

The Breath of Life



ALTERNATIVE THERAPIES FOR TREATING

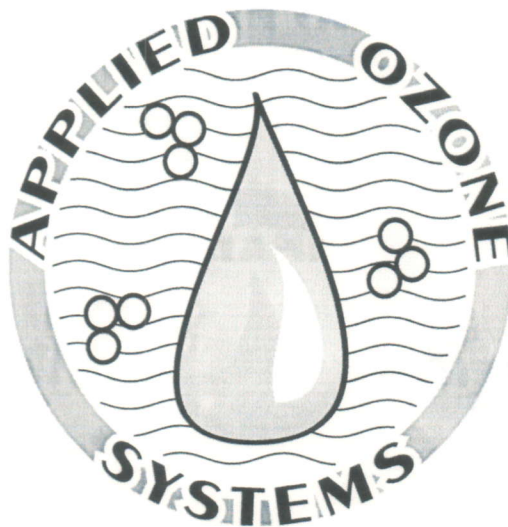
AIDS • ALCOHOLISM • ALLERGIES • ARTHRITIS • ASTHMA • CANCER
CANDIDIA • CONSTIPATION • DIABETES • GANGRENE • HEART DISEASE
HEPATITIS • HERPES • MALABSORPTION • MULTIPLE SCLEROSIS
PARASITES • TOXIC METALS • TUBERCULOSIS • ULCERS

When the body is out of balance the result is disease.
Whole Body Detoxification ENDS the "Cycle of Death" and
starts the "Cycle of New Life." A new you is possible!

By Charles C. Ankeney

THE BREATH OF LIFE

CHARLES C. ANKENY



"A Better and Safer Natural Alternative"

THE INFORMATION CONTAINED IN THIS BOOK IS AN INTRODUCTION TO OZONE AND ITS APPLICATIONS

The information obtained for the preparation of this book was obtained from various sources. Due to the suppression of ozone use, it's difficult to obtain truthful information from the government. It must be obtained from the public library or private sources. This book is based on facts and experience. It is meant to further your education on ozone and other alternatives. The main purpose of this book is to **SAVE LIVES** with no intentions of getting rich from selling equipment. This is information you need to know that others do not want you to know. You may only reproduce parts of this book to help and educate others about "OZONE" for nonprofit. Any other purpose requires written permission from Applied Ozone Systems.

THE BREATH OF LIFE

Revised 2007 Edition

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IMPORTANT NOTICE

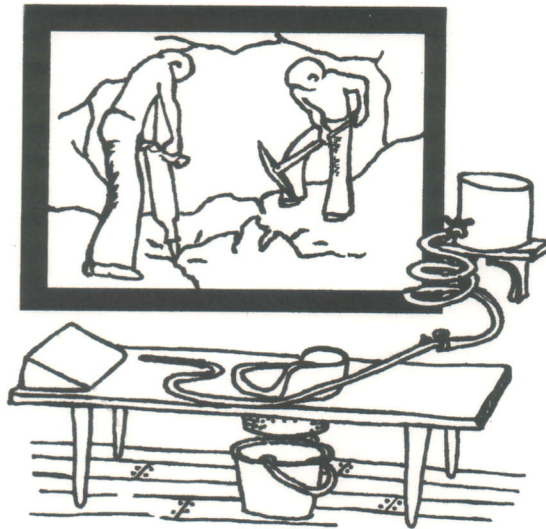
It's necessary to properly apply ozone for all air and water applications to assure safety. Anything in excess can cause harmful effects. This includes the foods we eat the oxygen we breathe and the water we drink. Everything has to be in balance and ozone in high concentrations can be toxic. Ozone is not a cure-all for everything. We dare not say much in support of ozone for medical uses, nor make any claims, except to quote historic facts and research that people have published. FDA has not approved ozone for "Medical Use." The information in this booklet is true and correct and meant to complement the advice of your physician. Any dosage rates given for vitamins or other supplements, and suggestions for use are merely those of the manufacturer or from other sources. Applied Ozone Systems, the author, and those associated with them in any manner or capacity, disclaim all responsibility for any liability or other loss as a consequence or misuse of ozone or its application, either directly or indirectly of any information presented herein. You or your physician must take responsibility for any use made of the information contained in this book or from the use of ozone.

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The body cannot heal itself without cleansing the intestinal and eliminative systems first. It takes a firm commitment, lots of work and usually a change in lifestyle in restoring your health!

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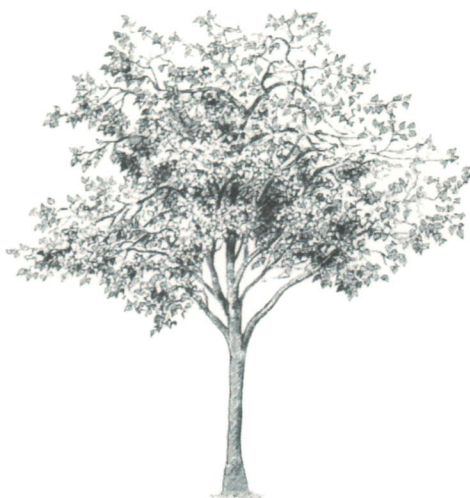


Improving your condition now is by far better than falling into "The Pit of Misery" with no end to your symptoms and pain!

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Part Four
The Tree of Life



The Breath of Life! It Creates and Protects. It sustains all life. Without it nothing would exist!

The Bread of Life! Gives Life To A Hungry World. When balanced within, harmony abounds!

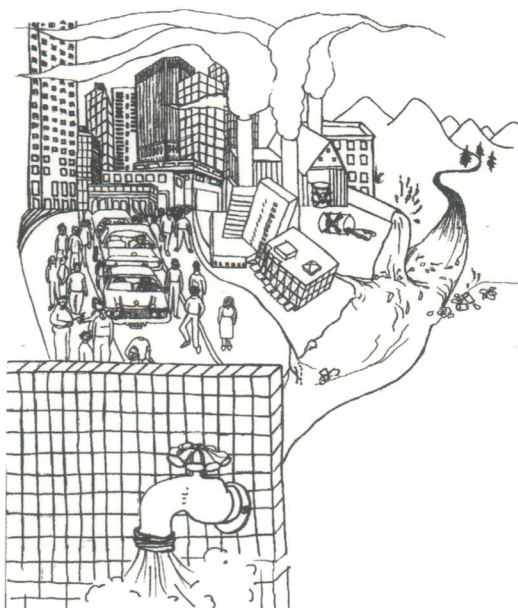
The Spring of Life! That Which Provides Living Water! Elements that add years to your life! Water that quenches the thirst!

The Scale of Life! Your health and longevity depends on your wisdom and understanding in keeping the "Scale of Life" in balance!

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Part One

The Breath of Life

Here long before the beginning, I will forever continue throughout all time.
When the sun rises or when the lightning streaks across the sky, I am there.
Through energy I transform to "give life" all around.
My presence is known only by the profound.

I clean the air to make it blue and pure.
The blue that protects you from afar and the harm nearby.
The "breath of life" is near as natural as can be.
Bringing "peace of mind" to all those in fear.

I am the "breath" that refreshes that you so desperately need.
That which rekindles the flame in weeping hearts that nothing can surpass.
I am the giver that lights up your life.
That which gives "new life" is in the healing power I possess.

My foes are ignorant and that is their choice.
They can mislead through their greed all while they can.
They can say all they want but it will not change the fact.
The "good" is in what they think is bad.

Those who believe and with hope are those not lost in peril.
Through the "light and truth" I shall prevail.
I am what I am and "nothing" can change that!

Charles C. Ankeney

The giver of all things and all life through his breath!

INTRODUCTION TO OZONE

Ozone-Oxygen therapy is one of the most powerful and versatile therapies known today. Research shows it throughout the twentieth century, mostly in Europe and other parts of the world. The action of ozone has beneficial effects on every part of the body. Some of the effects are bacterial, fungal and viral inactivation, circulatory enhancement, disruption of malignant tumor metabolism, and stimulation of oxygen metabolism.

Ozone was virtually unknown in the United States for many years. The chemical and drug companies paid out millions of dollars to the American Medical Association and government officials to suppress ozone and oxygen therapy, because of the new drugs that started coming out in the 1930's. Despite their greed and money, ozone is coming back with revenge and becoming very popular in the field of alternative medicine.

Oxygen plays a vital role in maintaining health and well being of the body. Oxygen, along with food, is the primary nutrient that cells use to generate energy for all its functions. With oxygen, the energy production is through oxidation of the unhealthy cells. The burn is incomplete without the main fuel, oxygen. As the oxidation process takes place throughout the body, antioxidants are protecting the healthy cells. Antioxidants also act as a cooling or regulating system for maintaining the metabolic temperature at a constant level, which prevents over oxidation from occurring. The body then has the responsibility of getting rid of the waste and debris left behind from the oxidation process.

Oxidation changes the physical nature of the things with which it comes into contact.

It involves a transfer of positive or negative electrons (an off balance) upon contact with the substance. The reactions always happen in pairs that are called oxidation and reduction or also known as redox.

The body's cells must have the proper nutrients for them to function properly, in order to maintain good health and a strong immune system.

As the body ages and begins to fill up with toxins and waste products, it lacks the ability to create energy to burn up the waste from the oxygen and foodstuffs. The body cells function by burning glucose in oxygen to provide energy and the waste products are carbon dioxide and water. If there is insufficient oxygen at the cellular level, the burn will be incomplete, resulting in carbon monoxide and lactic acid formation. A build up of carbon monoxide prevents hemoglobin from picking up fresh oxygen and body temperature lowers. Excess lactic acid in the system will clog the nerve pathways eventually calcifying and causing degeneration. If there is insufficient oxygen, toxins will build up and the blood will carry a heavy load of sludge. The toxins then build up in the body fat and tissue resulting in disease.

The body must absorb the nutrients and utilize the oxygen for it to function properly. The body reverts to a lower function level when there is a lack of oxygen. At this level, it also causes a breakdown of cell tissues, disease, and other health related problems. Insufficient oxygen also causes subnormal body temperatures. The abundance of oxygen creates good health and well being.

Anti-oxidants are really free radical scavengers and enzyme enhancers. Free radicals are atoms or molecules with unpaired electrons. The production of free radicals in our cells occurs by normal

respiration and the assimilation of sugar. Free radicals are an unavoidable occurrence in biochemical reactions.

Free radicals are the natural product of any chemical reaction and they fit into the bodies overall balance. White blood cells use free radicals in hydrogen peroxide to destroy invading bacteria and viruses.

Atoms normally contain an even number of paired electrons. During chemical reactions, electrons become "unpaired" momentarily, allowing the reaction to occur. If for some reason an electron becomes separated, it causes an imbalance and becomes a free radical. The unbalanced free radical can damage cells that do not have sufficient enzyme coatings.

Healthy cells have an enzyme coating around them, which they produce. This coating protects them from free radicals or the action of oxygen. Ozone can distinguish between "friend and foe." It attacks only invading pathogens, damaged or infected cells.

Oxygen starvation at the cellular level causes cells to be too weak to manufacture the enzymes that protect them. The oxygen-starved cells are vulnerable to invasion by the always-present viruses and pathogens. Ozone will attack microbes that have no enzyme coating, as well as diseased cells with deficient cell wall enzymes.

The properties of free radicals vary widely. Some are toxic to all living cells, others only to the most vulnerable cells. Singlet oxygen is a highly reactive beneficial free radical that acts as a scavenger of other harmful free radicals. The oxygen combines with them to render them harmless, thereby protecting cells from damage.

There could be no life without free radicals. A free radical is really a temporary stopping point leading from one stable molecule to another. The normal life span of such unstable particles is thousandths of a second. Millions of these fleeting molecules emanate in every cell as it burns sugar with oxygen.

Everything on our planet has a negative effect. Free radicals are a part of our natural immune system. Oxygen bonds to our hemoglobin as a superoxide anion, so the oxygen in our breathing process is an established radical.

Ozone therapy is harmless when used properly and has virtually no side effects. It is one of the most effective ways of restoring optimal levels of oxygen to the body. Its actions have beneficial effects on every part of the body.

Oxygen regulates all activities of the body. Our ability to think, feel, and act comes from the energy created by the oxygen. Approximately 90% of the body's energy originates from oxygen. Oxygen is our most vital element for good health. Ozone can add higher levels of oxygen to the working environment, raise energy levels, raise the body's immune system and increase your general vitality.

**"You Can Never Die Of Old Age,
Only From Disease."**

**Disease is but a symptom, caused
by malnutrition and oxygen
starvation at the cellular level!**

WHAT IS OZONE?

Ozone is oxygen in the form of O_3 instead of O_2 . Webster defines ozone as 1. A form of oxygen with a sharp, clean smell, produced by an electrical discharge in the air. 2. Pure air. The name "**ozone**" originates from the Greek word "**ozein**" that means to smell. The ancient Hebrew word for ozone means the "**Breath of God!**" Ozone is a clear gas with a distinct smell that makes the sky blue. It has been used to purify water since 1893.

Ozone occurs "**naturally**" in the environment. In nature, the main by-product released from plants and sea plankton during photosynthesis is ozone/oxygen. Oxygen floats upward into the atmosphere and in turn converted into ozone by ultraviolet radiation. Ozone blocks out the harmful UV rays. This explains the shortage of ozone over the poles in the winter months when there is a lack of sunshine.

"**Natural**" ozone concentration can vary between 0.01 to 0.05 ppm, depending on geographic location, altitude, and season. The cycle of oxygen and ozone is just like the cycle of water in nature.

Waterfalls and the oceans' surf produce ozone naturally. This accounts for the calm and the relaxed feeling enjoyed while at the beach or in the mountains.

Since ozone is heavier than air, it is carried in natural downdrafts into the lower atmosphere. As the ozone falls from the upper atmosphere it oxidizes any pollutant or contaminates which it comes into contact. Chlorine is the main compound that reduces the ozone layer in the upper atmosphere. Chlorine is the result from reactions due to man made chemicals from chlorofluorocarbons and hydrogen fluoride. When ozone forms during thunder and lighting storms, it comes into

contact with water vapor and forms hydrogen peroxide. This is why plants flourish better with rainwater than with irrigation water. This is also nature's way of cleaning our environment.

When natural ozone exists during thunder and lighting storms, its concentration levels are triple the allowable limit, as set by EPA. Ozone created electronically or through short wave ultra-violet light converts' oxygen molecules (O_2) into ozone molecules (O_3). Some define ozone as activated oxygen or pure air. Being an unstable gas, ozone's life span is between 20-50 minutes. After completing its job, it simply reverts back to oxygen.

Ozone is second only to fluorine as being the most powerful oxidant in the world. It's the most powerful, natural air and water purifier readily available. Ozone will break down most chemicals into safer elements. Ozone converts pollutants in the air into carbon dioxide and water. These elements are all naturally occurring substances needed for our survival.

Many scientists and doctors now believe that insufficient oxygen levels contribute to the world's health problems. Healthy body cells are "**aerobic**," that means they need oxygen to survive. Unhealthy cells, bacteria and viruses are "**anaerobic**." They can only survive in the absence of oxygen.

Widely used in Europe, ozone is just becoming popular and applied in the United States. This remedy is powerful and efficient in what it does that it may reform the practice of medicine. Ozone is antibacterial, antifungal, antiviral and kills protozoa. It works by releasing oxygen into the blood stream when applied externally, sublingually, rectally or by infusion.

In 1840, Christian F. Schonbein discovered ozone. Sir Benjamin C. Brodie recognized

the chemical nature of ozone in 1872. Observance revealed that ozone reacted with and destroyed bacteria and other organisms. The application of ozone during World War 1 was primarily on wounds as a disinfectant.

The first use of ozone on meats in cold storage is believed to have started in Cologne, in 1909.

On February 25, 1915, Albert Wolff of Berlin, Germany filed an application with the United States Patent Office. His process (patent # 1,152,066) was preparing a solution of 3% hydrogen peroxide with a high content of ozone and oxygen, and sprayed as a disinfectant on raw meats to preserve freshness. The decomposition and bacteria cause meat to turn color from red to blue or green. When the solution is used, it brings back the original color. Everyone in the food industry has been lead to believe that oxygen and the oxidation effect is what changes the color of meat. With this information, they reduce the concentration of oxygen in packaging that actually promotes the growth of anaerobic bacteria.

In 1934, a surgeon by the name of Erwin Payr experienced ozone by his dentist E. A. Fisch, who had patented the first piece of laboratory equipment for dental medicine. Some dentists and surgeons have been using oxygen-saturated water because of its action against bacteria.

With the increase in carbon dioxide and the increasing amounts of chemicals used in our environment, the decrease of oxygen in the air, one can understand the rise of cancer, new strains of bacteria, viruses, and disease in our environment.

Ozone is a powerful tool for cleaning-up the environment and curing disease, but is equally important for the prevention of disease. Bacteria and pathogens (disease producing bacteria) exist in any

environment; for example, air, water, dust, surfaces, and within our body fluids. Use in the home can provide high levels of immunity and protection for everyone. Ozone can treat and prevent most communicable diseases if applied and used in the right way.

Many have died needlessly over the years from contaminated foods and disease. It is possible that many lives could have been saved if ozone had been implemented and used to its fullest potential.

Ozone is one of the most energetic and useful agents known to science.

Ozone displays an "all or nothing effect" in terms of destroying bacteria.

The biocidal action of ozone is a result of its' reaction with the double bonds of fatty acids in the bacteria cell walls, membranes and the protein capsid of viruses. In bacteria, the oxidation results in a change in cell permeability and leakage of cell contents into solution. In viruses, alteration of the protein capsid prevents the virus from being taken up by susceptible cells. Ozone infiltrates the cell walls, which permits attack on the cell membranes and the ultrastructural components of the organism. In simple terms, the unstable electrons of ozone blasts holes through the membranes (this occurs by cell lysing or rupture of the cell wall) of viruses, bacteria, yeast's and abnormal tissue cells. Ozone destroys them by inactivation of the microorganisms enzymes.

Ozone is such a strong germicide that only a few micrograms per liter are necessary to reduce germicidal action. Factors such as humidity, temperature, pH balance, ozone concentration levels, types of organism and time, determine the kill rate for pathogens. Low concentrations can

easily achieve a 99.999% kill over a short period.

The action of ozone gas in air or water is instantaneous, and after performing its job, it always reverts back to **oxygen**. There are no bacteria or viruses that are resistant to ozone, since it acts as an oxidant of protoplasm. Ozone is the purest and most environmental friendly oxidant, as it introduces no toxic by-products into the water. Ozone decomposes compounds in water that chlorine can not eliminate. The bacterial kill rate of ozone is 3,125 times faster than chlorine and is a 50 percent stronger oxidizer than chlorine. Ozone destroys all pathogenic and organic microbes in water, and removes unwanted bacteria and viruses from the blood. Ozone is the strongest and most natural algicide, bactericide, fungicide, germicide, parasiticide, protozoicide and virus agent known to humanity. Ozone is the oldest and safest agent used to purify water.

* **Its' power is unsurpassed.**

Almost no one in medical field can understand the ability of ozone to oxidize almost instantly anything of a plant physiology.

A German doctor by the name of Otto Warburg discovered the cause of cancer in 1923. Warburg demonstrated that the replacement of oxygen in the respiratory chemistry of normal cells is by the fermentation of sugar. The growth of cancer cells is a fermentation process initiated only in the relative absence of oxygen, meaning cancer is a plant cell.

Dr. Harry Goldblatt continued Warburg's research and his work were published in the ***Journal of Experimental Medicine*** in 1953. Dr. Goldblatt determined that the lack of oxygen plays a major role in causing cells to become cancerous. In the absence of normal oxidation, cells are

incapable of burning cell waste that contributes to disease.

Others like Dr. Albert Wahl has said, ***"Disease is due to a deficiency in the oxidation process of the body, leading to an accumulation of toxins. These toxins ordinarily are burned in normal metabolic functioning."***

Dr. Wendell Hendricks wrote, ***"Cancer is a condition within the body where the oxidation has become so depleted that the body cells have degenerated beyond physiological control. The body becomes so overwhelmed with toxins that it automatically sets up a natural defense in the form of a tumor mass to harbor these poisons and remove them from general activity within the body."*** Dr. Hendricks also makes a relationship between oxidation and allergies in that, the cause of allergy is due to a lowered body oxidation process that causes a sensitivity to foreign substances entering the body.

Oxygen plays a primary role in our health. All normal cells in our bodies need oxygen to survive and give off carbon dioxide as a waste product. Cancer cells (plant cells) needs carbon dioxide to survive. When the body is **out of balance** and can not get rid of the waste products, nature's way of reacting is the growth of plant cells like cancer, fungi, candidiasis and others.

Ozone has Grandfathered Legal Status and predates the 1906 Pure Food and Drug Act. Charles J. Kenworthy MD in Jacksonville, Florida first published the use of ozone in the United States in 1885, for the Florida Medical Association. The papers state the use of ozone for medical usage before 1885. Medical ozone is legal in other countries but not in the United States. However, many physicians use ozone here as an alternative.

* **CANCER HAS CHLOROPHYL**

The International Ozone Association held their conference in 1983. Dozens of prominent physicians presented medical abstracts on their research. They noted different aspects of ozone and its applications. Papers submitted were studies in cancer therapy, resistant ulceration's, arterial circulatory disorders, herpes simplex, herpes zoster, viral hepatitis, physiological changes in the blood, coronary circulatory diseases and arthritis. Since then, research has shown beneficial results using ozone on AIDS.

Ozone therapy is a combination of both oxygenation and oxidation therapy. What the oxygen cannot do the ozone will.

Is Ozone Smog?

The news media today refers to air pollution or smog as being excessive ozone levels. This has to be the most ridiculous publicized statements ever made. The majority of most misunderstands the difference between ozone and smog. Ozone could do much to decontaminate our environment and relieve health-related problems that afflict us all. Use a little common sense, logic, and reasoning in everything you read or hear concerning ozone.

Pollution is defined as noxious chemicals or refuse that impairs purity. The two main sources of pollution are from automobiles and industry. EPA states a photochemical reaction takes place in the sunlight. When this occurs a single oxygen atom is stripped off and out of the complex hydrocarbon and nitrogen oxide molecules. If any ozone is produced it is on a very small scale. EPA bases this from the Chapman Mechanism, a theory done in the 1930's on how ozone is produced in the outer stratosphere only. After the stripping out of these singular oxygen atoms, come the bad guys (peroxy radicals). These offensive compounds

with the bad odors cause respiratory problems and runny eyes. The most damaging peroxy radicals are nitrogen dioxide, nitric acid, nitrous oxide, sulfur dioxide, sulfuric acid, carbonic acid and carbon monoxide. Ozone will eventually break down these radicals into safer compounds.

The largest source of contamination in the air that no one seems to mention is chlorine. Chlorinated compounds are among the largest of polluters in the air we breathe. Whatever the chlorinated compounds are used in they will evaporate into the atmosphere. The ones who report the ozone levels in the larger cities supposedly use ozone monitors to determine the concentration levels during smoggy days. This is how they have concluded that ozone is smog. When chlorine gas is in the atmosphere and passing through the ozone monitor there will be a false or higher reading on the instrument. They may not have considered this when coming to their conclusion. Some can be deceived while others can not; surely, anyone should be able to tell the difference between pure air and polluted air.

Most pollution is caused by humans and some from natural sources like forest fires or eruptions from volcanoes. The main pollutants in our environment are from auto exhaust, synthetic chemicals and others, not ozone. Ozone by no means is a pollutant. The pollutants do not destroy the ozone. Ozone destroys the pollution in the environment. Ozone is as natural as the air you breathe.

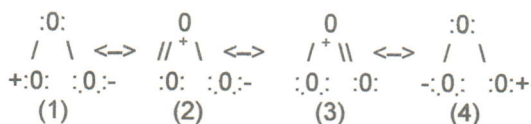
How can the "Breath of Life" that creates new life be of any harm when it comes from GOD? Why do these inhumane and inimically speaking individuals call ozone a pollutant?

CHEMICAL PROPERTIES OF OZONE

The chemical formula for Ozone is O_3 . The main components that are needed for the composition of ozone are three molecules of oxygen. Other trade names for ozone are activated oxygen, triatomic form of oxygen, allotropic form of oxygen, or in more simple terms, Pure Air. The Chemical Abstract Service Registry Number for ozone is CAS# 10028-15-6.

The triangular-shaped ozone molecule has a bond angle of $116^\circ 49'$ between the three oxygen atoms according to microwave studies or 127° according to electron studies. The actual structure of ozone is a resonance hybrid of (1-4). The two bond lengths are equivalent at 0.1278 nm. Forms (1) and (4) are the major contributors to the resonance structures. They are characterized by a terminal oxygen with six electrons. The resonance forms do not show any unshared electrons: unlike oxygen, the ozone molecule does not show any paramagnetic properties (2). Paramagnetism would impart free radical properties but has not been observed with ozone (3). The radical reactions by ozone involve the decomposition of peroxides formed by products of ozone reactions (4).

The Resonance Structure of Ozone



Oxidation Potentials of Oxidants

Ozone is the strongest oxidant used in water treatment. Because of its position on the electrochemical scale, ozone is highly reactive and decomposes to oxygen at a rate proportional to the concentration in the carrier gas. Decomposition is accelerated more by heat and catalyzed or

aided in decomposition by lime, moisture, metallic oxides, platinum, silver, sodium hydroxide and other metals.

Ozone is a natural compound or element of the planet. Ozone is pure air, free of contaminants and pollution because of its oxidation power. The following chart shows the power of ozone. Fluoride is the strongest but not as safe. The hydroxyl radicals are formed from the reactions of ozone.

The Oxidation Reduction Potential of Different Oxidants

Material	Volts
Fluoride (F_2)	2.87 More Reactive
Hydroxyl Free Radical OH	2.80
Atomic Oxygen (O_1)	2.42
Ozone (O_3)	2.07
Hydrogen Peroxide H_2O_2	1.78
Potassium Permanganate	1.70
Hypobromous Acid (HOBr)	1.59
Hypochlorous Acid (HOCl)	1.49
Chlorine Gas (Cl_2)	1.36
Chlorine Dioxide (ClO_2)	1.27
Oxygen (O_2)	1.23
Bromine (Br_2)	1.09
Iodine (I_2)	0.54 More Stable

Physical Characteristics of Ozone

Molecular Weight	48
Boiling Point	-169°F (111.9°C)
Freezing Point	-192.5°C
Melting Point	-420°F (-251°C)
Critical Temperature	10.2°F (-12.1°C)
Critical Pressure	5.53MPa (54.6 atm)
Critical Volume ($cm^3/mole$)	111
($in^3/mole$)	6.77
Density (Liquid)	1.572 g/ml at -183°C
Density (Gas) gr/l @ 32°F	2.154 g/l at 0°C, 1 atm
pounds/ft ³	0.13
Heat Capacity (Gas)	8 Cal/Deg Mole at 111.9°C
Heat Vaporization	3410 Cal/Deg Mole at 111.9°C
Solubility gr/l @ 32°F (0°C)	1.09
(pounds/gallon)	0.009
Surface Tension	38.1mN/m at -182.7°C
Viscosity (Liquid)	1.56 mPas at -183°C

MEDICAL OZONE

The main application for ozone is to purify the air you breathe and to purify the water you drink. Ozone is also being used by many to reduce food borne pathogens in the food industry. "Ozone is a natural alternative."

Medical ozone is also being used successfully to detoxify or clean the body. When using medical ozone, it is extremely important that you receive all the positive effects and not become dissatisfied from its use.

Ozone **will** work for you, if you apply it properly. The "**secret**" that I have learned from my success using ozone, I am sharing with you in this information.

The success of ozone depends on retaining the ozone-oxygen and allowing it to absorb through the colon. If the colon needs cleaning, you will be unable to retain the ozone-oxygen gas and have to release it after a short period of time. As treatments progress you should be able to retain the ozone for longer periods.

When ozone insufflation is introduced into the rectal cavity, it is important to receive all the optimum benefits that the ozone can deliver. If the colon is lined with debris, the ozone will not absorb into the body. The ozone has to absorb through the intestinal walls before for it to absorb into the bloodstream; therefore, the ozone is then carried throughout the whole body.

Rectal/Vaginal Ozone Insufflation

Some people are using ozone in the rectum or vagina for 30 seconds, one to three times per day for the first week. Some will increase the rectum time up to 60 seconds, three times per day. It is best to do this immediately following an enema,

a colonic treatment, or soon after a bowel movement.

A tiny tube is introduced a little way into the body cavity. The ozone machine is activated for 30 to 60 seconds, which introduces up to half a liter of pure ozone in a humidified gas form. The ozone and oxygen gas then enters the bloodstream through the intestinal walls. This process is painless and generally creates a sense of increased vitality and well being because the blood is being oxygenated and nourished.

The humidifier bottle is important when using ozone in the vagina or rectum area at concentrations of 27 to 32 mcg/ml. Oxidizing the skin tissue may result without the added moisture. When the ozone gas is humidified, it is more effectively absorbed into the skin tissue. Ozone generators with lower production levels are safe without the humidifier. Ozone over 72 ug/ml will inhibit healthy blood cells.

With the ozone generator turned on and ozone flowing, insert the catheter anywhere from 2 to 3 inches. Apply vitamin E or K-Y Jelly to the catheter for lubrication when needed. Set flow rate at 1/2 liter/minute, or 5 cc/min. Some prefer to reduce the flow rate to 1/32 liter/minute. This allows for higher ozone concentration levels and longer exposure times. One can usually do a rectal insufflation for 30 minutes and a vaginal for 60 minutes at these low flow rates. The "**low flow**" method allows for a higher contact time, which increases the absorption of the ozone into the body. It also saves on oxygen and helps prevent cramping.

In cases of high infection or candida, start treatment with daily uses of 2 to 3 times for 30 days. Start with a 60 second treatment, if you can not hold it in, try the 30 second treatment and work up to 60 seconds. After treatment pull out the tube. Shut off the ozone generator and oxygen valve.

Retain (hold in) the ozone-oxygen mixture for as long as possible.

The ozone treatments will help oxidize and loosen the debris on the intestines faster. After 30 days revert to one treatment daily if the colon is clear. For most, the fastest and most efficient way to loosen the encrusted debris is by irrigating the colon. This method used for cleaning is called colon cleansing.

As the ozone is oxidizing the bad bacteria, candida, yeast and so forth in the colon, excessive gases may form. Try not to pass the gas soon after because it is usually the ozone that is leaving. In cases where you can not retain the ozone-oxygen gas, make sure you are near or on the throne.

When there is a heating sensation, the ozone is oxidizing the germs in the area of use. Heat may be more noticeable in the vaginal area and the ears. The heating sensation is only temporary.

Some may experience a minor rash or itch on the skin as the body is dumping out the toxins and going through the cleansing effect. There are those who will increase the ozone treatments for faster elimination of the accumulated debris. When you increase the ozone treatments, you also need to increase your vitamin-mineral (especially electrolytes) supplements and vitamin E. Eating fresh vegetables (uncooked) will help flush out the body waste from the intestines at a faster rate.

The method for absorbing ozone through the skin is by injecting ozone into a body suit with only the head, hands and feet exposed. A small bag can be used for a specific area (like the arm, leg or foot) and sealing it off tight with the ozone tube inside. Most will stay inside the suit for 30 minutes. After this, they shut off the machine and stay inside the suit for an additional 30 minutes. Total time is one

hour. Before getting in the bag or suit, it is best to take a warm shower and remain damp. This will open the skin pores and allow the ozone to absorb through the skin at a much faster rate.

An excess of free radical oxygen atoms may decrease vitamin E during ozone treatments. It is essential to provide your body with the necessary supplements of beta-carotene, copper, manganese, vitamins A, C and E, selenium, molybdenum, zinc and N-acetyl-cystine.

Some people use ozone in the ears for one minute each, three times a day, or three minutes in each ear, alternating every minute. This method is called auricular insufflation. When the ear is dirty, you may notice a heating sensation for a second or two during the oxidation of debris. If you have a hole in the eardrum, this will cause extreme pain. Discontinue using in the ear if this occurs.

For those with arthritis problems, try filling a large container with warm water, large enough for the foot or hand. Let the ozone bubble under the limb for about five minutes. After the first or second application, itching may occur in the afflicted area. You should experience movement without stiffness or pain soon after with minor arthritis problems. Ozone generators that produce lower concentrations of ozone (UV type) are more suitable for soaking and bathtub applications.

Bubbling ozone into extra virgin olive oil has many therapeutic uses and benefits. It's used as a topical application for dry skin and used as a beauty aid for wrinkles, and for treatment of sunburn. Ozone can be inhaled directly when bubbled through the olive oil. "Ozonated" olive oil works when applied on your pets for cuts, bruises and other skin conditions.

Another method of inhalation of ozone in low concentrations is through room air purifiers. This method is the simplest for absorbing ozone into the lungs and bloodstream. The room concentration levels will depend on your tolerance level.

Lemon, orange and aloe vera juice can be **"ozonated"** for drinking or applications to the skin. By **"ozonating"** two cups of fresh lemon juice for six hours (use a large container because of the bubbles) can be used on all skin conditions like skin cancer, dry skin, psoriasis and ulcers.

Other topical applications of ozone are used on bruises, burns, fistulas, decubitis, gangrene, infections, muscle pains, osteomyelitis, radiation damage, and used to promote the healing of wounds.

Some physicians are injecting ozone directly into cancer tumors or into the muscle (Intra-muscular) for treating infections. Injecting ozone into the blood through the portal vein (Intra-arterial) may cause some adverse effects in some people. Another method, which purifies the blood, is called autohemotherapy. About 50 to 100 ml. of blood is withdrawn and mixed with (950 to 2,000 ug.) ozone, and then reintroduced by intravenous drip back into the patient.

Ozone is one of the finest ways to purify water. Bubbling the ozone gas into a glass of water for three minutes will kill the bacteria, fungus, virus and algae.

Ozone will not remain in the water very long. The maximum amount of ozone that is obtainable in water is approximately 24 ug O_3 /ml. The average time the ozone will last in water is about 25 minutes. High amounts of contaminants in the water will cause the ozone to disintegrate at a faster rate. The life span of ozone or its disintegration time refers to its half-life. This value of time depends on the quality and temperature of the water. The

addition of trace mineral drops in the water will increase the life span if refrigerated.

Drink the water in the humidifier bottle and refill after each ozone use. Be sure to use bottled, distilled, or unchlorinated water in the humidifier bottle. If chlorinated water is the only water available; then, stir the water vigorously for 30 seconds or let stand over night in an open container. This will let the chlorine evaporate out of the water. When high levels of organic material are present in the water, it will have a burned or oxidized taste after ozonation.

Research shows drinking **"ozonated"** water helps allergies, carcinoma, headaches, gastritis, gum disease, stomatitis, thrush, ulcer's; increases circulation, reduces infections after dental work, helps remove free radicals, helps colds and flu, cleans wounds and minor skin bruise's. Drinking **"ozonated"** water also increases the oxygen level throughout the body and accelerates the healing process.

Most of the published research on ozone is from European countries in another language. As time passes, the older information should be translated into English along with newer research. This will further prove the effectiveness of ozone and its use in other fields with future applications. Ozone is an old technology with a new beginning; especially, in the field of medicine. It could bring new life to everyone.

Use with CAUTION for the first time and never exceed 60 SECONDS at 1/2-liter flow per minute when using rectally. See Medical Ozone Therapy Protocol for more information in the contents.

"Anything In Excess Can Cause Adverse Effects."

IS OZONE TOXIC?

Webster defines toxicity as "the degree of poisonous." Toxicology is the science of poisons. The toxicity of a substance does not necessarily imply that the substance is a poison. All substances are toxic to the human body when taken in excess of normal human tolerance. The toxicity of ozone is largely related to its being a very powerful oxidant.

The toxicity of a substance is usually described as the "**maximum allowable dosage**." If the human body is capable of eliminating small quantities in a short period, small dosages of the substance may be tolerated, even if it's considered poison. If the human body has difficulty in eliminating the substance, toxic effects may result from long term exposure to what is normally considered non-toxic. The human body has no problem with ozone in low concentrations. It always reverts back to oxygen.

The most dangerous gases are the "**non-irritant**." The toxic limit may be exceeded before a physical result on the human body is noticeable. These types are usually absorbed in the lungs before toxic results appear. Irritant gases are so called because their first reaction is on the skin, mucous membrane, nose, and throat tissues.

Carbon monoxide and methyl chloride are considered non-irritant gases. Ozone is considered an irritant gas when compared to carbon monoxide. Ozone is a safe gas with a built-in safety factor. Its odor is noticeable at low concentrations. At extremely high concentrations, there are indications that ozone can be harmful.

Early research showing ozone to be highly toxic was unreliable. The generators used produced high amounts of nitrogen oxides.

Oxides are formed from nitrogen in the air, and considered irritating and toxic. However, some early research shows ozone with nitrogen oxides has greater bactericidal properties or kill power.

The chemical company's that produced chlorine and drugs paid for some of the unreliable information on ozone. In the 1960's, Hooker Chemical Corporation paid over one million dollars on ozone research. Ozone is not patentable because it is natural. No money can be made in its research and development as a treatment or cure since it cannot be protected. The process used can be patent, but not ozone. Money is what makes things happen in the United States. This explains the "**suppression of ozone**."

The EPA has set very low concentration levels (Permissible Exposure Levels) for ozone due to these oxides. When pure oxygen is used from bottles or oxygen generators (without nitrogen oxides) for the production of ozone, the result is "**pure ozone**."

In 1942, E.V. Hill published his work on the Effects of Pure Ozone in Air Conditioning. Tests of Hill showed that, "**pure ozone**" was definitely non-toxic in concentrations as high as 50 ppm. As a final result of his work, he states "**pure ozone is not poisonous in any sense of the word as it breaks down in contact with the mucous membrane and oxygen only remains. For this reason there are no cumulative effects and pure ozone may be breathed for long periods of time without harm provided, of course, that the immediate irritation of strong concentrations is avoided.**"

Ozone is a tool that should be used correctly for each and every application. You do not use a pipe wrench on a 1/2" bolt without a consequence. Use your tools correctly and you get substantial results.

CONDITIONS TREATED BY OZONE

Acariasis	Cryptosporidiosis	Krohn's disease	Prostate enlargement
Acne	Cystitis	Kyanasur Forest disease	Prurigo
Acrodermatitis	Cytomegalovirus	Landry syndrome	Psoriasis
Acute otitis media	Cutaneous larva migrans	Lassa fever	Pulmonary toxipiasis
Acute vestibulopathy	Dengue fever	Leishmaniasis	Pyoderma
Addisons disease	Dermatitis	Leptospirosis	Rabies
Adenocarcinoma	Diabetes	Leukopenia	Radiculoneuritis
Adenovirus	Diabetic foot	Listeriosis	Relapsing fever
Adrenitis	Diverticulitis	Liver disfunction	Reynold's syndrome
AIDS	Eczema	Lupus erythematosus	Reynaud's disease
Alopecia	Ehrlichiosis	Lyme disease	Rheumatism
Allergies	Emphysema	Lymphocytic	Rheumatoid arthritis
ALS (Lou Gehrig)	Encephalitis	choriomeningitis	Rhinitis
Amebiasis	Encephalomyelitis	Lymphogranuloma	Rift Valley fever
Amenorrhea	Endocarditis	Lymphoid pneumonia	Rubella
Amyloidosis	Endometritis	Lymphoma	Salmonella
Anal fissures	Endophthalmitis	Malaria	Salpingitis
Anemia	Enteric fever	Mastoiditis	Scabies
Angina	Enteritis necroticans	Measles	Scleroderma
Angiodema	Environ. Hypersensitivity	Melanoma	Senile dermentia
Ankylosing spondylitis	Epidermoid carcinoma	Melioidosis	Senile macular
Anthrax	Epidermolytic keratosis	Meniere disease	degeneration
Aphous stomatitis	Epididymitis	Migraine	Sennutsu fever
Arterial occlusion	Epidermophytosis	Molluscum ecthyma	Septicemia
Arteriosclerosis	Epstein-Bar virus	Mononucleosis	Shingles
Arthritis	Erysipelas	Morbilloform	Shock
Arthrosis	Erythema migrans	Mucous colitis	Sickle cell anemia
Asthma	Fistulae	Mumps	Sinusitis
Athlete's foot	Flavivirus	Multiple sclerosis	Skin burns
Babesiosis	Folliculitis	Myalgia	Spinalioma
Bacterial pneumonia	Food poisoning	Myasthenia gravis	Spondylitis
Bartonellosis	Freidreich ataxia	Mycobacterium avium	Staphylococcus
Basalinoma	Fulminant varicella	complex	Stomatitis
Bell palsy	Furunculosis	Myocarditis	Striatonigral degeneration
Bornholm myalgia	Gangrene	Mycosis	Stroke
Botulism	Genital warts	Myelitis	Syphilis
Bronchitis	Giardiasis	Myonecrosis	Tardive dyskinesia
Bronchopulmonary	Glaucoma	Myositis	T. cruzi
aspergillus	Glioma	Neurodermatitis	Tendinitis
Bronchospasm	Glomerular membrane	Neutropenia colitis	Tetanus
Brucellosis	disease	Ocular trachoma	Tinea versicolor
Bullous pemphigus	Glomerulonephritis	Optic nerve dysfunction	Tinnitus
Burkit lymphoma	Goodpasture syndrome	Optic neuritis	Thoracic zygomycosis
Cancer (all types)	Gout	Oral erythema	Thrombopenic purpura
Candidiasis	Graves disease	Orbital cellulitis	Thrombophlebitis
Carbuncles	Guillan-Barre syndrome	Orchitis	Thyroiditis
Cavernous sinus throm	Hairy leukoplakia	Osteomyelitis	Togavirus
Cellulitis	Heart arrhythmia	Osteoporosis	Tourette syndrome
Cerebral atrophy	Heart disease	Osteosarcoma	Toxic amblyopia
Cerebral sclerosis	Hematoma	Otosclerosis	Toxoplasmosis
Cerebro vascular accident	Hemorrhage	Pancreatitis	Traveller's diarrhea
Chagas disease	Hemorrhagic fever	Panniculitis	Trench fever
Chicken pox	Hemorrhoids	Papillitis	Thrombosis
Chlamydia	Hemolytic anemia	Parainfluenza	Trypanosomiasis
Cholecystitis	Hepatitis	Parkinson's disease	Tuberculosis
Chronic pain	Herpes (all types)	Pediculosis	Tularemia
Chronic pulmonary	Histoplasmosis	Pelvic inflammatory	Ulcers
disease	HHIV, HTLV	disease	Urethritis
Cirrhosis of the liver	Hypercholesterolemia	Pemphigoid	Urticaria
Cocciidiomycosis	Hypotension	Pernicious anemia	Uterine spasm
Colitis	Hypersensitivity	Pigmentosa	Uveitis
Colorado tick fever	Hyperthyroigism	Poliomyelitis	Varicose veins
Conjunctivitis	Huntingdon chorea	Polyarthritis	Varicella pneumonia
Constipation	Ichthyosis	Polyoma virus	Vascular retinopathy
Contact dermatitis	Ileitis	Poor circulation	Vasculitis
Corneal ulcers	Impetigo	Postpartum fever	Vulvovginitis
Coronavirus	Influenza	Pneumocytosis	
Cryoglobulinemia	Intravascular coagulations-	Pneumonia	
Cryptococcosis	chemic optic neuropathy	Proctitis	

COMMON ORGANISMS OXIDIZED BY OZONE

BACTERIA

Achromobacter butyri NCI-9404
Aeromonas harveyi NC-2
Aeromonas salmonicida NC-1102
Bacillus anthracis
Bacillus anthracis
Bacillus cereus
B. coagulans
Bacillus globiggi
Bacillus licheniformis
Bacillus megatherium sp.
Bacillus paratyphosus
B. prodigiosus
Bacillus subtilis
B. stearothermophilus
Campylobacter jejuni
Clostridium botulinum
C. sporogenes
Clostridium tetoni
Cryptosporidium
Coliphage
Corynebacterium diphtheriae
Eberthella typhosa
Endamoeba histolica
Escherichia coli
E. coli 0517:H7
Flavobacterium SP A-3
Leptospira canicola
Listeria monocytogenes
Micrococcus candidus
Micrococcus caseolyticus KM-15
Micrococcus luteus
Micrococcus spheraeroides
Mycobacterium leprae
Mycobacterium tuberculosis
Neisseria catarrhalis
Phytomonas tumefaciens
Proteus vulgaris
Pseudomonas aeruginosa
Pseudomonas Fluorescens
 (biofilms)
Pseudomonas putida
Salmonella choleraesuis
Salmonella enteritidis
Salmonella typhimurium
Salmonella typhosa
Salmonella paratyphi
Sarcina lutea
Serratia marcescens
Shigella dysenteriae
Shigella flexneria
Shigella paradysenteriae
Spirillum rubrum

Staphylococcus albus
Staphylococcus aureus
Streptococcus 'C'
Streptococcus faecalis
Streptococcus hemolyticus
Streptococcus lactis
Streptococcus salivarius
Streptococcus viridans
Torula rubra
Vigrio alginoliticus & *angwillarum*
Vibrio cholerae
Vibrio comma
Virrio ichthyoderms NC-407
V. parahaemolyticus

VIRUS

AIDS
 Adenovirus (type 7a)
 Bacteriophage (*E. coli*)
 Coxsackie A9, B3, & B5
 Cryptosporidium
 Echovirus 1, 5, 12, & 29
 Encephalomyocarditis
 Hepatitis A
 GD V11 Virus
 Infectious hepatitis
 Influenza
 Legionella pneumophila
 Polio virus (Poliomyelitis) 1, 2 & 3
 Rotavirus
 Tobacco mosaic
 Vesicular Stomatitis

FUNGUS & MOLD SPORES

Aspergillus candidus
Aspergillus flavus (yellowish-green)
Aspergillus glaucus (bluish-green)
Aspergillus niger (black)
Aspergillus terreus, *saitoi* & *oryzae*
Botrytis allii
Colletotrichum lagenarium
Fusarium oxysporum
Grotrichum
Mucor recemosus A & B (white-gray)
Mucor piriformis
Oospora lactis (white)
Penicillium cyclopium
P. chrysogenum & *citrinum*
Penicillium digitatum (olive)
Penicillium glaucum
Penicillium expansum (olive)

Penicillium egyptiacum
Penicillium roqueforti (green)
Rhizopus nigricans (black)
Rhizopus stolonifer
Thamnidium
Trichoderma viride
Verticillium albo-atrum
Verticillium dahliae

PROTOZOA

Paramecium
 Nematode eggs
 Chlorella vulgaris (Algae)
 All Pathogenic and Nonpathogenic forms of Protozoa

FUNGAL PATHOGENS

Alternaria solani
Botrytis cinera
Colletotrichum coccodes
Fusarium oxysporum
Monilinia fruticola
Monilinia laxa
Pythium ultimum
Phytophthora erythroseptica
Phytophthora parasitica
Rhizoctonia solani
Rhizopus stolonifera
Sclerotium rolfsii
Sclerotinia sclerotium

YEAST

Baker's yeast
Candida albicans- all forms
 Common yeast cake
Saccharomyces cerevisiae
Saccharomyces ellipsoideus
Saccharomyces sp.

CYSTS

Cryptosporidium parvum
Giardia lamblia
Giardia muris

ALGAE

Chlorella vulgaris

IS DETOXIFICATION NECESSARY?

Detoxification is the term used in referring to the removal of toxins and poisons that cause physical harm to our body. Whole body detoxification is the key to youth, vitality, energy and vibrant health.

The human body encounters and disposes of a variety of toxins and poisons on a daily basis. This is a natural internal process of detoxification that is ongoing. When healthy, it should neutralize and dispose of its waste products through the bowels, liver, lungs, lymphatic system, spleen, skin and kidneys under normal circumstances. About twenty-five percent of the detoxification of the body occurs within the intestinal lining from the various organs. The largest percentage of the body's detoxification occurs in the liver.

The liver is our largest most important organ and performs over 500 known functions. About two quarts of blood are filtered through the liver every minute. When working properly, it will transform toxins (that were absorbed into the blood from the colon) into less harmless chemicals for excretion through bile and back into the intestine. If the pathways of elimination are not clear, the cycle will keep repeating itself resulting in liver dysfunction and the formation of even more toxic substances.

The body's natural detoxification system is made up of enzymes that render the toxins harmless or prepare them for excretion from the body, according to *The Kellogg Report* by Joseph D. Beasley, M.D., and Jerry J. Swift, M.A. Jeffrey S. Bland, Ph.D., of HealthComm International states, **"The transportation of specific nutrients across the intestinal border for utilization by detoxification enzyme systems depends upon the quality of**

the diet and the overall state of digestion."

Leon Chaitow, N.D., D.O., states, **"A body with a healthy immune system, efficient organs of elimination and detoxification, and a sound circulatory and nervous system can handle a great deal of toxicity. But if they have been damaged from chronic exposure to environmental pollutants, restoring these functions, organs, and systems can be accomplished only through detoxification therapies which accelerate the body's own natural cleansing processes."** (*Why Detoxify*, Health Counselor, Aug/Sept 1996)

Toxins from environmental pollutants like chemicals and pesticides on the foods we consume, contamination in the air we breathe, heavy metals, bacteria, and viruses in the water we drink overload the natural elimination process and our immune system. The substances from these toxins are constantly inflicting destructive effects on our healthy cells.

The deterioration of our body occurs slowly, step-by-step, over a long period of time. We may not notice what is going on or that a problem is developing until it exists. When the health alarm sounds and it's ignored, serious health problems soon follow.

When the body is overloaded with these toxins, the body temperature lowers and it will not crave water. This condition suppresses the glandular system and the immune system. Bad bacteria in the colon thrive and produce ammonia, which raises the pH in the colon. If the alkaline pH in the colon is too high it creates an environment for parasites, and produces other forms of toxins and poisons that absorb into the bloodstream. The result of these accumulated toxins in the body

account for some health disorders ranging from a common cold to AIDS and Cancer.

In the book *The Body Ecology Diet*, author Donna Gates states. **"If we continue to inject the kinds of toxins we are now being exposed to, the human will continue on a dramatic and frightening decline."** Gates argues that the imbalance in our internal ecology lies behind many of America's health problems, including Candida, Chronic Fatigue Syndrome, Epstein-Barr and other immune disorders. The evidence suggests that an overgrowth of Candida in the body is often responsible for early warning symptoms such as; headaches, intestinal disorders, nail fungus, allergies, depression, skin rashes, vaginal yeast and low sex drive.

"Any symptoms the body is exhibiting is the body's attempt to repair itself, to detoxify itself." (Kratz in *Healthy & Natural Journal*, Vol, 3 Issue 1)

The small booklet called *Healthy Meals & Munchies* by Jennifer Martin was written to help others after her battle with cancer in 1996. The booklet is a guideline for a healthy diet and gives many excellent recipes. It became quite clear to her after reading and researching into cancer that it's our processed, chemically altered diet that is largely responsible for the increase of cancer and other degenerative diseases. The author states that, **"As a nation we've become more concerned with how foods taste than whether or not they are good for us. For the sake of taste and the convenience, we choose to consume foods that have been refined and processed to the point that we receive very little nutritional benefit from them."**

America has become a nation full of people who are overweight, have allergies, chronic pain, poor digestion,

degenerative diseases such as arthritis, heart disease and cancer. We live with too much stress, are exposed to toxins on a regular basis and have probably the worst food habits in the world."

As Jennifer makes the connection between diet and disease, she gives the following statistics as a few examples.

- Between 1950 and 1987 there was a 28% rise in the incidence of childhood cancers. (National Cancer Institute)

- Currently among children 1 - 14 cancer causes more deaths in the U.S. than any other disease. (Cancer Facts & Figures 1993)

- The two leading causes of death in the United States today are heart disease and cancer. Currently one in three Americans will eventually develop some form of cancer with heart disease decreasing.

- In 1997, the United States Senate Select Committee on Nutrition and Human Needs issued a landmark report entitled, *Dietary Goals for the United States*. They suggested that a modification of diet, including increasing consumption of complex carbohydrates, reducing intake of saturated fat, cholesterol, and refined sugar could lower the risk of cancer and other chronic diseases.

- In 1998, the Surgeon General reported that approximately 2/3 of deaths in our country is related to nutrition.

It's difficult for medical doctors to deny that the diseased state of our bodies is a reflection of our bad eating habits, environmental pollutants and the "quick fix" pharmaceuticals used to control disease. We have all been led to believe the only fix is through a pill. How can there ever be a quick fix to our health problems when the 'fixer' only treats the symptoms. America has grown strong since its birth through ideas and industry. What good are the

future generations going to be if everyone is sick and cannot think properly?

The question of whether or not poor dietary habits relate to disease is easy to answer when you see all the evidence. The way foods are processed, the things we eat, and our lifestyle will probably not change much for the better. This is the way it is in our society today. Disease has been around since the beginning of time and will never vanish. It does not ask how old you are before it strikes.

Dr. Linus Pauling (a Nobel Prize winner and a famous biochemical researcher) made the connection between mineral deficiency and disease. Pauling stated, **"that every disease could be ultimately traced back to a mineral deficiency."**

The need for additional supplements is just as important today as it was yesterday. Everyone is deficient in vitamins and minerals because they are lacking in the foods we eat and you're lucky if you absorb 10% of what you purchase in pill form. The importance and lack of minerals in our foods was documented by the 74th Congress 2nd Session back in 1936, so this is nothing new. Extracts from Senate Document #264 states:

- *"Our physical well-being is more directly dependent upon minerals we take into our systems than upon calories or vitamins, or upon precise proportions of starch, protein or carbohydrates we consume."*
- *"Do you know that most of us today are suffering from certain dangerous diet deficiencies which cannot be remedied until depleted soils from which our food comes are brought into proper mineral balance?"*
- *"The alarming fact is that foods (fruits, vegetables and grains) now being raised on millions of acres of land that no longer contain enough of certain minerals are*

starving us - no matter how much of them we eat. No man of today can eat enough fruits and vegetables to supply his system with the minerals he requires for perfect health because his stomach isn't big enough to hold them."

- *"The truth is that our foods vary enormously in value, and some of them aren't worth eating as food. Our physical well-being is more directly dependent upon the minerals we take into our systems than upon calories or vitamins or upon the precise proportions of starch, protein or carbohydrates we consume."*

- *"This talk about minerals is novel and quite startling. In fact, a realization of the importance of minerals in food is so new that the textbooks on nutritional dietetics contain very little about it. Nevertheless, it is something that concerns all of us, and the further we delve into it the more startling it becomes."*

- *"You'd think, wouldn't you, that a carrot is a carrot - that one is about as good as another as far as nourishment is concerned? But it isn't; one carrot may look and taste like another and yet be lacking in the particular mineral element which our system requires and which carrots are supposed to contain."*

- *"Laboratory test prove that the fruits, the vegetables, the grains, the eggs, and even the milk and the meats of today are not what they were a few generations ago (which doubtless explains why our forefathers thrived on a selection of foods that would starve us!)"*

- *"No man today can eat enough fruits and vegetables to supply his stomach with the mineral salts he requires for perfect health, because his stomach isn't big enough to hold them! And we are turning into big stomachs."*

- *"No longer does a balanced and fully nourishing diet consist merely of so many*

calories or certain vitamins or fixed proportion of starches, proteins and carbohydrates. We know that our diets must contain in addition something like a score of minerals salts."

- "It is bad news to learn from our leading authorities that 99% of the American people are deficient in these minerals, and that a marked deficiency in any one of the more important minerals actually results in disease. Any upset of the balance, any considerable lack or one or another element, however microscopic the body requirement may be, and we sicken, suffer, shorten our lives."*

- "We know that vitamins are complex chemical substances which are indispensable to nutrition, and that each of them is of importance for normal function of some special structure in the body. Disorder and disease result from any vitamin deficiency. It is not commonly realized, however, that vitamins control the body's appropriation of minerals, and in the absence of minerals they have no function to perform. Lacking vitamins, the system can make some use of minerals, but lacking minerals, vitamins are useless."*

- "Certainly our physical well-being is more directly dependent upon the minerals we take into our systems than upon calories of vitamins or upon the precise proportions of starch, protein or carbohydrates we consume."*

Many are not aware of the harmful substances we are subjected to on a daily basis. We can breathe in these pollutants just by driving down the freeway in heavy traffic. Traces of every chemical, poison, toxins from foods, drugs, or from any other source are still lying dormant in every part of your body.

When our bodies are constantly being bombarded with toxins from environmental pollution in our air, food, and water, the

effects of alcohol, drugs, tobacco, and processed foods are reasons why we have to detoxify. Just living a normal life requires a daily on-going internal cleansing program. Why, because this is just the way it is. Many do not want to face reality let alone the truth. Others may think they are immortal and defy the facts but they are only fooling themselves. Most fruit and vegetable crops have been genetically modified and grown in chemical fertilizers, pesticides and waste contaminates. They are sprayed, processed, radiated, and often coated with toxic chemicals. Additionally they are harvested unripe, and gassed to make them ripened before their time. Whatever nutritional value they once had is lost forever. Sure, they make an effort to replace the nutrients with the synthetic types but that creates more harm than good. Man cannot copy nor do what nature does better.

The animals we consume are continually being fed antibiotics, synthetic hormones, steroids, drugs, toxic chemicals, and then radiated. When we eat it, we get the leftover toxic residues in our body muscles, tissue and cells. These proven carcinogenic substances cause cancer and depress our immune system. The ever-increasing incidence of immune system diseases has increased dramatically in the last five years. This creates stress and pressure of everyday life, financial problems, family problems, crime, etc. Removing the good fat from foods and replacing it with low calorie fake fats are causing serious problems of being overweight. Major causes of heart disease, diabetes, and some cancers have been attributed to being overweight. Most everyone is lacking in energy today; the body burns good natural fat and turns it into energy. Good fats are digested (broken down) and used to produce bile for digestion, they are used by the lymphatic system and the thyroid gland. You wonder why so many women get breast cancer

today. Maybe its because their gallbladder, liver, lymphatic system, thyroid, and everything else is so plugged up with fake fats that they just quit working altogether. The human body was not made to digest or make use of anything unnatural. If you believe the unnatural junk is better, you will most definitely wind up with multiple symptom caboodle syndrome and die before your time.

For some of us, a simple detoxification may help us to avoid any needless operations or the removal of an important body organ. Just recently I have heard about a few people with a little pain in the upper part of the abdomen and caused by a gallstone or an irritation. The doctors removed the whole gallbladder to relieve them of their pain. I asked them if they knew what purpose the gallbladder had and they did not know. The doctor merely told them it would relieve the pain and that they could live without it. The gallbladder function is to receive bile that is produced by the liver, and to store and concentrate it for use when it is needed in the process of digestion. Bile is essential for the digestion of fats. This greenish-brown liquid (bile) colors the stools to a dark brown. Stools without bile may become very pale, bulky, fatty, smelly, sticky and hard to flush.

If you get your gallbladder removed, you might as well have your pancreas removed that produces enzymes for digestion or a *colostomy* operation. This is a surgery where the colon is brought out through the abdominal wall and the feces discharge into a bag or you can have a *colectomy* where part of the colon is removed. An operation like these will lessen the pain from simple obstructions or slight irritations and should greatly benefit the non-absorption of junk foods. Your doctor will love receiving the funds for his service and may miss your passing, but I doubt he will come to the funeral.

Any operation (temporary or permanent) that interferes with the absorption of foods, digestion, or the elimination of waste should only be done in a matter of life and death. One or a few good colon irrigations and a proper diet can save thousands from these unnecessary operations.

Disease is the inability of the body to detoxify itself properly. The body can not heal itself without cleansing the intestinal and eliminative systems first.

There are many signals, signs, or symptoms the body indicates when it is time to detoxify. Even if you think you are in good health, you may be experiencing at least one or several of the following symptoms that shows the need to detoxify. A few of these symptoms can appear for a short time during detoxification.

Allergies	Headaches
Back Pain	Irritability
Bad Breath	Joint Pain
Bloating	Loss of Appetite
Blurred Vision	Low Immunity
Coated Tongue	Memory Loss
Constipation	Menstrual Problems
Depression	Muscular Pains
Diarrhea	Nausea
Digestive Problems	Obnoxious Body Odor
Early Aging	Over-acidity
Excessive Colds-Flu	Periodontal Problems
Excessive Gas	Sinus Problems
Excessive Mucus	Skin Problems
Fatigue	Stomach Pain
Fever	Weight Problems
Food Reactions	Yeast Infections

Our immune system is the key to fighting the risk's we subject ourselves to daily. It fights the microorganisms that cause disease and promotes the natural healing process. We subject ourselves to all kinds of disease when our immune system is weak. If you studied the various diseases and their causes, you can see where most are lacking or deficient in nutrients. This can be caused from the daily diet or from malabsorption through the colon. The

immune system needs the essential nutrients to stay strong.

The human body has a tremendous healing power when it has the right nourishment. Foods in their natural state are a necessity for the building and repairing of all body tissues. Foods are the energy that is needed to fuel the chemical and physical functions of the body. The basic foods the body must have for nourishment are all the vitamins, all the amino acids, all minerals and trace minerals as well as oxygen, and hydrogen. The combination of everything is needed for every organ to produce the other entire complex chemicals and hormones. The synthesis of the body is complete when everything becomes as a whole. Achieving balance can only occur if the cycle is complete in every way. If all the basic building blocks are not in place and maintained daily, the body will soon go into a state of deterioration. When this condition is ignored, the cycle of death starts while you are still alive. The body starts to decay and rot from the inside until there is nothing left but dust.

When we are exposed to more than sixty thousand synthetic chemicals each year on our foods, it becomes a necessity to detoxify our body. The toxins and excess mucus need to be eliminated. The pathways for proper elimination must be kept clean.

Colon cleansing is the only effective way to quickly eliminate the undesirables that reside within. For full detoxification, they all have to be eliminated, not just a few. The process of elimination through the colon not only has to be free flowing, it has to be clean of any build-up for the absorption of nutrients. This is not only crucial for internal detoxification but for the healing process to begin as well.

Everyone needs to detoxify at various times in his or her life. You may think you

are healthy now because you have been taking all those synthetic supplements you purchased from the doctor, drug store, or even from health stores. They are foreign undesirable agents that need to be removed to prevent any further damage to the body. Most are not familiar with colon cleansing because of a lack of knowledge and will never enjoy the full benefits of good health. Those who are willing to be responsible for their own health can live without disease. This means you have to make choices, the right ones.

Some may be having a difficult time in considering detoxification, let alone colon cleansing. Take a long look at yourself in the mirror and think about the way you feel now. Can you remember the way you felt when you were younger and in good health? It is possible to feel like that again if you let loose of your stubbornness. Your choices will improve if you are determined to live a healthy life, instead of one full of symptoms and misery.

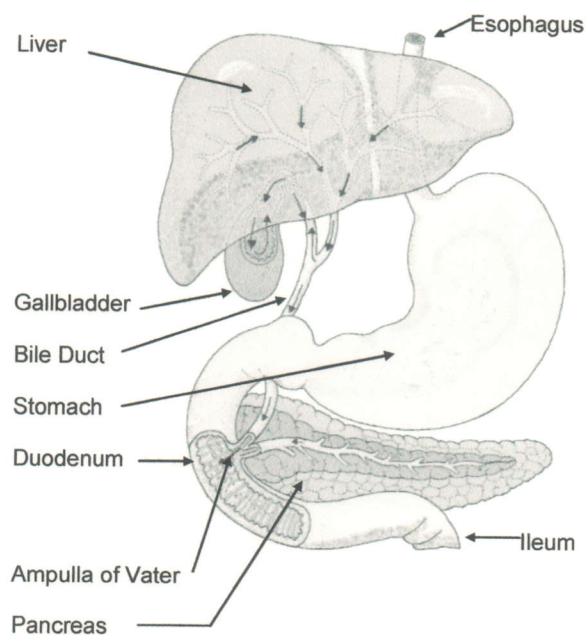
Your condition will determine if you need to participate in a cleansing program like the **Ultimate Detoxification Process**, now or in the future. If you are experiencing any or several symptoms of bad health and have a few bad habits, then you are a prime candidate for detoxification. The longer you wait, the more pain you will have to endure.

You may be asking yourself why would I choose this type of detoxification over all the others or what is the Ultimate Detoxification Process? This process of cleaning and healing is a combination of oxygen-ozone therapy, colon cleansing and plant derived nutritional supplements. It treats the cause of all disease, not the symptoms that are associated with disease.

The liver is the most important organ in the body and part of the biliary system. You concentrate on cleaning it because it

controls most of the functions in the body. Along with filtering out toxins and producing bile for digestion, it is the body's chemical factory, which regulate the levels of good and bad chemicals in the blood. The biliary system consists of the liver, gallbladder, pancreas and duodenum. The pathways for bile flows from the liver and travels through the hepatic duct where it connects to the common bile duct and the cystic duct. The bile travels up the cystic duct to the gallbladder where it is stored. When bile is needed it travels into the common bile duct and through the ampulla of Vater where it enters the duodenum.

The Biliary System



The **liver** produces bile in the polygonal cells from cholesterol (bilirubin and biliverdin) and bile salts (acids) that are linked from the amino acids glycine, glycocholic, taurine and taurocholic acid.

The **gallbladder** stores up to two ounces of bile and releases it back into the common duct to digest fats or food particles as they leave the stomach and travel down the duodenum

The **duodenum** starts at the outlet of the stomach or the upper part of the small intestine. As food travels from the stomach into the duodenum, the bile is released to emulsify the fats that turns them into a milky solution and returns the solution back to the liver via the blood.

The **pancreas** produces lipase, an enzyme that helps breakdown fats. It also produces a hormone that stimulates contraction of the gallbladder and causes the ampulla of Vater to open so the bile can flow into the duodenum.

The biliary system is the main part of your natural detoxification system within the body. When this system is working properly the function of all other organs will do their job more efficiently. When this system self-cleans the accumulated toxins and poisons that the liver has absorbed from the blood, it is supposed to render them into other harmless compounds for elimination. If the passageways are not clear, the toxins and poisons from disease or infection will accumulate. This will cause other disorders of the liver, which then effects all other body functions.

A simple coffee enema can stimulate the release of bile, as do some herbs. The **Ultimate Detoxification Process** not only stimulates the release of hepatic bile from the liver it promotes healing at the same time. Flushing out the accumulation of debris in the liver allows it to absorb more and continue its job of keeping us healthy. This is most essential for any disease.

There are other ways to detoxify the body if you are already in good health. Avoiding junk food, artificial sweeteners, coffee and tea will enhance detoxification. A mixture of herbal teas will speed up the process.

There are many foods that help clean and detoxify the body. Apples contain malic and tartaric acids that stimulate all body secretions and helps prevent liver troubles.

Dandelion helps in the elimination of toxins from the liver by increasing bile production and stimulates its release. Watercress relieves liver inflammation. Foods for a sluggish liver; grapefruit, parsley, pomegranate, raspberries, quince, strawberries, tangerines and tomatoes. Scrape the wax substance off any fruits and vegetables, and wash before eating.

Foods that can neutralize toxins are aduki beans, black soybeans, figs, millet, mung beans, radishes, Swiss chard and turnips.

Plant derived nutrients like Tropical Sunrise are needed to nourish the cells and to detoxify and neutralize the toxins. The cleaning process is slowed down when the body is lacking in the nutrients required. Detoxification can not occur without all the building blocks in place.

Avoid the types of calcium (carbonate, oxalate, and phosphate) that build-up as kidney or gallstones and create other physical problems.

Enzymes help transform toxic chemicals into less toxic forms.

Antioxidants such as glutathione helps neutralize free radicals and help protect the liver.

Those who are in good health and want to detoxify can facilitate it with amino acids, bioflavonoids, vitamins C, B complex and E, calcium, copper, magnesium, selenium and zinc. Eat a healthy diet of fresh organic fruits and vegetables. Those with deteriorating health problems may require all the nutrients in balanced portions.

Drink at least two quarts of purified water daily. Water helps carry toxins out of the cells and helps clean the colon.

Exercise and sweating in a sauna will improve circulation, helps flush the lymph glands, and promote the release of toxins

through the skin. Drinking more water is always required to keep you from getting dehydrated.

Fasting should not be considered if you are sick and weak because you need all of the nourishment you can get. If the body is strong, you may consider a light fast periodically of fresh vegetable soups or juices that are easily digestible. Changes in your diet can effect your health. You may want to consult with your health practitioner before you fast.

Garlic can detoxify the putrefactive bacteria in the intestines, and enhance your immune system reactions against cancer, candida, heart and other disease. A teaspoon of diced garlic mixed with a tablespoon of olive oil taken at night will liven up the liver and increase blood circulation through it.

Grapes combat jaundice, sluggishness and stimulate bile flow. Dandelion root, artichoke leaves and turmeric will increase bile flow from the liver.

Juicing and eating lots of clean fresh vegetables, and taking additional fiber will help absorb some of the toxins and aid in their elimination. When juicing fruits or vegetables it is important to wash and peel them thoroughly if necessary. Cut them into pieces small enough to fit into the juicer. You can dilute with pure water or apple juice. Some of the best vegetables to juice are beets, cabbage, carrots, celery, cucumbers, kale, parsley, turnips, spinach, watercress, and wheatgrass. Vegetables rebuild and fruit juicing cleanses the body. Drink at least one pint a day for beneficial results. Use only organic grown.

There are many different combinations of vegetables used in juice cocktails. In the book ***Foods That Heal***, by Bernard Jensen, there are many combinations for a large variety of health disorders.

Detox Cocktails

- Cocktail to clean the blood and provide energy: Juice four carrots and cut a 1/2-inch slice of gingerroot. Then juice 1/2 apple (cored and seeded) and 2 small beets.
- The **Master Cleanser** by Stanley Burroughs is drinking a combination of 2 Tbsp. of fresh lemon juice mixed with 2 Tbsp. of pure maple syrup, 1/10-Tsp. cayenne pepper mixed in 10 oz. of pure water and taken 6 to 12 times a day.
- Combinations of garlic, lemon juice, grapefruit juice and olive oil taken in the evening are also great cocktails. Juice 1 clove of garlic with 1 fresh grapefruit, 1 whole lemon, and 2 Tsp. of cold pressed olive oil.
- Juicing raw vegetables like 5 carrots, 2 celery stalks and 1 small beet will stimulate the liver and lymphatic system. Adding kale, garlic and a little ginger will warm up the body and kick in the immune system. Another cocktail for the liver is juicing 2 or 3 apples with half an apple.
- A cleanser cocktail consists of juicing 4 carrots, half cucumber with 1 beet.
- An alkaline cocktail will raise pH. Juice a 1/4 head of green or red cabbage with 3 sticks of celery. Carrots and other high alkaline vegetables can be added to suit your taste. The larger the variety, the more nutrients the body receives.
- For a green cocktail, juice 5 carrots, 3 sprigs of parsley, 1 handful of spinach, 1 handful of kale, 1 beet with top, and 1 clove garlic. A variety of different vegetables used in juicing will give you a wider variety of nutrients.
- Salt (sea or cell salts) and vinegar are good detox agents or vinegar can be used for food poisoning. Vinegar can neutralize poisons and toxins. Mix one teaspoon of apple cider vinegar in 1/3 cup of pure water 2 or 3 times a day. For food poisoning take 1/4 teaspoon every 15 minutes until symptoms are gone.
- Gallstones, drink a half-cup of olive oil mixed with a half cup of lemon or grapefruit juice just before bedtime. In the morning drink something hot and the stones should pass from the bowels. Green vegetable juices or combinations of beetroot and radish juice are helpful. Marshmallow and shavegrass help dissolve and discharge urinary or gallbladder stones.
- Stomach ulcers, juice half a cabbage head with one peeled apple or two carrots mixed with a half cup steamed pure water and drink.
- Apple cider vinegar may be used for excess mucus or inflammations in the mucous membranes. One freshly squeezed lemon, one teaspoon of honey mixed in a cup of warm water helps breakup phlegm and mucus.
- For a fast laxative, the ascorbic acid flush is another alternative. Drink 1,000 mg in a cup of water and increase dosage every half-hour until diarrhea occurs, subtract 1 from the total and take every 4 hours for one or two days. If the liquid does not go out the opposite end and comes out the way it went in, it may be an indication you have a restriction in the digestive tract. Use with caution, ascorbic acid is a synthetic form of vitamin C.
- For a drink to loosen excess mucus and clean the liver. Squeeze the juice from a half lemon, and pore into a cup of warm water with 1 teaspoon of honey. Small amounts of ginger can also be added. This old remedy is helpful for colds or flu.

The Salty Wush

This laxative cocktail is very effective for cleaning out parasites, plaque, and other debris from the walls of the whole gastrointestinal tract. This old remedy is stated as being helpful for just about anything. The ingredients used for this cleanse are very inexpensive and can be purchased in any market.

The cleansing starts first thing in the morning on an empty stomach. Doing one "salty wush" a month is recommended for maintaining good health and to replenish electrolytes due to lacking salts or minerals from an insufficient diet. Some people recommend doing one every morning for four days if you have serious health problems.

If you are currently on a salt free diet, overweight, or you have heart problems you may want to consult with your doctor first before proceeding with this type of cleanse. However, to deprive one of natural salt can also become a hazard. This natural sea salt (halite) is essential for maintaining balance and human life. It also ensures that the proportion and concentration of salts in the blood remain constant. The body needs 5 to 10 grams of salt per day in our diet to maintain health.

The main elements contained in rock salt besides sodium chloride and other salts are magnesium sulphate, calcium sulphate, magnesium chloride, and potassium chloride. Do not use white table salt! Regular table salt is iodized and it may contain aluminum tricillate, which prevents it from caking in your salt shaker and should not be consumed by humans in any way. Rock salt can be crushed with a rolling pin or ground up into small granules and used for cooking. Rice can be added with the salt to keep it loose in a shaker. A recent study published in the Dec. 1, 1999 issue of JAMA reports that the intake of

white table salt only increased blood pressure in overweight individuals.

The only supplies needed are a box of rock salt, the kind used for making home made ice cream, a quart jar and a toilet nearby. Heat two quarts of water until steaming. Add two rounded teaspoons of rock salt into a one-quart glass container; fill with hot water and stir. The water should be clear and not cloudy after the salt dissolves. Allow the water to cool (hot but drinkable) and drink the first quart down as fast as possible. Mix up a second quart of the same and drink slowly in the next 20 minutes. Children should only do one quart. You will feel a little bloated with some tingling and rumbling going on the tummy area as the solution passes through the small intestine and into the colon. You may also experience a few chills as the toxins are breaking loose and you may get thirsty. Heart rate will only increase a fraction. It should take from two to three hours for complete elimination of the solution. It is not a good idea to go anywhere after taking, stay at home near the throne.

If there are any restrictions in the colon and the solution does not come out, you may need a few colonics to reestablish proper flow. If there is an excess of poisons and toxins present in the stomach or restrictions in the small intestine, you may react by vomiting soon after drinking the first quart. This should be an indication that cleansing is necessary and too proceed as tolerated, especially with the elderly. Do a colonic after the salty cleanse to finish removing the rest of any undesirables in the colon. This will prevent reabsorbing any toxins not completely flushed out the first time; otherwise, a small healing crisis may be experienced the following day. Continue by drinking more liquids or juices for the rest of the day, this helps in the elimination of more toxins.

THE COLON

The colon is essential to your overall health and for elimination of waste products. Every day, more and more health care professionals are starting to realize that, "nearly all disease can be traced to a toxic colon."

The colon is the major part of the large intestine. It is a segmented tube within the abdomen cavity with the form of a large M shaped loop about 4.5 feet long and 2.5 inches wide. The colon ends at the anus.

The small intestine is situated below the stomach and liver. It is the major part of our digestive tract. It occupies much of the central and lower parts of the abdomen. The small intestine is about 21 feet in length and 1.5 inches wide. The total surface area of the gastrointestinal system is about six thousand square feet.

The main role of the colon is the removal of waste products and toxins from the body. The two-way membrane of the colon allows for the absorption of nutrients into the blood supply. In Europe, doctors consider the colon as the third lung because it has the ability to absorb up to 70% of the oxygen introduced to it during surgery.

Some common disorders of the intestines are: congenital defects, infection and inflammation, tumors, impaired blood supply, obstructions, peptic ulcers, and ulceration in the small intestine occur in typhoid and Crohn's Disease. Other disorders are appendicitis, diverticular disease, overweight, irritable bowel syndrome, ulcerative colitis, worms, bowel and other forms of cancer. Medical science acknowledges that up to 85% or more of all adult Americans suffer from some form of intestinal problem. Children are also effected by these same problems because of their diets.

Some symptoms of colon dysfunction are: allergies, appetite loss, asthma, backache's, bad breath, bad body odor, concentration loss, depression, eczema, fatigue, food cravings, gingivitis, headaches, hemorrhoids, indigestion, insomnia, irritability, memory loss, menstrual problems, nausea, nervousness, prostate problems, stomach pains, swelling, tension and weight problems.

Over the years, the colon's walls can become encrusted with uneliminated waste, making its function inefficient. The average person can have up to 10 pounds of old uneliminated waste accumulates in the colon. Other's can have as much as 10 to 30 extra pounds of unnecessary weight that can be eliminated very easily.

Problems in the Colon

Appendicitis is an inflammation in the appendix, which is due to an obstruction by a lump of feces or parasites. The tissue lining becomes infected, inflamed and causes swelling of the appendix. This condition can lead to gangrene or bursting of the appendix if not treated.

Autointoxication occurs when poisons and toxins are absorbed into the bloodstream via the colon. This is due to a dirty colon and the buildup of old waste matter that is not properly eliminated.

Ballooning occurs when waste backs up and stretches the walls of the colon due to a stricture or narrowing of the passageway. A **stricture** is damaged tissue from an inflammatory disease like colitis. The waste has a hard time getting through and causes the ballooning.

Colon Cancer is the second most common form of cancer and accounts for 20% of all cancer deaths. Carcinoid tumors are slow growing and can spread to the liver. Lymphomas damage the

intestinal walls, causes malabsorption of foods, and travels to the lymph nodes. About 97,700 cases of colon cancer are diagnosed yearly in the United States; consequently, 47,000 will die yearly.

Diverticula Disease is caused when the muscular walls in the colon become weak due to lack of fiber or bulk. A small hernia can occur in the weak spots to form pouches that protrude outward, called diverticula. When the pouches collect food and waste, the condition is called *Diverticulosis*. When an infection occurs on the inner lining of the pouches due to bacteria, the condition is called *Diverticulitis*.

Inflammatory Bowel Disease is ulcerated colitis or Crohn's Disease. Ulcerated colitis is ulcers or abscesses that occur from inflammations of the mucous lining of the colon. Crohn's usually occurs in the small intestine (ileum) or in the colon from spreading inflammations. Scar tissue develops as they heal which narrows the passageway. Transit time is reduced which results in weight loss and malnourishment.

Irritable Bowel Syndrome is a disorder of the muscular walls that effect transit time of waste to the rectum. This condition is also known as Apparent Colon Syndrome, Mucous Colitis, Spastic Colon, or Non-inflammatory Bowel Disease. IBS is the number one digestive disease in the United States.

Mucosa is mucus formed to trap harmful substances and keep them from penetrating into the body. The natural mucus is needed for lubrication in the elimination of waste. Some foods create mucus that adds to the propagation of bacteria or pathogens. An excess of mucosa in the stools causes clumping of the feces and constipation. Colon dysfunction occurs when the mucus becomes stagnant and putrefied which

keeps building up layer upon layer. It then becomes a source of infection, irritation, abscessed, and ulceration's on the walls of the colon. The toxins created will be absorbed into the blood. This condition also inhibits the absorption of nutrients and water.

Obstructions are a blockage that can be caused from waste backing up due to weak muscle contractions, undigested food, Crohn's, diverticula, hernia in the small intestine, closure or narrowing, a twisting or knotting of the colon, or a large worm infestation.

Parasites living in the small and large intestine contribute to a variety of disease and most intestinal disorders. Parasites destroy the intestinal lining, cause inflammation, irritations, infection, weak spots in the intestinal walls, and are responsible for the accumulation of some toxic waste. No part of the body is immune to parasites.

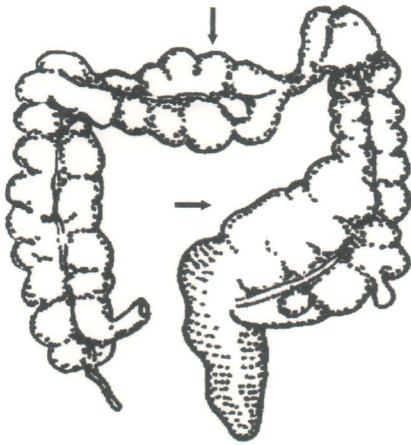
Polyps are growths on the inside of the small intestine and colon. Polyps can cause an intussusception or blockage in the small intestine. Polyps can be cancerous.

Prolapsus in the transverse colon is caused from an accumulation of waste. Gravity will force the transverse colon downward. The excess weight will determine the pressure exerted on the other body organs below. This can also put pressure on the spine and back.

Spastic bowel occurs when the bowl muscle's spasm from being overworked and tense.

Ulcerations are caused from constipation and autointoxication. This occurs on the muscle tissue from abrasions or irritants from bacterial or parasite infections, toxins, and result in bleeding from open sores.

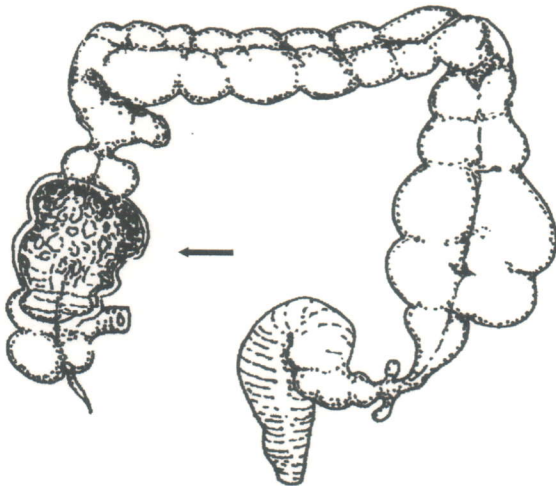
Ballooning



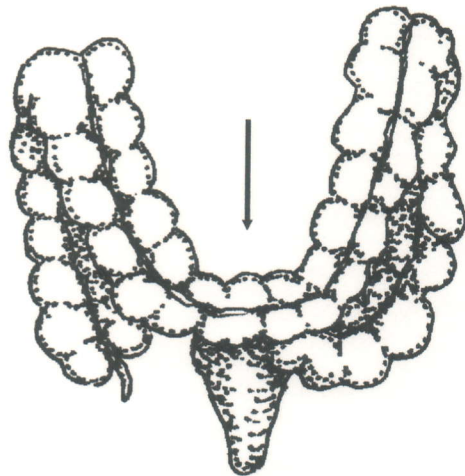
Polyps



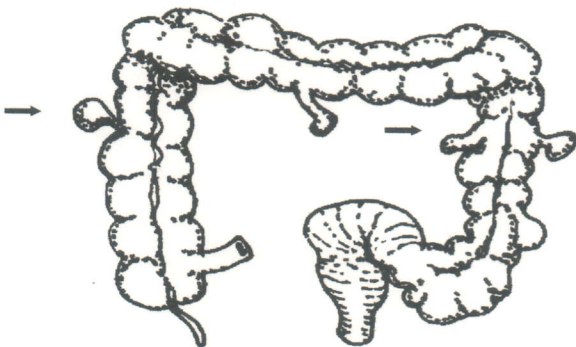
Colitis (Ulcerative)



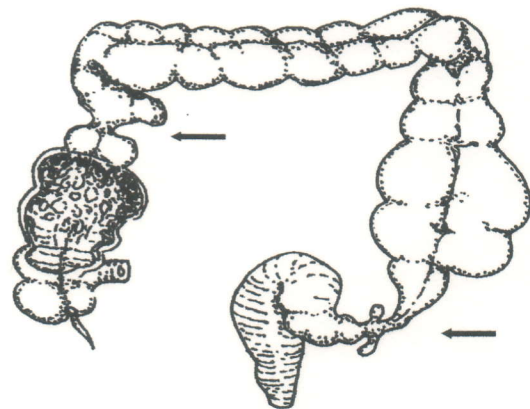
Prolapsus



Diverticula Disease



Strictures



A small booklet titled "Colon Cleanse the Easy Way," the author's state; ***Not to cleanse the colon is like having the entire garbage collecting staff go on strike for days on end! The colon is the sewage system of the body, but let it stagnate and it will decay and putrefy into the blood stream, poisoning the brain and nervous system so you become mentally depressed and irritable, poisoning the heart so you become weak and listless, poisoning the lungs so that your breath is foul, poisoning the digestive system so that you are distressed and bloated, poisoning the blood so that your skin is sallow and unhealthy. In short, every organ is poisoned and you age prematurely, look and feel old, the joints are stiff and painful, dull eyes and sluggish brain overtake you; and you lose the joy of living.***

Dr. Bernard Jensen states: ***"Every tissue in the body is fed by the bloodstream, which is supplied by the bowel. When the bowel is dirty, the blood is dirty and so are the organs and tissues. It is the bowel that must be cared for first."***

The "cycle of death" begins when the function of the colon is impaired. When not functioning properly it will affect the digestive system and every living cell and organ in the body. When the foods are not fully digested, the degenerative cycle begins. The undigested foods begin putrefying in the colon and creates an over acidic condition. The friendly bacteria begin to die off, creating an anaerobic environment for disease producing bacteria, virus, fungi and parasites. The accumulation of toxins or poisons from this environment can build up in the lymph and bloodstream. This condition is called autointoxication or self-poisoning in the colon.

When the colon's environment is out-of-balance, **"disease is the end result."**

When the toxins are reabsorbed through the blood capillaries lining the colon, the blood will putrefy and further acidification of the blood takes place. After time, the dirty blood can pollute every cell in the body. The "cycle of life" reverts to a "cycle of death."

"Life begins and ends in the intestines."

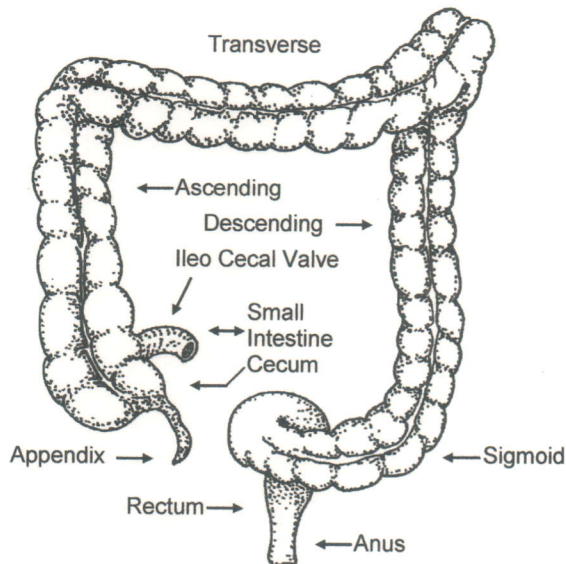
There is a simple method to clean the colon. It's called "colonics" or known as Colon Hydrotherapy by others. Colonics is irrigation of the large intestine. Old stagnated and putrefied fecal materials are simply washed out of the colon. The cesspool gets a through cleaning with purified water. The water is purified and saturated by the best purifying agent known to man. That agent is known as OZONE.

Colonics is the most effective way to cleanse the colon of accumulated toxins and waste. This therapy draws toxins from the blood and lymph back into the colon for elimination. This lays the foundation for improved health and a much more active life style that you can enjoy. Cleaning the colon starts the "new life cycle" for an exciting new life.

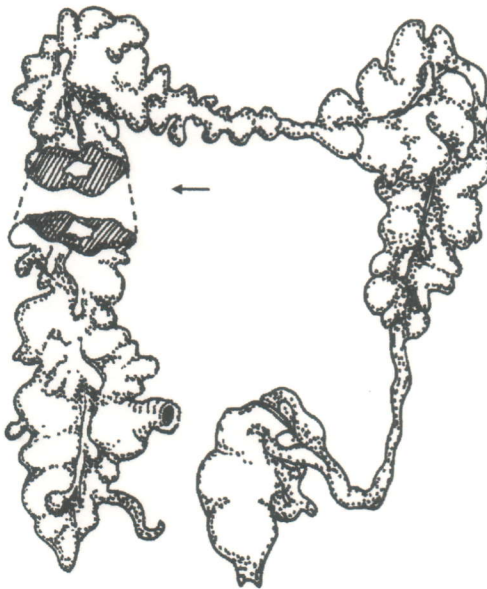
The theory of "LIFE and DISEASE" as stated by V. Earl Irons, Sr.: ***"There is only one God, there is only one Supreme Power, there is only one Cause of Disease, there is only one Disease and there is only one treatment for ALL DISEASE."***

"Colon cleansing treats the cause, not the symptom."

A Healthy Colon



The Abnormal Colon



Note the cut-away view of the Ascending Colon. It shows a small hole in the center of the encrusted hard fecal matter, which is probably more than 20 years of formation.

COLON CLEANSING

"Body balance" has been greatly emphasized throughout this book. For any of the vitamin and mineral supplements to fully benefit the human body, the intestines must be clean and free of debris.

For some, it may be necessary to cleanse the intestine (colon) manually. A clean colon will allow the nutrients to absorb through the intestinal walls, helping the body to detoxify and rejuvenate at a faster rate. Taking the best and all the vitamin supplements will not benefit anyone if the nutrients are not absorbed through the intestinal walls. This is like flushing your hard-earned money right down the toilet.

There are a few who have purchased ozone generators because of health related problems. The ozone did not help their problem and they were unsuccessful in their attempts because of a dirty colon.

Cleaning the colon should be the first step in any detoxification program. It helps in the absorption of nutrients and to diagnose related health problems.

Colon cleansing helps to reestablish regular bowel movements by restoring muscle tone and normal peristalsis (muscular contractions in the colon for moving waste). Peristalsis also stimulates the liver to produce more bile, which aids in the absorption of lipids and fat-soluble vitamins.

Other benefits of colon cleansing are. Relieve and clears blockage in the colon. Induce proper blood clotting and cleans the blood. Helps prevent the production of gallstones. Colon cleansing assists in the breakdown of cholesterol, cleans the colon of *Candida* and parasites, and stops infection and inflammation. It also help's control blood pressure, restores pH

balance in the body, restores proper digestion and reduces bad body odors.

Some symptoms relieved by colon cleansing are: a coated tongue, constipation, backache, bad breath, bloating, fatigue, bad gas, headaches, indigestion, loss of concentration, lung congestion, sinus congestion, skin problems, nail fungus, and symptoms of *Candidiasis*.

Poisons From A Toxic Colon That Age and Destroy The Body

Agmatine	Methylmercaptan
Ammonia	Muscarine
Bera-imidazothylamine	Neurin
Botulin	Pentamethy-lendiamine
Butyric acid	Phenol
Cadaverin	Ptomarropine
Cholin	Putrescin
Cresol	Sepsin
Histidine	Skarol
Hydrogen sulfide	Sulpherroglobine
Idolethylamine	Sulphuretted Hydrogen
Indican	Tetramerhy-lendiamin
Indol	Tyramine
Methane	Tryptophane
Methylgandinine	Urobilin

These poisons are the result of bacterial action during the putrefaction of foods that travel too slowly (usually from constipation) in the large intestine. These toxins will eventually burden every vital organ and cell in the body. In Europe, this condition is known as Alimentary Intestinal Toxemia or better known as a toxic colon.

A simple observation of the stools provides valuable guidelines to what is or not needed in your daily diet. The transit time (the time it takes for foods to travel through the digestive tract) can be too slow or too fast. Looking at what you created is like looking at a picture that tells a thousand words. Thinking this is degrading or embarrassing is like not facing reality.

The **Bristol Stool Form Scale** divides stools into seven distinct types of size, shape and color.

1. Dry with hard lumps or clumps. When transit time is too long, one may be extremely constipated. Usually caused by a lack of fluids, lack of friendly bacteria, essential oils, stress, excess mucosa, and not enough good fiber. Avoid alcohol, baking soda, and all products with refined white flour, sugar, white rice and yeast.

2. Like lumpy sausage.

3. Like sausage with surface cracks.

4. Long smooth surface. Normal, good color, quick exit, and easy to clean.

5. In blobs with well-defined margins.

6. Fluffy with ragged edges.

7. Watery with no solids. Diarrhea is usually caused by a bacterial or virus infection from foods or water. It can also be caused from anxiety, food allergy, drugs, or problems in the colon. This is a sign that something is wrong and the body is trying to clean itself. Drink extra water with vitamin C and electrolytes added to avoid dehydration. If it continues for too long a colonic should end it.

The size and shape of the stools indicate the transit time through the digestive tract. The color can tell you how well your digestion is and alert you to other changes concerning your health.

The **lighter in color** (pale) may indicate a blockage in the bile duct or a deficiency in producing bile (a digestive aid). Because of the high fat content, stools may be foul smelling and sticky like clay making it difficult to flush. This is usually the result of malabsorption.

Blood (red) in the stool is a good indication of colon disease, internal hemorrhoids, or parasites. Eating beets

will add color to stools and urine and be used as an indication of transit time.

Dark stools are usually from a diet of dark greens, iron supplements, or meat.

Black stools may indicate bleeding in the stomach or small intestine caused from an injury, bleeding ulcer, tumor, or worms.

Slimy stools contain excess mucus caused by bacteria, Candida, tumor, or other problems in the colon.

During the first phase of colon cleansing, the old stagnant waste coming out may appear in two types. The putrefactive waste has a very strong odor. The postputrefactive waste can not putrefy any further. The color ranges from black, dark brown, gray, or green with a little odor.

A healthy stool is long, round, and smooth with a texture similar to creamy peanut butter and golden brown in color. It should be slightly acidic so it floats on the surface of water breaking up soon afterwards. When the pH in the colon is slightly acidic it promotes the growth of friendly bacteria. The balance is thrown off when it gets too alkaline, creating an environment that only the bad can survive. Normal stools and bowel function return after colon cleansing.

A well-balanced and proper diet will cleanse the colon over a long period of time but those with serious health problems need to take quick action.

There are different methods and agents used in cleaning the colon. The most common is an enema called colonics. Additives that can be added to the water solution is bentonite (a ground up volcanic ash), cascara sagrada, garlic, hydrogen peroxide, calcium, chlorophyll, coffee, herb's, psyllium hulls, vitamins and minerals.

Colon cleansing is safe and effective for every one of all ages, children and the

elderly alike. Additives to the colonic water should be half that of adults for children. Pregnant women should abstain from cleansing the last three months of pregnancy and should consult their doctor.

The book *"Tissue Cleansing Through Bowel Management,"* by Bernard Jensen D.C., Ph.D., Nutritionist, describes these different methods very thoroughly. This method; however, requires a seven day diet of liquids to shrink the colon but the body becomes quite weak during this process. Those already in a weakened state should avoid fasting to prevent any further problems.

Colon cleansing is not some new fad or technique. It has been in use since 1500 BC by the Egyptian's. Dr. Elmer Lee introduced the first method used by many physicians in the U.S. for irrigating the intestines in the late 1800's. It was first used in St. Petersburg during the cholera epidemic of 1892. It was found to be a cure for cholera and many other bowel diseases at that time. Dr. Lee's apparatus for a colonic board and methods used then are similar to the same boards and methods used today. Those who have administered colonics to their patients in past have achieved remarkable success.

Another method currently being used with success by oxygen therapy users is ozonizing the colonic water and adding a little hydrogen peroxide. In the anaerobic world of parasites, pathogens and virus, ozone and oxygen is public enemy number one to these little creatures. Nothing can surpass the kill power of ozone in this environment.

The authors of some colon cleansing books are against oxygen therapies. They are not familiar with it because they have never tried it. As time passes, their thoughts may change for the better.

In a book called *"Healing Within,"* Stanley Weinberger, states; ***"There is no comparison in the way one feels after a cleansing with the new procedure with oxygen. Some authorities state that, liter per liter, more oxygen is absorbed through colon cleansing than through the lungs. This not only helps to heal the affected tissues in the colon, but also allows the oxygen to pass quickly into the bloodstream and bathe all the cells in the body. Colon therapy with oxygen has an antihelmintic action; that is, parasites are removed."***

The concentration of ozone in the water will determine the effectiveness of the cleanse. However, if there is too much ozone in the water it can be absorbed into the blood. If the ozone reaches the lungs it can cause coughing and the release of excess mucus. This can be an indication when the colon is becoming clean.

The addition of trace minerals will hold the ozone in the water, slowing down the disintegration time of the ozone. If the temperature of the water is too hot, the disintegration time is shortened. Water temperature should be around your normal body temperature.

Hotter water helps break loose the old crusty matter faster, but the toxins will absorb through the walls of the colon quicker. Your skin pores will open with warm water and close with cold water. This can apply to the colon as well.

The bacterial kill rate is higher in ozonated water at 100 degrees than it is at 70 degrees F, but not over 115 degrees. Water should be warm to the touch after ozonation. The ozone is bubbled into the water for 15 to 20 minutes with a generator that produces from 7 to 8 grams per hour. Smaller generators may take from 1/2 to 1 hour to ozonate the water.

The hydrogen peroxide is added (1/2 to 3/4 ounces of 35% or add 6 or 8 ounces of 3% food grade) to the water after ozonation.

"Use H₂O₂ with Caution"

Read and Follow All Instructions On The Label Before Using Hydrogen Peroxide. The 35% H₂O₂ Should Be Stored In The Freezer Away From Children.

Herbs and oils can be added to the water. Do a drop test of each with a drop of 35% H₂O₂ to check for any adverse reactions. Colloidal silver can also be added if preferred. Some use this water from a pressurized bottle or gravity feed from a 5-gallon bucket, which flows into the colon through the rectum. Other additives that some have added in the past to the cleansing water are as follows.

Ground coffee (3 tablespoons) added to 1 quart of water, brought to a boil and simmered for 15 minutes. Strain and add to 5 gallons of lukewarm water.

Epsom salts (1 tablespoon) dissolved in 5 gallons of lukewarm water.

Garlic (4 cloves) added to 1 cup of hot water and mixed in a blender, strained and add to 5 gallons of lukewarm water.

Strained lemon juice (1/4 cup) added to 5 gallons of lukewarm water.

The ozonated water and H₂O₂ will absorb into the old encrusted waste products that are lining the intestinal walls. The oxidizing and bubbling action will breakup the old fecal waste quicker than the other methods. The ozone oxidizes the bad bacteria, viruses, toxins, and parasites on contact before reabsorbing into the walls of the colon. Most of the bad odors are also controlled as the toxins and debris is eliminated out of the rectum.

The action of the ozone-oxygen will act as an alkalizing or neutralizing agent to these

foreign invaders that have taken up residence in the colon. Oxygenation of the blood will restore its pH so the body's electrolytes can function properly. When the body's chemistry is balanced, proper tissue and organ function will be restored.

The ozone-oxygen absorbs through the intestinal walls into the bloodstream if the colon walls are free of debris. A tingling sensation is felt throughout the body as the ozone-oxygen is circulated in the blood and purifying it at the same time. The increased amount of oxygen in the blood is highly energizing and restores bad circulation.

When extra amounts of hydrogen peroxide are used (2 or 3 ounces per five gallons of water) it has a tendency to turn gall and kidney stones into a fine gravel or sand. When your urine is foamy, is a good indication there is enough hydrogen peroxide. Start out with small amounts to see how the colon responds. Do only as tolerated. Once should be sufficient.

Ozone oxidizes the plaque in arteries and restores flexibility to red blood cells, which eliminates clumping in small capillaries. This method of irrigation is used in colitis and all chronic intestinal inflammations.

In an article titled **"Medical Ozone,"** John C. Pittman, M.D. states, *"I do believe that ozone is an important tool in medicine and should have a place in the treatment of disease, because most of the diseases afflicting humans today can be traced to diminishing levels of oxygen and a compromised immune system. Any therapy that can increase oxygen at the cellular level deserves to be incorporated into a complete treatment program. Ozone also possesses particular properties that make it a potent anti-viral substance. This is significant since many of today's most devastating diseases appear to be viral in origin. These diseases need active powerful intervention in order to be*

reversed. Ozone is a potent immune system stimulant that can also help to restore the bodies' own defenses, thereby making it possible to resist some of these intrepid viruses. Of course, building back the immune system depends on a complete program, including thorough detoxification with body cleansing. So, when given in conjunction with a program through body cleansing, lymphatic massage, supplementation, and other adjunctive therapies that stimulate the bio-oxidative process, ozone can do miraculous things. And, it is up to all of us, patients and doctors alike, to demand access to this incredible healing substance."

There are a few contradictions to colon cleansing. If any of the following colon problems pertains to you, proceed with caution.

Cardiovascular Disease	High Blood Pressure
Cardiomegaly	Megacolon
Crohn's Disease	Pregnancy
Cysts	Renal Insufficiency
Diverticulitis	Tumors
Hemorrhoids	Ulcerative Colitis

Oxygen therapy has helped with some of these contradictions. There is nothing wrong in taking precautions when it concerns your health. If you have already been diagnosed with any of these problems, it would be foolish not to proceed with colon cleansing.

A safer way of starting out that I would recommend first is taking a oxygen based magnesium type intestinal cleanser like the Oxy-Mega. Cleaning the whole digestive tract will start the restoration cycle and enhance the colon irrigation. Problems can exist in the stomach and small intestine as well. Just cleaning the colon does not take care of problems in the rest of the digestive tract.

OXYMEGA oxygen colon cleanser is a combination of citric acid and powdered magnesium oxide compounds, which has been stabilized to release nascent oxygen over 12 hours or more. The timed release ensures that OXYMEGA colon cleanser dietary oxygen supplement will provide an adequate amount of oxygen, slowly, for better utilization. This type is better than herbal colon cleansers.

Miracles have and will always continue to happen. Ozone and colon cleansing may help you after the first few times or it may not if the body is extremely filled with toxins. Try to imagine traces from every bacterial or viral infection, every drug or chemical, agents from processed foods still lying dormant in your fat and muscle tissue. Imagine pounds of this stagnant waste lying dormant in the colon. During this type of detoxification, the toxins are forced out of the body and you may experience diarrhea, fatigue, fever, nausea, or night sweats for a few days. For some, it may continue a few weeks. Your body temperature will run slightly higher than normal once your immune system begins working. This is normal during the detoxification process. The more toxic your body is, the stronger the **"healing crisis"** will be.

This process of eliminating toxins and old waste products is a sign that detoxification is working. The healing crisis is a normal reaction from the cleansing or purifying process that the body must go through in removing the old stored waste. The old has to be removed first for regeneration and healing to occur. You may be thinking that the healing crisis is a bad side effect, but in reality, it turns into a good effect. Look forward to its happening with a firm commitment to achieve optimum health.

The cost of colon cleansing by a trained therapist would be a minimum of \$50 too as much as \$175.00 per treatment. Some may feel this is too expensive but can go

out on the town or to dinner and blow this much in a few hours. Your number one priority in life should be one of good health so you can continue and enjoy going out on the town. When our body gives signals (symptoms), it's for a good reason. It tells us when there is something wrong or out-of-balance and that corrections need to be made.

Some first impressions of colon cleansing are that it is embarrassing. If you continue to think like this you are only cheating yourself from a more favorable life and your symptoms will only continue to worsen. Another option for those that are too embarrassed or stubborn is to purchase your own equipment and do-it-yourself. A colonic board and ozone generator can cost you as low as \$600.00 for a complete setup. A more expensive setup will cost around \$2,500.00. The cost is not that expensive when you consider what the medical profession charges these days or the cost of health insurance. In fact, colon cleansing is the best life insurance policy you could possibly have.

Once you see the results you will continue cleansing the rest of your life. Some health professionals may tell you that colon cleansing is habit forming and those considering colon cleansing have asked this question many times. Colon cleansing is not habit forming but **"feeling good"** and **"looking good"** can most definitely become a good habit. As long as you are eating good and taking the right nutritional supplements for your condition during colon cleansing the healing process will continue to escalate. It depends on you!

What better investment can a person make for himself or others but that of good health?

PROCEDURE FOR SELF CLEANSING

This method of internal colon cleansing is much easier and more thorough, and self-treats in the privacy of your own home. Some believe that a trained professional should always administer colon cleansing. With a little self-education and experience, you can be your own professional. However, there are always those who will require professional assistance if they are too sick.

You should not proceed with the cleanse if the colon is weak, had a recent operation, if you are pregnant. Nursing mothers should also abstain because toxins may form in the milk. You may want to consult your physician first.

There are no bad side effects, it is painless, and there is no fasting required. This method works on a gravity flow principle with very little pressure or distention of the colon. Bowel evacuations and emptying of the bladder are done at will.

A five-gallon plastic bucket is needed with a diffuser for bubbling the ozone into the water. The hose from the board connects to a 1/4 valve located at the bottom of the bucket. After the water is ozonated, the bucket hangs from the top of a bathroom door or it may hang from a sturdy shower door. Bend a 1/4 or 3/8 steel rod in the shape of a J or S to hang the bucket from. The bottom of the bucket should be approximately 2' to 3' (higher = more pressure) above the toilet lid with a minimum of 5 gallons of warm (100 to 105°) ozonated water.

A large plastic spaghetti strainer can be placed in the toilet bowl for final inspection if preferred. Latex gloves should be worn throughout the cleansing, especially for the over inquisitive.

With one end of the Colema™ board on the toilet and the other end sitting on a strong chair or another five-gallon bucket, connect the hose to the bucket and turn ON. When the water is flowing shut OFF the hose clamp valve. Insert the plastic rectal tip in the short hose on the colonic board and lubricate the plastic tip with vitamin E or K-Y Jelly. Rub a little of the jelly into the rectum. Spray the finger with 3% hydrogen peroxide and wipe off with a paper towel. This will prevent any possible transfer of bacteria to other body parts. Position yourself on the board and gently insert the tip in the rectum (about 2 to 3 inches) and slide up as close as possible.

Proper tip and rectum lubrication is important to prevent injury. Perforation to the colon or rectum is possible if the tip is forced or inserted too far.

Turn ON the hose clamp valve and lay down. The ozonated water will flow into the colon slowly. When the colon is full, the water will release on its own. Do not bear down to force it out as if you are having a baby. If the colon is weak and undernourished, it may cause damage. If you feel extremely bloated or the water is not releasing on its own you should massage the lower tummy area. This cycle will repeat itself for about 40 minutes or until the water container is empty. Throttle down on the clamp valve and retain the ozonated water for as long as possible. This allows the ozonated water and H_2O_2 to absorb into the old encrusted matter that is lining the colon walls. The bubbling action of the hydrogen peroxide breaks away at the crust or loosens it for faster elimination.

While the cycle continues itself, gently massage the entire area of the colon and the small intestines. Start the massage on the lower left side working your way up and across to the lower right side. Every so often, exercise the tummy using the stomach muscles to suck the stomach

inward and outward. While lying flat on the board, roll a little to right side for a short period and then to the left side. When on the right side, sit up for a while before releasing the water. This will let the water loosen the debris in the appendix area. These colonic exercises or using a hand held massage vibrator will help loosen the debris on the walls of the colon much faster, and it keeps you from becoming bored.

If any cramping occurs during cleansing, the water may be too cold or you are too tense. It may also be caused from weak muscles due to long term constipation or other colon disorders. Relax and massage the area to relieve the cramp. Avoid eating large meals before a cleanse that may cause bloating or cramping. Do each cleanse after your daily bowel movement.

When finished, shut OFF the hose valve, slide your body backward, and remove the tip. Before you get up, raise the middle portion of the body upward so any accumulated water can drain from the appendix to the ascending colon. Twist the body to the left so the water can drain from the transverse into the descending colon. After a few moments sit up for a while and release as much of the excess water as you can.

Place the Colema™ board in the shower and wash off thoroughly. Wash the tip in warm water and spray the inside and outside with hydrogen peroxide. Clean the tip before and after each cleanse. You might also want to stay close to the throne for a while just in case a large volume of retained water needs releasing.

Keep a daily written record to determine your weight loss, weighing yourself before and after each cleaning. When weighing yourself after cleansing, make sure all the retained water has been released. When you are a couple of pounds heavier after a

cleanse you may have retained the water because the body needed it.

The most important thing to remember in all cleansing treatments (especially during the beginning) is the final flushing of the water.

The wastewater should be **clear** near the end of each treatment. If the final flushing is still contaminated with toxins and waste, follow-up with another cleanse. If you do not, the toxins may reabsorb back into the bloodstream and you will experience a **"Healing Crisis"** the next day.

Taking fiber, bentonite, or any herb having the ability to absorb these toxins after cleansing will slow or eliminate the reabsorption of them back into the bloodstream.

Some colons are so dirty that after the first treatment one may have extreme diarrhea. It's almost as if the body says, "hey this junk is finally loosening up so lets help get it out." If you are continually on the toilet flushing out the old toxic waste matter continued treatments will flush out the waste left behind, ending the crisis. Large doses of vitamin C will also help this situation. This should be a sign of how dirty the pipeline really is.

If you have hemorrhoids, a small amount of bleeding may occur during this time. If excessive bleeding occurs you may have cancer in the colon, a peptic ulcer or some other problem. Any bleeding should stop in a few days and may continue for a few cleanses. Cayenne, taken in capsules helps stop bleeding or the herbs Buckthorn, St. Johnswort, or Yarrow can also be used. If this condition continues, you should consult your physician.

One or two treatments a day is sufficient or treat as tolerated. The total number of cleansing treatments depends on your specific condition. Some recommend two

colonics a day for the first week and then two a week until clean.

Some prefer to irrigate with 10 gallons for the first 10 treatments. This seems to break-up the old toxic waste quicker and gets you through the healing crisis in a shorter period. However, there may be a slight burning or irritation in the area of elimination due to the increased elimination of toxins. Rubbing ozonated olive oil or vitamin E in the tender area will help relieve the irritation.

Careful examination of the waste after each treatment and of the stools the following day may help you diagnose other problems or health related conditions. When there are large particles or amounts of undigested food is an indication you are not chewing well. You may also be lacking in enzymes or other digestive aids. Some colons may be so impacted in the cecum that it might stretch open the ileo cecal valve between the small and large intestine. A test to determine this condition is eating a few peanuts or a tomato (not fully chewed) a few hours before a cleanse. The water will wash it out of the small intestine if the valve is open during the beginning of the cleanse when the water is clear. Foods can also be washed out at the end of cleansing when the liver and gallbladder releases its bile and toxins. Do not stop in the middle of this cycle, it's important to follow through with the colonic when this happens. Otherwise, you will reabsorb the toxins again into the liver. The liver may clean itself during this cycle 3 to 5 times if you are extremely ill or have an infection. Excessive dumping of the liver may require additional supplements for the liver to create bile and for the pancreas to create more hormones to stimulate flow. You want this cycle to occur so the healing process can continue.

Worms are usually imbedded in the stools the following day. In cases of high infestation, roundworms or flat tapeworms

may be seen in the stools during cleansing. The detection of cancer tumors, candida and worms will help you choose other natural remedies. Keep in mind that many of the parasites can only be seen with a microscope. Samples can be taken to a local laboratory for analysis if you are unsure.

Colon irrigation may flush out the good bacteria along with the bad. The good bacteria (friendly flora) should be replenished on a daily basis. This is essential.

If the body feels drained after cleansing, drinking a glass of V8 Juice or or 1 ounce of Tropical Sunrise will help.

The body needs the essential nutrients to heal especially when problems exist in any part of the digestive or elimination system.

Vitamin A and Beta-carotene are needed for the repair, growth, and function of skin tissue and cells.

B vitamins are needed in the process of digestion, energy, healing tissue, protein synthesis, stress, and for the function of amino acids.

Vitamin C is needed for healing or the repair of tissue, and for the proper function of vitamins and minerals.

Vitamin E is essential in healing and protects the enzyme systems in the cells.

Essential fatty acids are needed for the repair of tissue, and for the protection and healing of cells.

Glutamine is an amino acid shown to build up the immune system. It has been proven to heal stomach ulcers and helps to relieve digestive disorders, improve muscle mass and aids in the healing of the digestive tract. Glutamine helps the body to heal itself naturally by using its own

internal mechanisms. A **balance** of all amino acids is needed for the growth and repair of tissue.

Trace Minerals are needed in all stages of growth, repair, synthesis, and metabolism for complete regeneration.

Fiber provides the roughage and bulk that is needed to sweep clean, absorbs toxins, and tones the gastro-intestinal tract. Fiber helps clean and nourishes the entire digestive system. Fiber is needed for the binding and elimination of toxins, debris and harmful bacteria. Fiber contributes little in food value but speeds up the transit time of toxic waste products in the intestines. The addition of fiber in the diet will reduce diseases that are related to a fiber-depleted diet.

Enzymes are the keys for proper digestion of the foods you eat. Overcooking destroys the enzymes the body needs to completely digest and to keep the foods from putrefying in the colon.

The body must produce bile, enzymes (pancreatic), hydrochloric acid, and other digestive factors for proper digestion. Overeating puts stress on the digestive system. Foods are not completely broken down and tend to lodge in the colon. The vital nutrients are lost and not absorbed.

Your appetite will generally increase during the detoxification process. Always eat foods high in vital nutrients that promote good health during the detoxification and after for prevention.

Herbs, vitamins, minerals, amino acids, and enzymes all work with the body's own functions. **Balanced** portions of each will accelerate and stimulate the internal cleansing process, naturally. Herbs such as aloe vera, comfrey root, and licorice root have a soothing and healing effect on inflammations of the digestive tract.

You will be amazed and relieved when you examine the old uneliminated waste that accumulated over the years on the lining of the walls of the colon. Seeing is believing. Some feel the bowel demon himself was cleaned out during the first cleanse.

You will be joyful to know it's all gone. You will feel cleaner, stronger and energized.

When the colon is clean and taking a **"balance"** of good foods and daily supplements, the body can restore its natural healing process. When the **"cycle of degeneration ends,"** the rejuvenated body feels re-energized with new life. The cycle of **"death"** that begins in the colon is a well-known fact. The cycle of **"new life"** can begin in the colon as well.

When the colon is clean, you are going to be more susceptible to the incompatible foods that do not match your blood type. Eating by your blood type is the most important thing to remember. It is the only way to achieve maximum immunity.

Many will not believe or accept this method to relieve their health problems. They are either too stubborn or there thinking and common sense is clouded by their ailments. Because of this, many will just give up on life. They are tired of the pain and suffering they are experiencing. Life is precious. Why not live it to its fullest extent? Why let others profit from your bad decisions when you and your loved ones can profit from your living a healthier life? Renew those goals and future plans. Get out and do the things you have always dreamed about.

A clean colon and proper eating habits will start to renew your life again. The beginning of a new healthy you is possible. This is guaranteed if you make the right choices.

THE REST IS UP TO YOU!

Directions for A Homemade Board

You can make your own colon cleansing board if you can not afford to purchase one. Using warm water and hydrogen peroxide is, better than nothing.

Your body size will determine the size of a homemade colonic board. For the average body size you will need the following.

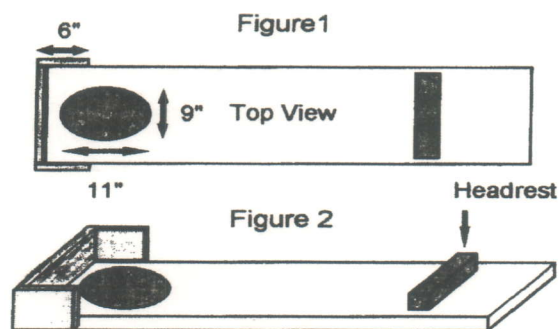
- 1 - 1" x 12" x 4' long board (plywood or pine).
- 1 - 1" thick by 6" wide and 12" long board.
- 2 - 1" thick by 6" wide and 6" long boards.

1. Cut an egg shaped oval at one end of the board. One inch smaller than the inside diameter of the toilet (with toilet seat up). Leave a 1" space between end of board and the oval to be cut out. The approximate size of the oval is 11" x 9" (Figure #1). Use a router to bevel the inside edge. Pegs (1/4") can be installed on the backside to keep board secure on the bowl surface.

2. On the end of the oval make a backstop about 6" high and 1" thick. Add side stops and attach with screws to the large board. (# 2)

3. Sand and stain to your specifications. Cover the board with one-inch foam and upholstery material up to the side stops or about center of the oval for added comfort.

4. The oval end sits over the toilet with a chair on the other end to make level. To avoid leakage on the floor, insert a 13-gallon plastic bag into the oval and wrap around the backstop and tape to board. Cut out the bottom of the bag so it fits about 3 inches into the toilet.



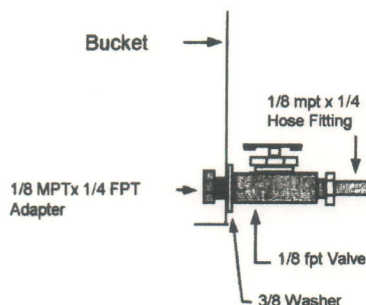
5. A five-gallon bucket may be purchased at a hardware store or at your local restaurant. Water may be siphoned from the 1/4" hose over the top edge of the bucket or fittings and shut off valve can be installed for gravity flow. Fittings and valves can be purchased at the hardware or auto parts store.

6. Install the colonic water outlet valve approximately 3/4" from the bottom of the bucket. Drill a 3/8" hole and install fittings per diagram. Use silicone to avoid water leaks.

7. The bucket is hung from the top of a bathroom door or a sturdy shower doorframe with an S type hook made from 1/4 or 3/8-inch steel rod. The bottom of the bucket should be about two to three feet above the board.

8. Connect approximately eight feet of clear plastic hose to the valve. If using a urethral catheter, connect a 1/4" x 3/16 plastic adapter and a 3" x 3/16" tube to the other end of the 8' hose. A hose clamp valve can be slipped over the hose near the board to regulate the flow of water. The catheter end will slip over the smaller hose tube.

When doing an enema this way the catheter is held in place to prevent it from slipping out the rectum. By drilling a 1/4 hole in the center of the 12" back stop and about 3" up from the bottom, you can silicone a 1/4" tube that sticks out a couple of inches on each end. The hose from the bucket is slipped over the tube on the outside. A 3" long hose is slipped over the other end with the 1/4 plastic rectal tip that can be purchased at Colema® Boards or Libbe. A towel can be used for the headrest. Cost of materials should be under fifty dollars.



AGING

The changes in our body over time effect us physically and mentally. Not being able to do the things we were able to do, forgetting what we were supposed to do, or getting old before our time are things we all fear and dread. Living a healthy life and not going before our time is possible.

The degenerative change of aging effects the brain, circulation, digestive system, eyesight, immune system, heart, joints, liver, lungs, muscles, nervous system, oral health, senses, and skin. Signs of degeneration and the names given for most disease are merely symptoms of aging. Most medical experts say the cumulative damage to organs and other body structures are never regained after maturity. However, there are others with a little more common sense that does not believe the "theories of ignorance."

The early or later signs of aging effect our thinking and ability to memorize things. Our eyesight is weakened and we are hearing less. The heart is weaker, and vessels lose elasticity and become hardened from plaque. Joints loose cartilage or lubrication for easy movement and bones become more brittle. The liver is less efficient in filtering toxins from the blood. The muscles lose strength and tone. The skin loses its elasticity, and becomes more flabby and wrinkled. Constipation is a problem for days on end. At this point, all hope may have vanished and the pain may be intense, but do not give up yet. There is HOPE for you yet.

A recent newspaper article about a leading researcher at a university in Texas has hypothesized that breathing oxygen is the culprit and cause of aging. He believes that oxygen is toxic in generating free radicals, and damages cells that lead to disease and deterioration. When one

studies his hypothesis it's found to be tentative or uncertain because it's not fully worked out. This research was done on fruit flies, not humans. This type of research has produced the use of anti-oxidant vitamins for the wrong reasons. Their funding probably comes from medical or government grants. After reading this article, the majority would believe this misinformation. Just the opposite is true, oxygen free radicals are beneficial and vital to your immune system. It's part of the natural process that destroys bacteria, fungi, viruses, or toxins.

Another article suggests that, "Good oral hygiene could reduce the risk or delay the onset of heart disease." They feel the build-up of bacteria around the gums creeps into the blood stream and damages blood vessels. Those who believe this will be getting a checkup once a week. The tongue is an excellent indicator of how toxic the body really is. Anything in the blood whether its bacteria, candida, or toxins can leach into the mouth via the tongue and cause bad oral health. As the body detoxifies itself, the levels of toxins will increase on the tongue and disappear when the body becomes cleaner.

The preparation of good meals becomes more difficult as one ages because of their physical condition. Being alone also contributes to not taking the time in preparing fresh foods just for themselves. Diets usually consist of anything that is easy to prepare like canned and processed foods. It must be soft and easy to chew because of past or present oral health.

Many of the elderly reach the point where they have to rely on others. Winding up in a hospital or rest home means more drugs and less nutritious food. Unless they do the right things to make you better, the degeneration process will continue. You soon come to the point of no return. You could very well be among the 50,000 plus

people who die annually from infection after admission to a hospital.

Other published problems existing in most all hospitals include thousands of inappropriate procedures that pose a significant risk and complications resulting in death. Mistakes from overuse of drugs, patients receiving drugs meant for another, amputating the wrong limb, making the wrong diagnose to your problem are quite common. Just treating your symptom instead of the cause is one of many mistakes.

More than half of all medical treatments has never been validated by clinical trails. The manufacturers only test drugs. The FDA does not test them because they do not have the time. The general population is the guinea pig for testing. A little forethought instead of hindsight will better our health and save us from the mistakes of others.

The main causes of aging are mostly related to a lifestyle of bad eating habits and a lack of exercise. Other contributors are alcohol, chemicals, drugs, smoking, or any of the risk factors we face daily. Many tell you to avoid the sun. The sun has natural healing effects. The best exercise is working in the garden or a simple walk for soaking up some of those rays. Enjoy it without over doing it. The sun may not cause those dark spots on your skin. When the liver is not removing your waste properly, it winds up in the skin.

The older we become the more malabsorption becomes a problem. This is also a problem in younger years or you would not feel the symptoms of aging. Assimilation or the absorption of nutrients is essential for the body to repair itself from years of abuse and neglect. The body is an amazing piece of work and can rebuild if it's receiving the nutrients for each and every part.

The older you are the more important it is to clean the colon.

When you reach the "**point of no return**," the hospital will not completely detoxify your body or clean the colon. It is vital for you to receive the nutrients that are so desperately needed. You may not receive any vitamin or mineral supplements because they will be concentrating on relieving your pain and other symptoms.

Aging can not be completely stopped but its effects on the body can be prolonged. If you already have to rely on others, it is better with family. Start by taking a balance of all (Tropical Sunrise) multi-vitamin and mineral supplements, amino acids, digestive enzymes, and friendly bacteria. Taking a good colon cleanser like Oxy-Mega will help considerably for better absorption. Eat organic live high fiber foods of fresh fruits and vegetables by your blood type. Run foods through a blender (puree) if necessary for a while if chewing is difficult. Drink lots of water and anything to aid the oxygenation of cells. Deep breathing exercises helps get more oxygen into the lungs. Avoiding all the risk factors is essential. Just by reducing the amount of drugs should help most of your symptoms disappear. If they are not needed, they should be totally eliminated. When you start feeling better, you can rely on yourself once again.

Making the right choices early in life adds to a longer life without the symptoms of aging. Looking and feeling younger than you are is definitely worth looking forward too. It's never too late to live life to its fullest.

If you have already been diagnosed with any of the problems that follow you may be lacking in other essential nutrients.

AIDS

Acquired Immune Deficiency Syndrome is a disorder of the immune system that alters the body's ability to defend itself. The virus invades the T-cells, multiplies, and causes a breakdown in the immune system of the body. AIDS will eventually lead to multiple diseases and eventual death.

Some believe the virus that causes AIDS is HIV or human immunodeficiency virus. Others believe that it takes two viruses to cause AIDS and that HIV alone you will only be a long-term non-progressor. If you have HHV-6A (Human Herpesvirus 6), you may develop Chronic Fatigue Syndrome. Testing from research has found that HHV-6A is the primary virus that causes AIDS that is linked and similar to the African Swine Fever Virus (ASFV).

There is much controversy over this issue of what AIDS is and where it originated. We were originally told it came from a monkey in Africa and there was no cure. Others believe individuals striving to reduce high-populated areas created it and there is a cure. This issue will settle itself if you obtain U.S. Patents like #4,647,773 (abstract in references). In addition, a large library may have the Department of Defense Appropriations for 1970. This is the hearing before a Subcommittee of the Committee on Appropriations, House Of Representatives, ninety-first Congress, H.B. 15090, Part 5, page 129.

Numerous articles and research have been published on the inactivation of the AIDS virus using ozone, instead of using the expensive drugs that stress the immune system and other organs with toxic substances. Ozone inactivates by oxidizing the virus molecules safely, leaving the blood cells unharmed. Ozone has been proven effective even in terminal patients. Ozone has the potential to

reverse all other related infections. Excerpts from a few studies done on the AIDS virus using ozone:

"Is There A Role for Medical Ozone in the Treatment of HIV and Associated Infections," by Michael T. Carpendale, M.D. & John Griffiss, M.D.

Medical Ozone inactivates many pathogenic viruses including HIV in vitro. Pilot studies in man suggest positive benefits in HIV infected patients (T-4 cells greater than 400). These include increased T4 and T8 cells, normalizing of T4-T8 ratio, and a general feeling of wellbeing and minimal evidence of infection. Improvement also occurs in AIDS patients (T4 cells less than 200) but less evidence of T4 cell resurgence. These studies indicate that at least in vitro there is a good safety margin between the ozone dose required to inactivate HIV and the earliest suggestion of suppression of lymphocytes. In fact, the lymphocytes are being stimulated at doses that completely inactivates HIV. More work needs to be done to clarify the most effective dosage and means treating HIV infections with medical ozone.

Excerpt from a study presented at IV International Conference on AIDS Stockholm, Sweden - June 15-16, 1988, by Joel K Freeberg and Michael T. Carpendale. ***"Ozone Inactivates Extracellular Human Immunodeficiency Virus at Non-Cytotoxic Concentrations".***

Purified HIV was exposed to ozone in buffered saline at different ozone concentrations and assayed for infectivity. The infectious titer of purified HIV exhibits a rapid decline from exposure to ozone in saline at a relatively low range of concentrations. More than 99.99% of HIV is inactivated at free ozone concentrations of less than 1/2 milligram per liter. 'This same method was used to treat human serum with different concentrations of

ozone followed by exposure of the serum to purified HIV. No infectivity remained at ozone concentrations of greater than 4 milligrams per liter. In addition to its potential clinical importance in the treatment of AIDS, ozone may also have laboratory applications to eradicate viruses, including HIV and hepatitis viruses, from donor blood and blood-derived products such as serums and clotting factors.

Excerpt's from a 1991 study by the American Society of Hematology. ***"Inactivation For Human Immuno-deficiency Virus Type 1 by Ozone in Vitro"***, by Keith H. Wells, Joseph Latino, Jerrie Gavalchin, and Bernard J. Poiesz.

A device was designed to deliver a constant source of given concentrations of ozone to fluids containing human immunodeficiency virus type 1 [HIV-1]. Ozone was found to inactivate HN-1 virions in a dose dependent manner. Greater than 11 log inactivation was achieved within 2 hours at a concentration of 1,200 ppm ozone. Similar concentrations of ozone had minimal effect on factor VIII activity in both plasma and immunodeficiency-purified preparations of factor VIII treated for the same time period. The data indicated that the antiviral effects of ozone include viral particle disruption, reverse transcriptase inactivation and/or a perturbation of the ability of the virus to bind to its receptor on target cells. Ozone treatment offers promise as a means to inactivate human retroviruses in human body fluids and blood product preparations.

This result would indicate that ozone treatment led to complete solubilization of most of the treated HIV-1 particles and that, while key epitopes of solubilized HIV-1 p24 could still be detected in the antigen capture assay, functional reverse transcriptase activity was lost secondary to the oxidation of solubilized enzyme.

Ozone has previously been shown to possess potent antiviral activity, especially when used against lipid-enveloped viruses. We first examined the ability of ozone to inactivate cell-free HN-1 in cell-free CM. These results indicate that ozone has potent anti-HN-1 activity. The escalating dose study indicated that, at 1,200 ppm ozone can achieve a 90% inactivation of HIV-1 in human plasma with only a corresponding 25% decrease in factor VIII biologic activity. Ozone has potent anti-HIV-1 activity in cell culture media and factor VIII preparations.

Another study titled ***"Hope and Challenge of 10 Years of LSU AIDS Therapy with Ozone and a Multimodal Treatment Program"*** published in Townsend Letters for Doctors-Aug/Sept. 1995 by H.E. Sartori, M.D., and H. Hugh Fudenberg, M.D. All but 10 out of 165 patients showed a significant improvement of their general well being and of most of their clinical symptoms in less than a month.

Basil Earle Wainwright for an apparatus and method for the Inactivation of Human Immuno-Deficiency Virus filed a patent for the cure of HIV/AIDS (# 6,027,688) in May of 1994. A brief excerpt is as follows: An apparatus and method for the inactivation of infectious organisms such as viruses, bacteria, fungi and protozoa, and especially for the inactivation of human immunodeficiency virus in proteinaceous material such as blood and blood products, without adversely affecting the normal physiological activity of the material, by contacting it for a time interval of only about 16 seconds with an ozone-oxygen mixture having an ozone concentration of only about 27 mu./ml. The apparatus includes a gas-liquid contact apparatus through which the material and ozone-oxygen mixture flow in contacting, counter-current relationship, and an ozone generator which produces an ozone-oxygen mixture having a resonant

frequency of about 7.83 Hz. The apparatus and method of the invention provide precise control of the concentration of ozone and the contact time between the material to be treated and the ozone-oxygen mixture.

On March 14, 1990, in Miami, Florida, Basil Wainwright converted his first HIV+ patient to PCR undetectable. Following this major medical breakthrough he is responsible for sixteen separate in-vivo human research studies which recorded staggering results.

Mr. Wainwright was invited to establish his research facilities and use his proven Polyatomic Apheresis Technologies & Polyatomic Oxygen Therapy in Kenya, in early 1996. Since Mr. Wainwright has made Kenya his home, he is able to carry out his research while still being smeared and under attack by the establishment.

One study from a 24 patient sample carrying the HIV/AIDS retrovirus, Polyatomic Oxygen Therapy achieved 24 conversions ~ 19 PCR undetectable conversions and 5 HIV+ to PCR undetectable conversions with P 24 antibody negative. Over 58 fully documented scientifically irrefutable HIV+ to PCR undetectable conversions have been achieved and verified by PCR (Pre-Polymerase Chain Reaction) analysis, indicating "undetectable" viral loads and including in many cases, blood plasma P 24 marker anti-body negative. To date there are 376 HIV + ve to PCR undetectable conversions, in-vivo and in-vitro.

The Polyatomic Apheresis Research Ltd. (www.PolyO2.org) has treated many other medical conditions with miraculously results using Polyatomic Oxygen Therapy. Polyatomic Oxygen is a highly reactive and atomically unstable gas in combinations of varying oxygen atoms.

The best defense against AIDS is keeping the immune system strong through diet and nutritional supplements. The diet should consist mainly of organic fresh fruit, vegetables (chlorophyll-rich), grains, nuts and seeds. Juice whenever possible.

All trace minerals, the most essential is zinc, germanium, copper, and selenium. Beta-carotene, vitamins A, B complex, E, C, enzymes, essential fatty acids, and amino acids are essential. The fortified daily power drink, MGN-3, whole lemon drink and friendly flora will also be beneficial. CoQ-10 improves cellular oxygenation. Use **Tropical Sunrise** as an added supplement. Since so many other multiple conditions are associated with AIDS, it may be necessary to treat for candida, cancer, parasites, and cleaning the colon for proper absorption.

Avoid processed or refined foods, alcohol, caffeine, cokes, red meat, saturated fats, salt, sugar and white flour. Avoid toxic drugs like AZT that worsen the condition.

Herbs and Foods for AIDS

Aloe Vera	Grapefruit Seed Extract
Astragalus	Licorice Root
Bee Pollen	Maitake
Beets	Milk Thistle Extract
Black Radish	Mullein
Carrots	Olives
Cayenne	Onions
Chaparral	Pau d'arco
Chinese Ginseng	Primrose Oil
Chlorella	Poke Root
Dandelion	Propolis
Echinacea	Red Clover
Garlic	Royal Jelly
Gentain	St. Johnswort
Ginkgo Biloba	Siberian Ginseng
Golden Seal	Suma

Note! Use foods & herbs to your blood type.

Warning! Explicit facts and information on the development of AIDS and Mycoplasmas are included in the references.

ALCOHOLISM

Drinking a little beer or wine is something many of us enjoy from time-to-time. We do it by choice. Others will drink away their sorrows hoping their stress or pain will disappear, only to find it keeps getting worse. Those that choose to drink excessive are told they have a disease called alcoholism. Alcoholism does not start out as a disease but long term effects from it can certainly degenerate the body with disease as the end result.

Alcohol is poisonous and toxic. Excessive amounts can damage every cell in the body and depress the immune system. The long-term use of alcohol can lead to several health problems. Some of the chemicals used in processing and the toxicity of alcohol can cause cancer in the mouth, esophagus, liver, or throat.

Damage to the central nervous system effects the brain, effects us physically and it effects us psychologically. This alters our behavior, emotions, judgments, mental thinking and personality. Symptoms of cramping, pain, numbness, tingling, and weaknesses in the limbs are signs of deficiency of vitamin B₁. Alcohol causes fluctuations of blood sugar levels because it slows down the metabolism of carbohydrates and glucose. This effects our mood, the craving for another drink, depression, and eventually thoughts of guilt and suicide.

Gastronintestinal disorders caused by excessive alcohol are abdominal pain, bad eating or difficulty in eating, creatitis, esophagitis, gall bladder disease, gallstones, gastritis, gastric or duodenal ulcers. Alcohol dilutes the enzymes for proper digestion and its diuretic action drains the body of vital nutrients. When the absorption of vitamins and minerals are impaired by alcohol it causes

nutritional deficiencies. The improper digestion of foods becomes a problem from a lack of enzymes and hydrochloric acid. Stomach problems and inflammation are caused by over acidity.

Alcohol effects the liver's production of digestive enzymes that impairs the absorption of nutrients and the metabolism of fats. Fats collect in the liver; cells die and become inflamed that may develop into hepatitis or cirrhosis of the liver. The inflammation, hardening, and scarring prevents the normal flow of blood and its ability to filter toxins out of the blood. This also creates inflammation in the pancreas. The excess of fat can also cause diabetes, circulatory, obesity or heart problems.

If this information makes it a little more desirable to quit your choice will be a much better one than the choice to start. Complete detoxification is essential, especially colon cleansing. Getting the toxins from the alcohol, candida, and old waste out of the colon will help in your sugar cravings, the absorption of nutrients you are going to be taking, and in helping the withdrawal symptoms.

With long-term alcohol abuse you will need a balance of all vitamins, minerals, enzymes, essential fatty acids and amino acid supplements. Your diet should consist of organic raw fruits, vegetables and whole grains. Avoid all medications because other more toxic combinations are formed with alcohol. Refined foods, sugar, candy and soft drinks should be avoided.

The amino acid L-glutamine (500 mg x three a day) and chromium (200 mg x two a day) will help the cravings and give the alcohol a bad taste. Valerian root will help calm you down and help you to sleep. Additional herbs can be used for cleaning the blood, kidneys and liver. Tropical Sunrise will also help combat the side effects of alcohol.

ALLERGIES

The most common definition of an allergy is a response of the body's immune system to something good or something harmful. When the body overreacts to a substance and provokes the immune system it produces antibodies that coat the cells. This causes the release of other chemicals from the cells.

In most allergies, the body may react to animals, chemicals, cosmetics, detergents, drugs, dust, flower and tree pollen, certain foods, grasses, mites, molds, perfumes, vaccines or yeast's.

Symptoms from a reaction may include asthma, congestion, coughing, depression, digestive problems, fatigue, frequent colds, hay fever, headaches, inflammation in the respiratory tract, itching, muscle spasm, skin rashes or hives, sneezing, sore throat or swelling.

If the body was in balance and healthy it would not react and produce the symptoms. When the digestive tract is clogged (especially the colon) with excessive waste, toxins build up to form other chemicals that react to other natural body chemicals. These bad chemicals can derive from processed foods, bacteria, parasites, pathogens, yeast infections or viruses. When these types of toxins or chemicals that are foreign to the natural chemicals accumulate in all parts of the body; then, they can have an immediate reaction to the chemicals in good foods. The first or fastest reactions can occur in the mouth or throat from foods. Slow reactions are when the toxins are stirred up in the colon and absorbed into the bloodstream. Any symptom from a reaction is the result of an imbalance or the body being unable to oxidize the toxin.

A simple change in your diet and nutritional supplements will raise the oxidation process of the body and alleviate most minor allergies. Eliminate all processed foods in your diet, eat fresh organic fruits and vegetables, and take a balanced form of supplements. Avoid eating foods that you know cause an allergic reaction. Bumps and itching are noticeable within a half-hour. You should always eat the foods that match your blood type for all blood sensitivities. Try to avoid all antihistamines because all drugs are toxic and cause damage to the gastrointestinal tract. Try the amino acid tyrosine for hay fever.

Complete detoxification is necessary in cases of extreme allergic reactions, sensitivities to foods or when skin rashes will not clear. Most symptoms will begin to disappear after a few colon cleanses.

A balance of minerals and vitamins like Tropical Sunrise are needed; especially calcium, magnesium, zinc, vitamins A, B-complex, B₁₂, B₆, C, D, E, pantothenic acid, enzymes, amino acids and friendly bacteria.

Herbs and Foods for Allergies

Alfalfa	Garlic
Aloe Vera	Golden Seal
Apricots	Honey
Bee Pollen	Marshmallow
Blessed Thistle	Lobelia
Black Cohosh	Olive Oil
Burdock	Onions
Capsicum	Parsley
Chaparral	Peaches
Dandelion	Pleurisy
Desert Tea	Plums
Echinacea	Nectarines
Fiber	Scullcap

Note! Use foods & herbs to your blood type.

Some believe allergies are a disease while others feel it is the start of most all disease.

ALZHEIMER'S, DEMENTIA, ALUMINUM TOXICITY

Alzheimer's is a progressive brain disorder in the areas of the brain that control behavior, memory and thinking skills. As Alzheimer's progresses the nerve cells degenerate and die in other parts of the brain. Those with Alzheimer's will gradually lose their ability to learn and reason, find the right words to say, make good judgments, and being able to communicate and carry out daily activities. As the nervous system deteriorates there may be involuntary muscle reflexes.

As Alzheimer's progresses, individuals may also experience other changes in personality and behavior, such as anxiety and mood changes, suspiciousness, and have delusions or hallucinations ranging from arguments, agitation, depression, striking out, and violent behavior.

Alzheimer's symptoms include memory loss, difficulty performing familiar tasks, language problems, disorientation, forgetfulness, poor judgment, thinking problems, misplacing things, mood or behavior, personality changes, Loss of initiative.

Currently there are more than 4 million people in the USA with Alzheimer's Disease.

Medical experts conclude that Alzheimer's is the most common cause of dementia and the causes of Alzheimer's is unknown in the minds of many.

Dementia is a general decline in all areas of mental abilities due to narrowed or blocked arteries in the brain that leads to a progressive decline in mental function. The brain shrinks and brain cells die from reduced blood flow to the brain's nerve cells.

Dementia symptoms include anxiety, confused, depression, disorientation, emotional outbursts, embarrassing behavior, bad judgment, incoherent speech, irritability, memory loss, paranoid.

Dementia has developed in some people during kidney dialysis because of the amount of aluminum in the water used during treatment. But most everyone concludes that there is no evidence linking aluminum with Alzheimer's and Dementia. Looking at some of the symptoms of aluminum toxicity like nervousness, forgetfulness, speech disturbances, memory loss and the accumulation of aluminum salts in the brain has been implicated in seizures and reduced mental faculties. If the symptoms are about the same why won't anyone in the medical field admit that aluminum may be the cause of Alzheimer's and Dementia?

Prior theories regarding the causes like the accumulation of aluminum, lead, mercury, and other substances in the brain leading to Alzheimer's and Dementia are unbelievable to many in the medical field. They believe that twisted fragments of protein within nerve cells or abnormal clusters of dead and dying nerve cells, and protein clog up the cell. The destruction of nerve cells leads to a decrease in substances secreted by a neuron to send a message to another neuron and this appears to disconnect areas of the brain that normally work together.

Only 4 parts per million of aluminum in human blood causes it to coagulate. This will slow down or completely shut off the flow of blood in smaller vessels. The brain cells will die without blood flow and oxygen.

Some toxic metals like aluminum, arsenic, cadmium, lead, mercury, and nickel are taken into our bodies through the air, food, and water. The toxins from these metals remain in our bodies for years and have

been linked to Alzheimer's disease, aluminum toxicity or mercury poisoning.

Aluminum toxicity and its symptoms can mimic those of Alzheimer's disease and osteoporosis. Colic, rickets, gastrointestinal problems, interference with the metabolism of calcium, extreme nervousness, anemia, headaches, decreased liver and kidney function, memory loss, speech problems, softening of the bones, and aching muscles.

Antacids may contain aluminum hydroxide. Anti-diarrhea products may contain aluminum salts and aluminum magnesium silicate. Antiperspirants and deodorants contain aluminum chloride or chlorhydrate. Baking powders contain aluminum sulfate or sodium aluminum sulfate. Bleached flour contains potassium alum. Buffered aspirin contains aluminum hydroxide or aluminum glycinate. Check makeup, hand creams.

Canned goods, cooking utensils, deodorants, douches may contain aluminum salts. Containers, aluminum coated waxed containers, used especially for orange and pineapple juices, cause juices inside to absorb aluminum. Beer and soft drinks that are stored in aluminum cans also absorb small quantities of aluminum.

Food additives in cake mixes, frozen dough, self-rising flour contains sodium aluminum phosphate. Food starch modifiers and anti caking agents also contain varying levels of aluminum compounds.

Processed and grated cheese contain sodium aluminum phosphate. Shampoos, anti-dandruff contain magnesium aluminum silicate. Other shampoos may contain aluminum lauryl sulfate. Table salt contains aluminum calcium silicate or aluminum trisilicate. Tarter sauce, tobacco smoke may also have high levels.

Eye drops used for the treatment of glaucoma and increased pressure in the eye contain monobasic and dibasic sodium phosphate and sodium hydroxide in a buffered water solution. The aluminum hydroxide is used as a gelatinous flocking agent to filter out particulates in the water. Aluminum hydroxide is prepared at the treatment plant from aluminum sulfate by reaction with the sodium hydroxide.

One process of producing the sodium hydroxide is the mercury cell process where the sodium metal forms as an amalgam at the mercury cathode and the sodium is then reacted with water to produce the sodium hydroxide. The sodium hydroxide goes by other names like Lye and Caustic Soda and also used in detergents, drinking water, food preparation in washing fruits vegetables, washing hominy, pepper, gelling of egg whites, pretzels, pulp and paper, textiles, toothpastes, soaps, tissue digestion or decomposing, and unblocking drains.

Food in aluminum cans, foils or containers may have trace amounts. Pancake mixes, and grains may contain aluminum. Pickling salts for pickles or maraschino cherries can contain aluminum ammonium sulfate and aluminum potassium sulfate.

Vaccines that contain aluminum hydroxide are used as an absorbing agent in many vaccines and hypo-sensitization preparations causes hypersensitivity reactions. Aluminum may also be used in allergy testing, intravenous solutions, allergens, wound and antacid irrigation, ulcer treatment, blood oxygenation, bone or joint replacement and burn treatment.

Municipal water supplies are treated with both aluminum sulfate and aluminum fluoride. The role of aluminum from toothpastes with sodium fluoride may be even just as important than the drinking water. Use baking soda for an alternative.

Most of these types of aluminum will be found in ground water and toxic to aquatic life: aluminum acetate, aluminum bicarbonate, aluminum caprylate, aluminum chloride, aluminum diacetate, aluminum hydroxide, aluminum oxide, aluminum sulfate, Poly-oxo aluminum stearate, and Sodium aluminum phosphate are found in pesticides and herbicides.

Aluminum has been exempted from testing for safety by the FDA under a convoluted logic wherein it is classified as GRAS. (Generally Regarded As Safe.) It has never been tested by the FDA on its safety and there are NO restrictions whatever on the amount or use of aluminum.

Mercury is the most toxic element among the risk factors that causes damage to our bodies. It is found in shellfish and some fish. It is used in dental amalgam fillings, bactericides, fungicides, paint, thermometers and vaccines. Mercury can cause changes in the lymphoid tissue; it effects the immune system, nervous system, kidneys, and it produces resistance to antibiotics. Mercury is extremely toxic and poisonous to our bodies. Symptoms of mercury toxicity include fatigue, indigestion, muscle and joint weakness, nervousness, depression, or weight loss. Mercury poisoning has been linked to Alzheimer's, Multiple Sclerosis and Parkinson's Disease.

The first step in the treatment of Alzheimer's or Dementia is to check the product labels for any of these ingredients shown and avoid those that contain aluminum. Some of the ingredients in pharmaceutical may be listed under other names like thimerosal as mercury, and formalin as formaldehyde. If the product insert or label shows the ingredients look each one up on the internet before using.

Eat fresh fruits and vegetables rich in antioxidants, chlorophyll, and foods that help promote oxygen to the blood. Avoid

alcohol, copper, high gluten, pharmaceutical vitamins, processed foods and city tap water. Drink bottled or distilled water and avoid those foods that cause allergies and eat by your blood type. All vitamins and minerals are essential, especially A, B complex, C, D, E, folic acid, calcium, germanium, kelp, manganese, potassium, selenium, zinc and vanadium. The other essentials are amino acids, enzymes, fatty acids, friendly bacteria, CoQ10, chlorophyll, and lecithin.

Herbs like butchers broom, ginkgo biloba, Huperzine A (moss extract) may also be beneficial.

Aluminum Toxicity; Multi vitamin and mineral complex especially calcium, magnesium, B complex, garlic tablets, lecithin, and kelp.

Mercury supplements like selenium, Vitamins A, B complex, B6, B1, C, E, and K. Amino acids (cysteine, glutathione and methionine) are essential. Other aids are lecithin, beta-carotene, brewer's yeast, alfalfa, milk thistle and hydrochloric acid.

Foods that help remove toxic metals are alfalfa, apples, barley grass, garlic, kelp, miso, mung beans (lead), pectin, Sea Vitamins Minerals, seaweed and wheat grass. Drinking lots of fresh ozonated water is also beneficial for the removal of toxic metals.

Cleaning the colon and the smaller intestine with Oxy-Mega colon cleanser helps in removing the toxins and the absorption of vitamins, minerals and other nutrients.

Eliminating and removing the causes through complete detoxification is essential in regaining normal functions. Ozone oxidizes the causes, cleansing will help remove them. The nutrients in Tropical Sunrise helps nourish the bodies functions.

ARTHRITIS

Arthritis is a degenerative condition that over forty million Americans suffer needlessly. Inflammations in the joints result in stiffness, swelling and pain. The most common types are:

Ankylosing spondylitis affects joints in the spine or lower back.

Bacterial arthritis is an infection in the space between the joints. Some believe that most arthritis is caused from microorganisms.

Gout attacks the smaller joints in the feet and hands from deposits of uric acid.

Osteoarthritis is the deterioration of cartilage at the ends of the bones.

Rheumatoid is an inflammation in the membranes surrounding the lubricating fluids in the joints and effects the whole body. It results in anemia, fever, fatigue, pain, stiffness and swelling in the joints

Systemic lupus erythematosus results from a malfunctioning immune system.

As an alternative to drugs, hydrogen peroxide (0.03%) has been used by injecting it into the joints and tissue. Magnetic therapy is another alternative.

Research shows ozone to be effective in severe cases of rheumatoid arthritis with stiffness and inflammation. A Cuban study shows patients scored twenty five percent better than those who received drug therapy did. Those who used ozone suffered no adverse effects; meanwhile, those on drugs received additional steroids or suffered from gastritis.

Another study at the Center of Medical-Surgical Studies in Havana, involved sixty patients with osteoarthritis of the knee was given one interarticular injection of ozone

weekly. The majority (93.3%) was symptom free after ten weeks of ozone treatments.

As one ages they have a tendency to take drugs to alleviate pain. Many drugs tend to bind and hinder the absorption of nutrients. The deficiency of nutrients from bad eating habits and malabsorption speeds up the cycle of degeneration. Liquid nutritional supplements are needed to help rebuild and prevent arthritis. The first step in the healing process should be cleaning the colon first. This will help eliminate any food allergies or toxins and restore balance. Eat by blood type.

Arthritis sufferers are deficient mostly in calcium, magnesium, all B vitamins, A, C, D, beta-carotene, enzymes for proper digestion, amino acids and the essential fatty acids. Glucosamine sulfate reduces pain. A diet of raw fruit (non-acidic) and vegetables, fresh juices, nuts and seeds, and protein from whole grains should be on the menu. Avoid refined sugar, milk, intoxicants, processed foods, rhubarb and cranberries because of the oxalic acid. Avoid red meat because of the uric acid.

Herbs and Foods for Arthritis

Alfalfa	Fish
Aloe Vera	Flaxseed Oil
Ashwagandha	Garlic
Black Cohosh	Ginger
Black Walnut	Green Tea
Brigham Tea	Kelp
Boswellia	Lobelia
Bromelain	Olive Oil
Burdock	Onions
Capsicum	Parsley Tea
Celery Seed	Sarsaparilla
Chaparral	Scullcap
Cod Liver Oil	Tropical Sunrise
Comfrey	Turmeric
Devil's Claw Tea	Valerian Root
Essiac Tea	Wild Lettuce Tea
Evening Primrose	Wormwood
Feverfew	Yarrow
Fiber	Yucca Extract

Note! Use foods & herbs to your blood type.

ASTHMA

Asthma is caused by allergies that constrict the small airways in the lungs called bronchi. Symptoms of asthma are coughing, difficulty in breathing, tight chest and wheezing.

Spasms occur in the muscles that surround the bronchi that increases mucus during an allergic response from contaminants in the air or from a reaction to foods. The histamine produced by the immune system as a response brings on this situation. Histamine causes blood vessels to widen, fluids to leak into tissue, and muscles to spasm.

Another substance that is formed during allergic food reactions is called immunoglobulin E (an abnormal antibody). In the lungs, it causes shortness of breath, hives when in the skin, and inflammations in the walls of the intestines.

An allergy can be a bad response to something that is not normally harmful. A weak or confused immune system can misidentify a non-toxic substance as an alien object with the overreaction of the white blood cells. When the immune system is confused it causes more damage to the body than the invader. No one knows why people have allergies. Common sense tells me if the immune system is confused it may be due to the chemicals from foods mixing with chemicals produced by parasites or other organisms living in the digestive track. Some chemicals are bad enough by themselves, but when mixed with others they can be deadly. This situation disrupts the balance of all body organs that maintain a healthy immune system.

Asthma, like most all other disease as described in medical books does not have a cure. There is not a lot of research showing that ozone helps asthma, but

testimonials prove otherwise. Ozone generators help relieve many allergies caused by dust mites, mold spores, pollens and other pollutants in the home.

A thorough cleaning of the digestive tract, especially the colon, relieves food allergies and restores balance. When the immune system is strong, it will fight off the pollens and molds that cause reactions like hayfever. The relief of allergies is usually one of the first things noticed after a few colon cleanses.

Some feel that asthma sufferers are always deficient in magnesium. Other helpful nutrients are calcium, selenium, zinc, all B vitamins, A, C, D, E, beta-carotene, enzymes for proper digestion, bee pollen, essential oils and a balanced mineral supplement. A diet should consist of raw fruit and vegetables, brown rice, protein from whole grains and low in carbohydrates. Avoid refined sugar (use honey), dairy products, cokes, white flour, processed foods with sulfites and red meat. Avoid foods that cause allergic reactions and eat by your blood type.

Herbs and Foods for Asthma

Aloe Vera	Juniper berries
Black Cohosh	Kelp
Blessed Thistle	Licorice Root
Capsicum	Lobelia
Desert Tea	Marshmallow
Echinacea	Pau d'arco Tea
Flaxseed	Pleurisy
Garlic	Propolis
Ginkgo	Scullcap
Golden Seal	Slippery Elm
Horsetail	Tropical Sunrise

Note! Use foods & herbs to your blood type.

If an excess buildup of mucus is causing problems, try making a tea from equal parts of fennel seed, fenugreek seed, flaxseed, nettle leaf and 1/4 part licorice root. Green tea also helps to loosen mucus and open the airways.

CANCER

Deadly cancer-causing chemicals are found regularly in our air, food and water supplies. They are in the form of lawn chemicals, pesticides and other health destroying compounds. There are some 400 pesticides used on the foods we eat. Several hundred of these chemicals in pesticides are thought to be carcinogenic or cancer causing. The EPA estimates that about one-third of the active ingredients used in pesticides are toxic, and one-fourth are carcinogenic.

Scientists have long contended there is **"no safe level"** of exposure to carcinogens. Many carcinogens are stored and build up in our bodily tissues, especially in the body fat. Small "insignificant" exposures over a period of time can accumulate to levels sufficient to trigger the process that causes cancer and other ailments. Children are much more sensitive to these levels than adults. Many of the non-carcinogenic chemicals will enhance the cancer-causing effects of carcinogens.

A 1978 report issued by the President's Council on Environmental Quality (CEQ) states, "Most researchers agree that 70% to 90% of all cancers are caused by environmental influences and are hence theoretically preventable."

Chemical contamination is contributing to our current cancer epidemic, which will strike three out of four families in the United States. The cancer rate in the U.S. in 1900 was three out of a hundred. Today, one in three people will get cancer and one in four will die from it. This amounts to over a million Americans a year, killing some 520,000 of us annually.

Research shows that chlorine's use in drinking water causes chemical reactions

that produce carcinogenic compounds called chloroforms and tri-halomethanes (THM). Chlorine is the greatest crippler and killer of modern times and drinking it is hazardous, if not deadly to your health. Cancer risk among people drinking chlorinated water is 93% higher than that of those not drinking chlorinated water.

About 4,200 cases of bladder cancers per year are associated with chlorinated water. There is a higher incidence of cancer of the esophagus, rectum, breast, larynx and of Hodgkin's Disease. One person dies every minute from cancer.

The use of chlorinated water damages body enzymes, creates magnesium deficiency, and destroys protein in the body, which causes adverse effects on the skin and hair. Other results from its use are atherosclerosis, heart attacks and strokes. **Avoid chlorinated water at all times.**

Research studies on formaldehyde show it a health risk to those that reside or work in structures with measurable levels. Its also been found to be a significant indoor air contaminant. Formaldehyde is a known carcinogen.

Some sources of formaldehydes are synthetic materials, new carpeting, drapes, wood cabinets, furniture, insulation, and glue used in particleboard or plywood. The use of formaldehyde is in thousands of products bought on a daily basis.

There are many medical treatments and anti-cancer drugs used to treat cancer's that will actually cause cancer. All drugs are cell killers, which destroy the body's needed enzymes for it to function. Avoid drugs like Estradiol-17, Estrone, Ethinylestradiol and Mestranol. These Estrogens's are carcinogenic.

Avoid Chemotherapy. The damage done to the body by an unsuccessful course of

treatments is so great that the immune system never recovers. Laetrile destroys cancer cells, is nontoxic to normal cells, and is a safer chemotherapeutic agent.

"Avoid all irradiated foods." Benzene is formed in all foods after large doses of radiation and it decreases vitamin B₁ content. Both benzene and radiation are known carcinogens. Beneficial claims of irradiation are more imaginary than real.

All compounds that impair cellular respiration are carcinogens. Oxygen deficiency at the cellular level is the cause of cancer.

When normal cells are deprived of oxygen, the respiration of the cell is damaged. Damaged cells begin to ferment sugar anaerobically producing carbon monoxide and lactic acid. When the cell loses control, cancer develops. *"Cancer has only one prime cause. It is the replacement of normal oxygen respiration of the body's cells by an anaerobic cell respiration"* quoted by Dr. Otto Warburg.

Oxygen is required at the cellular level to destroy the cancer cells. This can be accomplished by an addition of nutritional supplements that improve cellular oxygenation and enhance oxygen utilization. Medical ozone treatments, or ingesting hydrogen or magnesium peroxide are other alternatives.

Total **"Internal Detoxification"** of the body is essential for any natural remedy to be totally effective. The healing process is enhanced when the colon is clean.

Other alternatives for cancer are Alkylglycerols, Antineoplastons (protein compounds), Clodronate, Colloidal Gold, the Gerson Therapy, Hydrazine Sulfate, Hydrogen Peroxide, Isoprinosine, The Macrobiotic Diet, MGN-3, The Salty Wush, Shark Cartilage or 714-X.

Essential Nutrients for Cancer

All trace minerals, the most essential is calcium, germanium, iodine, magnesium, potassium and selenium. Beta-carotene, Vitamins A, B complex, E, C, D, enzymes and amino acids. Tropical Sunrise, the whole lemon drink and friendly flora will also be beneficial. Beta-1, 3-glucan in NSC-24 is a potent immune stimulator. CoQ-10 improves cellular oxygenation.

Avoid all junk, processed or refined foods, saturated fats, salt, sugar and white flour. Inland Sea Water by Trace Minerals is a great table salt substitute.

Herbs for Cancer

Alfalfa	Golden Seal
Aloe Vera	Ho-Shou-Wu Root
Barley Juice	Irish Moss
Bayberry	Mandrake
Bee Pollen	Marigold
Black Radish	Mistletoe
Black Walnut Oil	Queen of Meadow
Blessed Thistle	Parsley
Burdock Root	Pau d'arco
Cat's Claw	Periwinkle
Chaparral	Pokeweed
Chickweed	Red Clover
Comfrey	Rose Hips
Echinacea	Slippery Elm
Essiac Tea	Suma
Eucalyptus	Taheebo
Evening Primrose	Violet
Garlic	White Oak Bark
Ginkgo	Yellow Dock Root

Foods for Cancer

Apples	Lemons
Beet Juice	Limes
Blue Berries	Mustard Greens
Cabbage	Olives
Carrots	Oranges
Cauliflower	Plums
Cherries	Pumpkin Seeds
Grapefruit	Reishi Mushrooms
Grapes	Shiitake Mushrooms
Kale	Squash
Kohlrabi	Tangerines

Note! Use foods & herbs to your blood type.

CANDIDIASIS

Candidiasis is an infection caused by the yeast *Candida albicans*, and thrives in the colon. Molds and fungus are members of the plant kingdom and yeasts are a subgroup of these organisms.

Candida is a thick white mucous, "cottage cheese" in appearance and can discharge from the vagina. *Candida* can grow on the skin, in the mouth and inside the body. It is present in every adult, child, and in some animals. Yeast connected health problems affect people of all ages and both sexes.

The *Candida* fungus is forever lurking to multiply in moist areas and if the resistance of the body is lowered, it can overgrow within the body. In some forms, *candida* roots can penetrate the lining where it resides, such as the intestine. When this mucous membrane lining is penetrated by rhizomes (roots) it becomes possible for partially digested food particles, toxins, and yeast products to pass into the bloodstream. *Candida* can result in a poor immune system, degenerative conditions, and sickness.

As stated in *Healthy and Natural Magazine*, Vol. 2, NO. 1, called "The Silent Spring Within," quotes CDC. A Center for Disease Control report stated that, "the incidence of serious fungal infections in hospitals has nearly doubled since 1980. *Candida* accounted for 78% of these infections."

Though the CDC concludes that internal yeast is the cause of *candida*, they have not made the connection that the yeast may be systematically the result or misuse of birth control pills or antibiotics.

Candida is fed by carbohydrates, sugars, yeast and fermented foods. Most people who have *Candida* do not realize they are

feeding it on a daily basis. Do not eat cooked or fresh fruit with other foods because it spoils and ferments in the stomach. Fresh fruit when eaten alone will not ferment. All carbohydrates will ferment if eaten with proteins.

Some physicians' experiences are showing a connection between *Candida*, parasites, and other disorders like Arthritis, Crohn's disease, Hypoglycemia, Multiple Sclerosis, Myasthenia gravis, Schizophrenia, Psoriasis, Grave's and Systemic lupus erythematosus.

Most physicians continue to treat vaginal yeast by using medication that only suppresses the symptoms instead of dealing with the real issue.

Symptoms of Candidiasis

Depression, digestive disorders, fatigue, headaches, hypoglycemia, hyperactivity, irritability, impotence, memory loss, learning difficulties, menstrual problems, muscle pain, premenstrual syndrome (PMS), respiratory problems, short attention span, skin problems, urinary disorders and vaginitis.

The combination of friendly bacteria and ozone can restore the balance of bacteria and regain control over the bad bacteria and *candida*. This combination, along with the correct vitamin and mineral supplements, internal body detoxification with colonics, will lay a solid foundation for the "Ultimate Detoxification Process."

Optimum results can be achieved from ozone after the intestines are clean and free of debris. The most effective way to rid the colon of *candida* and other toxic waste products is to irrigate the colon with ozonated water and H₂O₂. The ozone-oxygen is absorbed into the bloodstream and circulated throughout the entire body. When the body has ample oxygen, it produces enough energy to optimize

metabolism and eliminate toxic wastes in the tissues. Natural immunity is achieved when the immune system is not burdened with a heavy toxic buildup. Colon therapies help to balance body chemistry, eliminate waste, and restore proper tissue and organ function.

Disease is due to a deficiency in the oxidation process of the body. This leads to an accumulation of toxins that are stored in the fat tissue. These toxins ordinarily are burned in normal metabolic functioning.

As the dead bacteria, candida, and other poisons or toxins are released in the body; a cleansing effect may be experienced while the toxins are being released through the skin, lungs, kidneys and bowels. After a few weeks, some reactions to the cleansing effect could include skin eruptions, head or chest cold, boils, headaches, diarrhea or other ways the body uses to loosen toxins. This effect is temporary and should only last for a few days. This is commonly referred to as a **"Healing Crisis."** Many will quit their attempt to get better and fall back into their old degenerative habits because of this.

"DON'T GIVE UP"

Eating fresh organic vegetables and unprocessed foods will hasten the elimination of debris from the intestines. You can eat them raw or partially cooked. Squash and bananas help promote the growth of the friendly *Lactobacteria* and *Acidophilus* bacteria in the colon. The friendly bacteria also produce lactic acid, which lowers the pH of the colon.

One important thing to always avoid with *Candida* or any disease is yeast. Most all commercially used yeast has been genetically altered for years. Substitute with sourdough breads. Better yet, bake your own bread and use a sourdough starter instead of yeast. This way, you will

avoid the preservatives and hydrogenated oils used in commercial breads.

Foods to Avoid

If excess *Candida* is present in the body, you should avoid all foods with sugar, sucrose, corn fructose, maltose, lactose, glycogen, glucose, mannitol, sorbitol, galactose, monosaccharides and polysaccharides. You should also avoid honey, molasses, maple syrup, date sugar and turbinado sugar.

Packaged and Processed Foods. Canned, bottled and boxed foods usually contain refined sugar products and other preservatives or ingredients.

Avoid bakery goods that contain yeast or molds like breads, pastries, biscuits and muffins made with bleached white flour. Eat foods with whole-wheat flour or stoned ground cornmeal.

Other foods that contain yeast and molds are all cheeses, alcoholic beverages like wine and beer that have been fermented. Other fermented beverages include cokes, cider and root beer. All forms of yeast used in processing are genetically altered with cloned and mutant forms that cause additional health related problems. ←

Avoid condiments, sauces and vinegar-containing foods like mustard, ketchup, foods with monosodium glutamate, mayonnaise and salad dressings.

Avoid fungi and all types of foods that contain mushrooms, morels and truffles.

Reduce tobacco, coffee and tea intake. Avoid processed meat and fish products, especially when antibiotics have been used in the animals. Today, 50% of the antibiotics in use are fed to livestock. ←

The foods mentioned need only to be avoided during the first few months or if *Candida* is still present.

Natural Yeast Fighters

Aloe Vera
Biotin (vitamin B-6 complex)
Cabbage
Canrol (mixture of oils)
Caprinex or Capricin (caprylic acid)
Caprystatin (caprylic acid)
Colloidal Silver
Cultured Cabbage Juice
Echinacea (herb)
Essential Fatty Acids
Essiac Tea
Friendly Flora (good bacteria)
Garlic (Kyolic)
Germanium
Glutathione (natural body antioxidant)
Glycyrrhetic Acid
Grapefruit Seed Extract
Horseradish
H₂O₂ (Hydrogen peroxide)
Kale
Lemon/Orange and Olive Oil Drink
Linseed Oil from Flax Seed
Lumatium Dissectum (herb) LDM-100
Mathake
Mountain Savory Oil
Mycocidin (fatty acid concentrate)
Olive Oil
Onions
Oxygen-Ozone
Pau D'arco (Taheebo or Lapacho Tea)
Primrose Oil
Psyllium Hulls
Pure Purple Lapacho
Sea Vitamins-Minerals
Selenium (natural element)
Tanalbit (tannic acids)
Tea Tree Oil (*Melaleuca alternifolia*)
Thyme (herb or oil)
Turnips
Vitamin C
Vitamin E
White Oak Bark Tea
Yogurt (all natural)
Zinc (natural element)

White Oak Bark, Pure Purple Lapacho and Mathake Tea. Use one teaspoon of each or one tea bag three times a day.

Chromium picolinate or hypode can be used to reduce sugar cravings. The herb

known as **Stevia** is a sweetener that is 30-100 times sweeter than sugar.

Douching with five drops of Grapefruit seed extract in eight ounces pure water every 12 hours for three days is helpful for yeast infection.

Essential Nutrients for Candida Are

All trace minerals, the most essential is calcium, germanium, iron, magnesium, selenium, and zinc. Vitamins A, B complex, C, E, D, essential fatty acids, enzymes and amino acids (L-cysteine) are essential. Tropical Sunrise, Oxy-Mega, whole lemon drink and friendly flora will also be beneficial. CoQ-10 improves cellular oxygenation.

The Whole Lemon Drink

The whole lemon drink is for reducing high acid levels in the body and maintains pH balance.

The juice from one whole lemon blended in mixer, add to 1 1/2 cup of fresh orange juice with 1 tablespoon of extra virgin cold pressed olive oil.

Some report this drink helps flush toxins from the liver, move's lymph fluid thereby bringing natural killer and CD8 cells to the lymph nodes, helps the absorption of the essential fatty acids, helps reverse neuropathy, reduce swollen lymph nodes, and increases the absorption of nutrients. Lemons are anti-bacterial, anti-infectious and anti-viral.

Lemon oil contains an agent called sesquiterpenes that some say goes beyond the blood brain barrier. This agent is also found in Frankincense and Sandalwood oils.

Note! Use foods & herbs to your blood type.

CHRONIC FATIGUE SYNDROME

According to a survey conducted by the Centers for Disease Control and Prevention, chronic fatigue syndrome is a serious health concern that affects three in every 1000 Americans. CFS is a debilitating and complex disorder characterized by profound fatigue that is not improved by bed rest and that may be worsened by physical or mental activity. Chronic fatigue syndrome occurs between the ages of 20 to 50 and starts suddenly with a flu-like condition. Because of this, many researchers have focused on the possibility that a virus or some other infectious agent causes the syndrome. In white women, it is more prevalent than lung and breast cancer; high blood pressure and some women with irregular menstrual cycles may face a higher risk. Chronic fatigue is reported by 20% of all patients seeking medical care and is associated with many other well known medical conditions.

To be diagnosed with CFS, the symptoms must be persistent for 6 months or longer. The main symptoms include weakness, muscle pain, impaired memory and/or mental concentration, insomnia, and post-exertional fatigue lasting more than 24 hours. Other symptoms may include abdominal pain, alcohol abuse and intolerance, anxiety, autoimmune disease, bloating, cancer, chest pain, chronic cough, chronic mononucleosis, diarrhea, dizziness, dry eyes or mouth, earaches, eating disorders, headaches, hormonal disorders, hypothyroidism, irregular heartbeat, jaw pain, morning stiffness, multi-joint pain, nausea, night sweats, psychological problems (depression, irritability, panic attacks), reactions to medications, shortness of breath, skin sensations, sleep disorders, sore throat, tingling sensations, tender lymph nodes, and weight loss. Many physicians doubt that CFS is an actual disease but believe

rather that it is a component of a psychological disorder or a symptom of other problems, similar to anemia and high blood pressure and treated as such.

There are many theories as to the causes of CFS but no primary cause has been found that explains all cases according to the medical experts. Some believe it develops from a combination of factors including brain abnormalities, a hyper-reactive immune system, and a viral or other infectious agent but the CDC rules out many of these and the cause remains unknown or simply covered up.

A number of other illnesses have been associated with CFS because of similar symptoms especially chronic fatigue. These include chronic mononucleosis, fibromyalgia, gulf war illness, myalgic encephalomyelitis, neurasthenia, multiple chemical sensitivities, and rheumatoid arthritis. These illnesses may exist with a primary symptom other than fatigue but chronic fatigue is commonly associated with all of them.

Few infectious agents can produce the complex chronic signs and symptoms found in CFS, FMS and GWI patients (and some RA patients), but one type of airborne infection that has received renewed interest of late as an important element in these disorders is represented by the class Mollicutes. These microorganisms, principally mycoplasmas and other rather primitive bacteria, although not well known agents, are now considered important emerging pathogens in causing chronic diseases and may be important cofactors in some illnesses, including AIDS and other immune suppressive diseases.

Recently published studies by Garth Nicolson and others at The Institute for Molecular Medicine in Huntington Beach, CA. demonstrated a possible link between mycoplasmal infections and chronic

fatigue. Systemic mycoplasmal infections can cause chronic fatigue, muscle pain and a variety of additional signs and symptoms, some of which are related to dysfunctional immune responses and in extreme cases autoimmune-like disorders. Some mycoplasmas can invade virtually every human tissue and compromise the immune system, permitting opportunistic infections by other bacteria, viruses, fungi, and yeast. When mycoplasmas exit certain cells, such as synovial cells, nerve cells, among others that can be infected, they can stimulate autoimmune response.

The institute (IMM) has found a high frequency of mycoplasmal infections in their patients suffering from chronic illnesses. They found that about one half of patients with Gulf War Illness and two third of patients with Chronic Fatigue Syndrome / Fibromyalgia Syndrome were positive for mycoplasmal infections in their blood. The Gulf War Veterans suffer from signs and symptoms similar to patients diagnosed with CFS and FMS. They can be treated using antibiotics effective against mycoplasmal infections, and once they recover, their blood is no longer positive for the presence of mycoplasmal infections. Their recent results indicate that Rheumatoid Arthritis is also associated with mycoplasmal infections.

Although most mycoplasmas are not considered important human pathogens, some species, such as *M. fermentans*, *M. penetrans*, *M. pneumoniae*, *M. genitalium*, *M. pirum* and *M. hominis*, among others, have been closely associated with various human diseases. This does not necessarily mean that these diseases are entirely caused by mycoplasmal infections but this type of infection is important in causing much of the morbidity or illness seen in-patients with chronic illnesses.

The tests they use to identify mycoplasmal infections, polymerase chain reaction, and nucleoprotein gene tracking are very

sensitive and highly specific. These tests are a dramatic improvement over the relatively insensitive serum antibody tests that are routinely used to assay for systemic mycoplasmal infections. Blood specimens can be sent directly to the International Molecular Diagnostics, Inc. for testing at 15162 Triton Lane, Huntington Beach, CA 92649-1041. Forms and instructions for submitting specimens for PCR testing are available by calling (714) 799-7177 or visit their web site at <http://www.imd-lab-com> for any additional information. Information on mycoplasmal infections, visit the Institute for Molecular Medicines web site at <http://www.immed.org> or call (714) 903-2900.

Dr. Daryl See of the University of California College of Medicine, Irvine, CA, as well as others are finding strong evidence for mycoplasmal blood infections that can explain much if not most of their chronic signs and symptoms. *"In our studies on GWI, a CFS/FMS-like condition, we have found mycoplasmal infections in about one-half of approximately 400 patients, and these patients were found to have principally one infectious species, M. fermentans. Moreover, in over one-half of the 500 civilians with CFS, FMS or RA that we have examined we are finding a variety of pathogenic mycoplasma species, such as those listed above, in the leukocyte fractions of blood samples"*.

The recommended treatments for these types of mycoplasmal blood infections by IMM require long-term antibiotic therapy, usually multiple 6-week cycles of doxycycline (200-300 mg/d), ciprofloxacin or Cipro (1,500 mg/d), azithromycin or Zithromax (500 mg/d) and clarithromycin or Biaxin (750-1,000 mg/d). Multiple cycles are required, because few patients recover after only a few cycles, possibly because of the intracellular locations of mycoplasmas like *M. fermentans* and *M.*

penetrans, and the slow-growing nature of these microorganisms. The administration of some antibiotics, such as penicillin's, resulted in increasing symptoms.

The July 2000 issue of *The Journal of Degenerative Disease* by the Common Cause Medical Research Foundation (CCMR) states; the diseases linked to *mycoplasmas fermentans, incognitus strain* by Shyh-Ching Lo and his patent # 5,242,820 on "Pathogenic Mycoplasma". These include AIDS, ARC, Chronic Fatigue Syndrome, Fibromyalgia, Wegener's Disease, Sarcoidosis, Respiratory Distress Syndrome, Kibuchi's Disease, autoimmune diseases such as Collagen Vascular disease, Lupus, and chronic debilitating diseases such as Alzheimer's Disease. A committee from the CCMR has added the following to Dr. Lo's list: bipolar depression, Crohn's, Colitis, Creutzfeldt-Jakob, Diabetes (Type1), Dystonia, Endometriosis, Huntington's Disease, Lyme Disease, Multiple Sclerosis, Parkinson's Disease, Schizophrenia and several more. (See Mycoplasma in References)

Ozone counteracts any bacteria, fungus, virus, or other agents linked in CFS or from any of the above conditions when used correctly. Ozone air purifiers help with the physical and chemical sensitivities around the home. Fatigue due to environmental conditions are also improved.

Those suffering from CFS are deficient in most nutrients and probably related to malabsorption. Cleaning the colon should be the first step in detoxification for the proper absorption and healing from your nutritional supplements like Tropical Sunrise. If candida or other fungus infections are present with mucus in the upper respiratory track, start out with the salty wash to clean out as much as possible and follow the candida diet. When the colon is clean, rectal insufflation with ozone is most beneficial.

The most essential vitamins are A, B complex, B₁₂, C, D, E, and beta-carotene. Digestive enzymes and amino acids are essential. All minerals are essential, especially calcium, germanium, iodine, magnesium, potassium, selenium and zinc. Tropical Sunrise, the whole lemon drink, and friendly flora are also beneficial. CoQ-10 or Oxy-Mega improves cellular oxygenation. Use Juice Plus+® as an added supplement to vegetables for chlorophyll. It may also be necessary to treat for parasites and viral infections.

Those suffering with chronic fatigue syndrome should maintain an immune enhancing diet low in saturated fats, high in grains, seeds, sprouts, and organic fruits and vegetables. Some fats are beneficial like black current, fish oils, olive, and primrose oil. These oils contain polyunsaturated fatty acids known as gamma linoleic acid, which seems to block the release of cytokines and prostaglandin's that may play destructive roles in inflammatory diseases.

Avoid all junk, processed, canned, refined foods, alcohol, caffeine, canola oil, diet drinks, gluten, hydrogenated oils, acidic and mucus forming foods, saturated fats, table salt, sugar, spaghetti, and white flour.

Herbs and Foods for Chronic Fatigue

Bee Pollen	Peppermint
Burdock Root	Propolis
Cayenne	Red Clover
Centella	Rose Hips
Chamomile	Royal Jelly
Chlorella	S-Adenosylmethionine
Colloidal Silver	Sage
Dandelion	Siberian Ginseng
Echinacea	Spirulina
Flax Seed	St.-John's Wort
Garlic	Suma
Goldenseal	Thymus Extracts
Pau d'arco	Yarrow

Note! Use foods & herbs to your blood type.

CONSTIPATION

Constipation is a major health problem of today resulting from improper eating habits. Proper eating habits and the intake of food is important but it is equally important to rid the body of the waste. Constipation results when the food waste moves to slow in the colon. When this condition occurs, the waste tends to ferment or putrefy. Toxins are produced and absorbed into the blood stream. This is due to insufficient fiber and fluids in the diet; a side effect of drugs or pregnancy.

When the body wants to remove of its waste and the call of nature is not heeded to, the muscular action in the colon moves the waste in reverse. This action causes a building up (bulging) of waste in the colon that weakens the walls. Eventually, this will cause cancer, colitis, diverticulitis, intestinal toxemia and ulcerations.

Constipation leads to malabsorption that results in a deficiency of vitamins and minerals. It creates an environment for unfriendly bacteria and parasites. The build-up of poisonous toxins creates stress on the gall bladder, liver, pancreas, pressure and stress on the upper gastrointestinal, thinning of the intestinal walls, and muscle weakness in the colon.

Constipation usually leads some people to a dependence on laxatives. Overuse can lead to damaged nerves, muscles, and tissues of the colon. Most laxatives contain carbohydrates, sodium or sugar. Some laxatives will list their inactive ingredients, some will not. Glycerin is used in antifreeze, solvents and sweeteners. Sodium hydroxide is used in chemical products and soaps. Stearic acid is used in pesticides and listed as a possible carcinogen. Read the labels and think twice about using these laxatives.

In an article called *"How To Be Always Well"* by, Dr. Robert G. Jackson, states; *"Anything that lessens the functioning or working power of any one body organ, cell or part, automatically lessens the functioning power of every other body organ, cell or part, through the circulatory and nervous interrelations which obtain between all the cells, organs and parts of the body."*

When the natural stimulus that induces normal bowel function is lost because of weak muscles, colon irrigation tends to stimulate these muscles and cramps are experienced during the cleansing. The herb Marjoram, strengthens stomach and intestines, helps relieve abdominal cramps. Oxy-Mega colon cleanser is more gentle.

Herbal Remedies for Cramps

Blue Cohosh	Rue
Cramp Bark	Watercress
Pennyroyal	Wild Lettuce

A diet of raw fruits (apples) and vegetables, brewer's yeast, yogurt, whole grain cereals with lots of water, and wheatgrass juice should be taken for constipation. Balanced portions of all vitamins and minerals are essential. Potassium stimulates nerve impulses for muscle contraction and builds a foundation for muscular tissues and elasticity.

Natural Remedies for Constipation

Aloe vera	Flax Seed Oil
Barley Juice	Gentian
Beets	Glucomannan
Black Sesame Seeds	Mandrake
Buckthorn	Olive Oil
Cascara Sagrada	Prunes
Castor Oil	Psyllium
Chamomile Tea	Sea Vitamins-Minerals
Comfrey	Senna
Elder Flowers	Wormwood
Fiber	Zucchini

**Note! Use foods & herbs to your blood type.
Avoid all forms of Canola and Hydrogenated Oil.**

DIABETES

It is estimated that over 13 million Americans have diabetes, and only half are being treated. Diabetes is the third leading cause of death in the United States.

There are two types of diabetes; *diabetes insipidus* and *diabetes mellitus*. Problems associated with diabetes are heart problems, circulatory, blindness, kidney, atherosclerosis, and loss of nerve function. It can also lead into infections and candidiasis.

Some symptoms of diabetes are abnormal thirst, bedwetting, blurred vision, drowsiness, fatigue, frequent urination, irritability, itching, nausea, skin infections, slow healing, tingling in the feet, unusual hunger and weight loss.

Those that are overweight are at a higher risk in developing diabetes. Diabetes mellitus types 1 or 2 are usually associated with the individual's diet of high refined and processed foods, and foods low in fiber and complex carbohydrates.

Studies show that ozone therapy increases oxygen unloading of hemoglobin in the blood of diabetic's, improves the peripheral oxygen supply and circulatory disorders.

When taking supplements for the treatment of diabetes, the first step should be cleaning the colon. Colonics and Oxy-Mega will help the digestive process and the absorption of the nutrients taken. This is beneficial to the healing process.

- Chromium picolinate is essential for diabetes. It improves efficiency of insulin and lowers blood sugar levels.
- L-carnitine will mobilize the excess fat for easier elimination.

- L-glutamine helps in reducing the craving for sugar.
- Spirulina (herb) helps stabilize blood sugar levels.
- A diet high in raw fruits and vegetables will help reduce the need for insulin, and helps lower blood fat.
- Enzymes and friendly bacteria are needed for proper digestion.
- Aloe vera and bee products are also helpful.
- Coenzyme Q10 improves circulation and stabilizes blood sugar.
- Avoid all foods with saturated fat and hydrogenated oils.

Essential Nutrients for Diabetes

Vitamins A, C, D, E, vitamin B complex, B12, Biotin and Inositol. Nutrients from Tropical Sunrise are very beneficial.

Minerals

Calcium	Manganese
Copper complex	Zinc
Magnesium	

Herbs for Diabetes

Alfalfa	Goat's Rue
Astragalus	Goldenseal
Bilberry	Gymnema sylvestre
Buchu	Huckleberry
Cayenne	Java Plum
Cedar Berries	Nettles
Dandelion Root	Plantain
Devils Claw Root	Stevia
Essiac Tea	Suma
Fringetree Bark	Sweet Sumach
Garlic	Uva Ursi
Ginseng Tea	Wheatgrass Juice

Note! Use foods & herbs to your blood type.

DRUG ADDICTION

In the past, all drugs were natural from animals, minerals and plants. Today, all pharmaceutical drugs are artificial. Drugs impersonate other natural body chemicals and alter the function of body organs. They do this by stimulating or blocking natural chemical reactions by binding or attaching themselves to cells or by absorbing into the cell where it can affect the chemical process directly.

All drugs produce adverse effects. There will always be interactions between the unnatural and natural. Drugs are all artificial and foreign to the body. They do not mix together. Each drug in their own way will rob the body of essential vitamins and minerals needed for a healthy life.

Depending on a drug to cover-up your symptoms, using it to escape from reality or for some experience into the unknown can lead to an addiction. Once addicted, and with long term use you may suffer from malnutrition and a suppressed immune system. The body can only tolerate this for short periods.

Most of the population is addicted to alcohol, coffee, colas, drugs (legal and illegal), foods, nicotine, or sugar mostly out of habit. Moderate use may not present any problems. Abusing or overdosing on a particular substance may kill.

Cocaine has been shown to damage heart muscle that leads to artery spasm and heart attack. Marijuana use can damage white blood cells by as much as forty percent.

In response to smoking (nicotine), the body produces the hormone epinephrine (adrenaline) in the adrenal gland. This substance increases heart rate, dilates airways, increases blood flow to muscles, constricts blood vessels to the skin, and

intestines (less absorption). This is the reason most will gain weight after quitting. You absorb more of what you eat.

If you are currently taking drugs, smoking may be beneficial because you will absorb a smaller percentage of them. If the drug does not help your symptom, you may consider not using it. This goes against the will of the pharmaceutical companies because they want you to be dependent on their products. Other drugs are always needed for symptoms created from the previous drug. Do you really think they care about your health or the bad side effects created? If they truly cared, they would produce natural drugs that are good for us. The more money they make, the more powerful they become. Is this the reason for the increase in cigarette prices and to get you to stop smoking so their drugs will have a greater impact? Do not let these reasons keep you from quitting.

Other physical problems may include a higher risk of cancer, lung, or heart disease. There are many chemicals used in growing tobacco and other chemical residues are formed during burning. If you must smoke and can not quit, use a natural tobacco without chemical additives.

The best way to quit any habit means wanting to quit. Determination and will power come after learning their negative effects on the body. Supplements and diet aid in kicking bad habits and the effects of withdrawal. Your current health determines if you need all supplements. Seek advice because antidepressants and other drugs may react to certain supplements.

Colon cleansing is extremely helpful for detoxing by removing drugs or residues from fat and muscle tissue. It also increases the absorption of nutrients you are lacking.

FIBROMYALGIA

Fibromyalgia was first described as an inflammatory condition in women more often than men. This condition is mostly associated with pain in the fibrous connective tissue components of the muscles, tendons, and ligaments. The constant pain can be severe enough to completely incapacitate some sufferers. Fibromyalgia is associated with a variety of other conditions like chronic fatigue syndrome or others that produce pain. Viral infections from Lyme disease, human immunodeficiency virus, parvovirus B19, and others are linked to this condition.

Symptoms include, anxiety, fatigue, headaches, depression, insomnia, irritable bowel syndrome, morning stiffness, sleep disturbance, stress, and diffuse aching with tenderness in at least 11 of 18 locations.

The origins and cause of fibromyalgia are unknown to the world of medicine and many have been diagnosed as having psychiatric problems. However, they are able to blame it on a sleep disorder and other things but they can treat your symptoms with drugs and future treatments caused by their adverse side effects. For every action, there is always an effect or reaction!

Studies show that reduced circulation into the muscle cells causes damage to the cells' energy producing mechanism, which causes a deficiency of energy in muscle tissue. In other words, when there is insufficient oxygen supplied to the cells as well as other nutrients there is an imbalance and a shortage of other important biochemicals. The body then robs protein from the muscles and converts it to glucose for energy, which causes tissue breakdown resulting in the aches and pains associated with fibromyalgia. (See *Mycoplasma* in References)

Fibromyalgia should be treated as any other disease or syndrome caused by an out-of-balance condition originating from intestinal problems, malabsorption, malnutrition, or viral infections. Complete detoxification is a necessity. Ozone therapy increases energy, reduces pain, kills any virus, supplies oxygen to the cells, and helps blood circulation. Colonics will clean out any undesirables in the colon and restore proper absorption of vital nutrients. The right nutritional elements will promote detoxification, the healing process, and restore balance. The combinations of all three will eliminate the cause along with all the symptoms.

Concentrate on the cell level with all the amino acids, electrolytes, enzymes, Tropical Sunrise dietary supplement. Extra supplements of B₁, CoQ-10, flaxseed oil, H₂O₂, malic acid, magnesium, and potassium are also beneficial.

Another agent found effective which is formed from the amino acid methionine and adenosyl-triphosphate is called SAM (S-Adenosylmethionine), it reduces most all symptoms. Exercise and massage therapies are very beneficial.

Some report that certain foods appear to hasten their symptoms. Avoid all acid forming foods, alcohol, bad fats, caffeine, carbonated drinks, canola oil, nightshade vegetables, pharmaceutical painkillers, processed foods, and sugar.

Herbs and Foods for Fibromyalgia

Aloe Vera	St. John'swort
Bee Pollen	Primrose Oil
Brewers Yeast	Pycnogenol
Butchers Broom Tea	Turmeric
Chlorella	Wild Lettuce (pain)
Ginkgo Biloba	Wild Yam (pain)
Lecithin	Wheatgerm
Milk Thistle	Valerian (headaches)

Note! Use foods & herbs to your blood type.

GANGRENE

When an inadequate supply of oxygen is not supplied by the blood to certain areas like fingers, portions of limbs, or areas of the skin, the body tissues die. This condition may be caused by an injury, arteriosclerosis (thickening and loss of elasticity of artery walls), diabetes mellitus, thrombosis (blood clots), an embolism (blockage), or frostbite.

There are two main types of gangrene, dry or wet. The first symptoms of dry gangrene are; affected areas are cold, painful and pale. As the body tissue dies, the overlying skin turns black.

Wet gangrene usually develops when dry gangrene or a wound becomes infected by bacteria. Symptoms include swelling, severe pain, and tenderness in the area. Skin color changes from pink to red to gray-green or purple. This condition can lead to death in a few days if not treated. The usual treatment in most cases is amputation of the affected part. This form of treatment is common today with diabetic gangrene.

Millions lost their lives during wars from gas gangrene, a dangerous strain of bacteria that destroys muscles and produced a foul-smelling gas. One of the first uses for medical ozone was by Germany during the First World War on its soldiers for treating wounds and fistulae.

Ozone treatment may be used in combination with major autohemotherapy, intraarterial injections, or the infected arm or leg can be placed in a bag for gas applications. Rectal treatments can be used in conjunction with the others, but the colon should be cleaned first, the absorption of nutrients is essential for healing. Hyperbaric oxygen and hydrogen peroxide treatments have also been used

with success. Amputation should only be done as a last resort. Any alternative treatment should be tried if time allows.

The foods eaten and those that should be avoided are the same for diabetics and heart disease. Eat fresh vegetables rich in chlorophyll, and foods that help promote oxygen to the blood and tissue.

Essential Nutrients for Gangrene

Vitamins A, C, D, E, vitamin B complex, enzymes, friendly bacteria, CoQ₁₀ and chlorophyll. Tropical Sunrise and Oxy-Mega helps in getting oxygen and other essential nutrients to the skin cells.

Minerals

Calcium	Magnesium
Germanium	Potassium
Iodine	Zinc

Herbs and Foods for Gangrene

Aloe Vera	Ginkgo Biloba
Bayberry	Goldenseal
Bee Pollen	Kelp
Butcher's Broom	Onions
Cayenne	Red Seal
Echinacea	Sea Vitamins-Minerals
Essiac Tea	Shiitake Mushrooms
Garlic	Wheatgrass Juice

Note! Use foods & herbs to your blood type.

Marshmallow root and cayenne can be mixed and used as a poultice (salve) on the infected area. A combination of cabbage and wheat grass can also be used. Ozonated olive oil or spraying the area with a mist of hydrogen peroxide may also be beneficial.

Combinations of herbs for treatment of infection are 1. Echinacea, yarrow, myrrh, and capsicum. 2. Echinacea, golden seal, yarrow, and capsicum. 3. Golden seal, black walnut, marshmallow, lobelia, plantain, and bugleweed.

GENETIC MODIFIED DISEASES

The largest and most massive killer of all time which has acquired a multitude of other deceptive and fictitious names to cover the true origins and purpose.

Thousands of these slow killing biological agents are the results of man "tampering with nature" over the years by altering the genetic material (proteins) in living organisms to produce a desired change in their characteristics. This is accomplished by extracting genes from cells and by use of enzymes the recipients cell molecule is split and spliced with the other gene. The technique used for mass producing these genetic proteins is called recombinant deoxyribonucleic acid (DNA) technology.

When bacteria, cancer cells, and other organisms are altered, they reproduce more rapidly resulting in a highly more dangerous microorganism. This is done in the name of 'science' to extend genetic engineering to humans for purposes of treating so called genetic disorders. As stated in the 1989 AMA Encyclopedia of Medicine, *"The most popular organisms in the past have been common intestinal bacterium Escherichia Coli and various yeast's but cells of other organisms, including human cancers cells, have also been used with success"*. Immune system disorders originating from genetics will never be named as such and the cause is blamed on your defective genes, the environment, or your specific lifestyle.

The effects of medical drugs and vaccines seem to be far more deadly since genetics has emerged. Everyone would probably like to know if the altered and more dangerous versions are currently being used in vaccines. What kind of altered mutations are they using to genetically change our currently grown foods? A recent article suggests that scientists have used a chemical (zVAD-fmk) that blocks

and enzyme crucial for cell death. Through experiments on genetic mice, they believe these 'caspase inhibitors' will prolong the lives of those suffering from degenerative nerve disorders. Will these diseased cells propagate into other more deadly forms if their death is prolonged?

Genetics originated following the end of WWII when the US recruited German Scientists in 'Project Paperclip' to work for the United States on rocket science technologies and biological warfare. After their arrival, they continued their viral research program named 'VISNA'. The American biological warfare programs were developed and controlled from Fort Detrick in Maryland. The initial development of the retro-viral groupings, which has become known as HIV/AIDS, was part of the American Biological Warfare Program, called the "Special Virus" program in 1962. Top government officials were led to believe the Russian Biological Warfare Program was more advanced in germ warfare. This was the excuse to initiate a plan of genocide to secretly depopulate the world of which they considered as undesirables. They were convinced that creating an immune system attacking virus was the ideal way because humanity had no known or acquired immunity to defend itself against their created genetic mutants of destruction. It seems these impostors in sheep's clothing and acting as Gods will indeed have a high price to pay for their deadly acts against humanity.

George Washington once said, ***"This country will never be destroyed from the outside, only from within"***.

For more facts and information sources, see **"THE GENESIS & CHRONOLOGY OF THE DEVELOPMENT OF HIV/AIDS"** provided by PA International and **"Mycoplasma"** in Research References. However, this comes with a **WARNING!** The truth hurts and this explicit information may be very upsetting.

HEART DISEASE

Heart disease is the number one killer in the United States. Approximately 50 million are afflicted with heart and blood vessel disease, which claims more than 1 million lives annually.

The circulatory system is composed of the heart, blood vessels and blood. Its function is to distribute oxygen and nutrients to the cells, transport carbon dioxide and waste from the cells, maintain pH balance, regulate body temperature and to form blood clots when bleeding.

The coronary arteries supply blood to the wall of the heart, supply oxygen and nutrients for the heart muscle. When the oxygen supply is restricted, chest pain is the main result. When the coronary arteries restrict the flow of blood to the heart muscles, heart attack is the result. High blood pressure (hypertension) results in a stroke.

The most common cause of these restrictions is hardening of the arteries (*Arteriosclerosis*), which is caused by fat or cholesterol deposits. Another cause is blood clots in the coronary arteries. Some feel the main cause of mini-tumors in the walls of blood vessels is the abnormal reproduction of cells caused by chlorine. If you are suffering from angina (chest pain), avoid drinking and showering in chlorinated water. Use carbon filters to remove the chlorine.

Poor bowel function is an important cause of accumulated fats and toxins on the artery walls.

When the waste products of the body are stagnate in the colon it fosters the growth of anaerobic bacteria and other parasites. The toxic waste produced is continually being recycled into the blood. The toxins accumulate around the heart first, then in

the veins and arteries. Since the toxins are circulated in the blood, they are deposited in all other parts of the body. Cleaning the colon is very important so the body can detoxify itself naturally.

Factors that contribute to heart disease are diabetes mellitus, excess weight, high blood fat, high blood pressure, high uric acid, hypertonia, nicotine and stress.

Ozone improves blood circulation by reducing red blood cell clumping. This is due to an increase in the negative surface charge of the red blood cell. The flexibility of the red blood cells is improved due to an increase in membrane fluidity, which loosens the structure of the membrane lipid. This occurs when the ozone combines with the fatty acids and peroxides are formed in the cell. The improvement in the membrane flexibility of the red blood cells increases blood circulation through small vessels and stimulates several enzymatic processes related to oxygen metabolism.

After oxidation of the plaque, the flow and viscosity of the blood in the arteries return to a normal rate of flow. Oxygenation of the red blood cells is increased in the lungs, which increases oxygen in the tissue. Ozone helps erythrocytes in performing their biological functions, which restores flexibility in tissue capillaries.

Ozone will effectively sterilize the blood of all bacteria and viruses, the same way it purifies water. Protein levels are not effected by treatments. Vitamin levels in the blood are decreased and should be replenished after any ozone therapy. Uric acid (a waste product in blood) is almost completely eliminated. Ozone treatments support the detoxification process of many toxic and carcinogenic substances, in not only the blood, but also the whole body.

The typical fast food diet and other bad lifestyles pave the way for cardiovascular disease. A change in your daily habits is essential to avoid and prevent heart problems.

Avoid all fried foods with saturated and hydrogenated oils. Use polyunsaturated oils only. Also avoid alcohol, animal fats, aspartame, caffeine, homogenized milk, margarine, table salt, soft drinks, sugar, processed foods and white flour products.

A **balanced** diet of whole grains (fiber), raw organic vegetables, fruits, and herbs will clean the arteries and nourish the body. Consume foods that will build the blood and strengthen the heart like almonds, brown rice, buckwheat, chicken, garlic, herring, mackerel, olive oil, onions, peas, salmon, sprouts, tomatoes, trout, tuna, turkey, watercress and wheat germ.

The Essential Nutrients Needed

Vitamins • B complex; B₁; B₆; niacin; B₁₂; C; D, E; bioflavonoids; choline; folic acid; inositol, and pangamic acid. Plant derived nutrients from Tropical Sunrise would be very beneficial.

Minerals

Calcium	Iodine	Potassium
Cobalt	Magnesium	Selenium
Copper	Manganese	Silicon
Fluorine	Nitrogen	Sulfur
Germanium	Phosphorus	Zinc

Amino acids • L-carnitine will reduce fat levels in the blood and increase oxygen uptake. L-aurine will help stabilize the heartbeat and aids in digestion of fats.

Flavonoids act as antioxidants and prevents oxidation of cholesterol in arteries that form plaque. Grape seed extract is an excellent source.

Essential fatty acids like evening primrose oil or black currant oil will prevent hardening of the arteries.

Chromium Picolinate helps reduce blood and body fat. Lecithin acts as a fat emulsifier. Extra vitamin E aids in the assimilation of these fats.

CoQ-10 and NSC-24 are also beneficial. CoQ-10 will prevent additional heart damage due to a lack of oxygen. NSC-24 has cholesterol reducing agents that help clean the blood and prevent plaque.

Herbs for the Heart and Blood

Herbal combinations to purify the blood denotes the symbol < or >. The * or ^ combinations will strengthen the heart and circulatory system. This symbol • help's circulation.

Aloe Vera	Ginseng ^
Barley Juice	Gentian Root •
Bayberry <	Golden Seal ^
Bee Pollen	Hawthorn Berries * •
Bilberry	Ho-Shou-Wu Root
Black Currant Oil	Horseradish
Buckhorn <	Kelp •
Bugleweed	Pau d'arco <
Butchers Broom •	Parsley ^
Burdock Root <	Peach Bark <
Cayenne * ^ •	Prickly Ash <
Cascara Sagrada <	Red Clover > <
Cat's Claw	Rosehips
Chaparral > <	Sarsaparilla <
Cloves	Spice >
Dandelion <	Stillingia <
Echinacea	Suma Tea
Essiac Tea	Tropical Sunrise
Evening Primrose Oil	Virginia Snake Root
Garlic * ^ •	Wheat Grass Juice
Ginger	Yarrow <
Ginkgo	Yellow Dock Root <

Note! Use foods & herbs to your blood type.

Avoid all forms of Canola and Hydrogenated Oil!

HEPATITIS

The most common forms of hepatitis virus is A and B. Both forms are highly contagious, and lead to other health disorders. Hepatitis A spreads from person-to-person, and contaminated foods or drinking water. Hepatitis B spreads from insects, sex, blood transfusions, or contaminated syringes. Hepatitis C seems to be the next staged epidemic of the new millennium. Hepatitis inflicts over 150,000 Americans yearly.

Mild symptoms are abdominal discomfort, fever, headache, jaundice, muscle aches, nausea, weakness and vomiting.

Chronic acute hepatitis virus infection symptoms cause liver inflammation, cancer, cirrhosis, disease, pain. Minor hepatitis symptoms include abdominal pain, appetite loss, dark urine, fever, jaundice, muscle joint aches, nausea, tiredness.

Chronic Hepatitis Symptoms include abdominal discomfort, anxiety, arthritis, blurred vision, chills, dark urine, decline in sex drive, depression, dizziness, dry skin, edema, excessive bleeding, excessive gas, eye problems like blurred vision, dry eyes, fatigue, fever, flu symptoms, gallstones, gray, yellow, white colored stools, headaches, pain discomfort in liver, hot flashes, indigestion, insomnia, irritability, itching, jaundice, joint pain and inflammation, mood changes or swings, memory loss, mental confusion, menstrual problems, muscle aches, nausea, rashes, red palms, sensitivity to heat-cold, sleep disturbances, slow healing and recovery, stomach swelling, susceptibility to illness-flu, sweating, vertigo, vomiting, water retention, weakness, weight gain or loss.

Three of every four persons infected with HAV have symptoms. When symptoms are present, they usually develop suddenly

and may include fever, tiredness, loss of appetite, nausea, abdominal pain, dark urine, and yellowing of the skin and eyeballs. Adults have symptoms more often than children.

People are most infectious about one week before symptoms appear and during the first week of symptoms. However, an infected person who has no symptoms can still spread the virus. Unlike some other viral types, HAV causes no long-term damage and is usually not fatal.

Hepatitis B virus is very common in Asia, China, Philippines, China, Africa and the Middle Eastern countries. World wide, it is estimated that there are over 350 million hepatitis B carriers which represents 5 percent of the worlds population and it is estimated that 10 to 30 million people become infected with the virus each year.

Hepatitis B virus is in blood, semen, menstrual blood, urine and fecal matter as well as other bodily fluids of a person who is infected with the hepatitis B virus. 5 to 10 percent of adults and about 90 percent of babies who contract HBV will continue to carry and spread the virus for the rest of their lives.

Hepatitis B virus is spread by exposure to blood and human fluids of a person infected with the virus. The virus can be spread by sharing needles, sharing snorting straws used by people who snort their drugs, during sex, getting stuck with a dirty needle, or by getting blood or other infected bodily fluids in the mouth, eyes, or onto broken skin. The virus also can be passed from mother to baby, usually at the time of birth.

Symptoms may include aches in muscles and joints, dark-colored urine, fever, jaundice, light or white stools, loss of appetite, tiredness, and vomiting. Most children and about half of all adults who get hepatitis B will never feel sick at all.

People with HBV will be at a greater risk for cirrhosis and liver cancer later on in life.

Hepatitis C virus (HCV) infection is increasing worldwide and the major cause of chronic hepatitis in the USA. The World Health Organization estimates 170 to 200 million individuals throughout the world are infected with HCV. An estimated 1.8 percent of the population in the USA is positive for HCV antibodies; this rate corresponds to an estimated 3.9 million persons with HCV infection nationwide. Infection due to HCV accounts for 20 percent of all cases of acute hepatitis, an estimated 30,000 new acute infections with 10,000 to 15,000 deaths each year in the USA. Hepatitis C may produce approximately a trillion new viral particles each day of viral replication.

According to Dr. Eugene Schiff of the Univ. of Miami reviewed the history and impact of Hepatitis C, it appears that the Hepatitis C virus (HCV) emerged in the USA population beginning in the 1960s, related to blood transfusion and injection drug use, although the extent of the problem was only apparent after 1990 when reliable blood tests first became available for Hepatitis C. Studies of the natural history have been somewhat contradictory but indicate that over the first 20 years of chronic HCV infection, 20 percent of chronically infected patients will develop cirrhosis, and many of those will progress to hepatocellular carcinoma. HCV-associated end-stage liver disease is now recognized as a leading indication for liver transplantation in the USA and the developed western world.

History of hepatitis is contradictory because some professionals believe that it started from contaminated Yellow Swine Fever virus vaccines. In 1938 more than one million Brazilians were inoculated with the vaccine before it was discovered that it had been contaminated with hepatitis B virus. 330,000 people came down with

hepatitis B virus infection linked to vaccine lots given to approximately 50,000 USA Army personnel. In 1939 samples were acquired by the Japanese at the Rockefeller Medical Research to be used for biological warfare.

Army veterans given yellow fever vaccine contaminated with hepatitis B virus in 1942. 69,988 men were the subjects of the cohort study. Another epidemic of icteric hepatitis in 1942 affected approximately 50,000 Army personnel. This outbreak was linked to specific lots of yellow-fever vaccine stabilized with human serum. Mortality of Korean War Veterans infected with Hepatitis C Virus. Approximately 100 veterans had been identified as Hepatitis C Virus (HCV) infected by testing a collection of serum specimens collected from approximately 9,500 military recruits during the period 1949 to 1954. This is just of brief chronology of the development of the Hepatitis C virus.

Hepatitis D or Delta Hepatitis is a liver disease with symptoms similar to Hepatitis B and may include fever, lack of energy, nausea, vomiting, abdominal discomfort, and jaundice (yellow color to the whites of the eyes or skin and darkening of urine). Some persons who have Hepatitis D have no symptoms. Up to 20 percent of Hepatitis D infections are rapidly fatal. Infected persons may recover or may develop chronic long-term Hepatitis D (carrier) and are at risk for cirrhosis and liver failure.

Hepatitis E virus occurs in young to middle-aged adults in Asia and the Indian subcontinent. It is transmitted mainly by contaminated drinking water and is associated with a high mortality rate up to 20 percent in pregnant women. Chronic types of hepatitis E are not known.

Hepatitis G virus is clearly a transmissible agent that may be spread in the same manner as other conventional blood-borne

viral agents. Studies of recipients of blood transfusion have documented the appearance of HGV RNA after transfusion of blood or blood products in patients previously negative for HGV RNA.

Autoimmune Hepatitis is a condition in which the persons own immune systems attacks the liver causing inflammation and liver cell death. The condition is chronic and progressive. Although the disease is chronic, many patients with autoimmune hepatitis present acutely ill with jaundice, fever and sometimes symptoms of severe hepatic dysfunction, a picture that resembles acute hepatitis. Autoimmune hepatitis usually occurs in women (70 percent) between the ages of 15 and 40.

Research shows ozone to be quite successful in the treatment of hepatitis. In 1960, it was discovered that hepatitis-B viruses were inactivated at ozone concentrations of 1.800 ug in 100 ml of blood. Since the virus can be detected in feces, it may originate and multiply in the colon. It makes good sense to irrigate the colon or clean with Oxy-Mega.

The diet should consist mainly of organic fresh fruit, and vegetables (chlorophyll-rich). Juice whenever possible. Avoid all junk, processed or refined foods, alcohol, raw fish and meat, saturated fats, salt, sugar and white flour.

Essential Nutrients for Hepatitis

Vitamins • A balanced supplement of all should be taken, especially vitamins A, C, D, E, Vitamin B complex, B12, calcium, magnesium, Coenzyme Q10, multi-enzymes, friendly flora, essential fatty acids and amino acids are essential.

Herbs for Hepatitis

Black Radish
Dandelion
Goldenseal

Milk Thistle Extract
Red Clover
Wheatgrass Juice

HERPES

Of the two types of herpes virus, genital herpes (Type II) is the most prevalent and is sexually transmitted. Severity ranges from an infection to a serious inflammation in the liver. Infected blisters form in the mouth and genitals. Symptoms include low fever, muscle aches, blisters in the infected area and pain.

Herpes simplex (Type I) is recognized by cold sores and skin eruptions, or an inflammation in the eye that can lead to inflammations in the brain.

Research shows that ozone is the best method for viral infections. Ozone can be used by injecting it into a bottle of blood, rectal insufflation, using ozonated olive oil on the infected areas, and bathing in ozonated tub water. If the virus is detected in the colon, colon irrigation with ozonated water should be the first step. The ozonated olive oil has also been proven effective for herpes zoster or shingles.

The essential nutrients should be vitamins A, B-complex, C, E, zinc, lysine, and essential fatty acids. Tropical Sunrise would also be beneficial.

Avoid all junk, processed or refined foods, alcohol, cokes, intoxicants, saturated fats, sugar, all concentrated sweeteners, nuts and white flour.

Herbs for Herpes

Aloe Vera
Black Tea
Black Walnut
Echinacea
Dandelion
Garlic

Gentian
Goldenseal
Grapefruit Extract
Myrrh
Red Clover
Sarsaparilla

Note! Use foods & herbs to your blood type.

INFECTIOUS DISEASES

Infectious disease is an illness caused by any one of several hundreds of different microorganisms. These diseases—causing organisms are defined in well-known groups that originate from bacterial, chlamydial, fungal, mycoplasmas, protozoal, rickettsial and viral microorganisms. Infectious disease is usually spread and transmitted through the air, blood, direct skin contact, foods, insects, sexual and from water.

Bacterial infections are causes of disease like gonorrhea, meningitis, whooping cough, pneumonia, tuberculosis and typhoid fever. Bacteria multiply by dividing from one cell to two cells every 20 minutes. Under ideal conditions, one cell can multiply to a quarter of a million more cells in six hours.

Viral infections causes disease like Aids, chicken pox, common cold, hepatitis, influenza (flu), measles, meningitis, mononucleosis, poliomyelitis, rabies and rubella. When the immune system is low, viruses can invade body and white blood cells by using the enzymes within the cells to multiply. This can eventually destroy the cell the virus invaded. Viruses can multiply or sit dormant for months or years in your cells. About 20,000 Americans die every year just from the flu. The main treatment used for virus infections is to relieve your symptoms. All too often, antibiotics are used to treat viruses just to appease the sick. Maybe it helps physiologically but it is still a big waste of money.

Antibiotics are used to combat bacterial, chlamydial, and rickettsial infections as the main treatment because they mainly kill bacteria. Antibiotics do not kill viruses! The new vaccines coming out for the flu only relieves its duration time for about one and a half days if you take it in the early

stages. There are other treatments more effective than synthetic antibiotics. Drugs do not combat bacterial or viral infection effectively. The best defense against any infection is your immune system and a healthy lifestyle.

Doing a colonic the first day of sickness with ozonated water and hydrogen peroxide should stop the progression. It is almost guaranteed you will wake up the next day and not realize you were sick the day before. If you wait a day or two, it may take two or three colonics before a cold or flu disappears. When the ozone encounters anyone of the infectious microorganisms, it is eliminated.

Ozone is the only sensible way to control the transmission of airborne organisms from spreading in the home, schools or at work. It is the only effective solution.

All vitamin-mineral supplements are essential. Especially vitamin A, B complex, C, and zinc. The essential fatty acids, a complex form of digestive enzymes, friendly bacteria and amino acids are also essential. Drink lots of water, herbal teas, or juices without the added sugar. Eat a fresh balanced diet.

Avoid flu vaccines, mucus forming foods, junk, processed or refined foods, alcohol, cokes, sugar, nuts and white flour.

Remedies for Colds and Flu Virus

Aloe Vera	Licorice (mucus)
Astragalus	Marshmallow (mucus)
Capsicum	Olive Leaf Extract
Dandelion	Pau d'arco
Echinacea	Propolis
Elderberry	Rose Hips
Ephedra (Ma huang)	Royal Jelly
Garlic	Sage
Ginger (mucus)	Siberian Ginseng
Golden Seal	Slippery Elm (mucus)
Grapefruit Seed Extract	Tropical Sunrise
Irish Moss (mucus)	Yarrow Tea

Note! Use foods & herbs to your blood type.

LYME DISEASE

Lyme disease is considered the most frequently diagnosed tick-transmitted disease in the United States. The main cause comes from a tiny parasite of the spirochete family called the *Borrelia burgdorferi*, which resides in hard ticks called the *Ixodes dammini* that uses deer, cats, dogs, mice and other animals as a transmitting agent. The tick, *Ixodes scapularis* has also been reported to harbor the spirochete.

Symptoms of the disease begin with a red circular rash at the bite site with fatigue, fever, chills, and headache during the first stage that may last up to 30 days. Muscular pains become more evident and some may show cardiac malfunctions up to six weeks. Several months' later symptoms similar to rheumatoid arthritis, chronic fatigue syndrome, or multiple sclerosis can lead to a wrong diagnosis by doctors. In the past, many people were diagnosed as having spinal meningitis later realizing it was Lyme disease. It can affect the brain, central nervous system, joints, and knees. The symptoms will continue indefinitely with a low immune system and left untreated, the spirochetes will multiply, attack, and destroy vital organs.

Tests have been developed to identify Lyme disease in the blood and should be taken advantage when in doubt. Treating this disease with conventional antibiotics can lead to the destruction of some but not all of the spirochetes. The friendly bacteria will be destroyed and *Candida* will manifest itself creating further health problems.

Most all arthropods (fleas, flies, hard and soft ticks, lice, mites, and mosquitoes) inflict direct injury upon their host and used as vectors for various pathogenic microorganisms and viruses. Infections from ticks occur when they puncture the

skin. Spirochetes enter the skin via the tick's mouth during a blood meal.

When any tick is found anywhere on the body, it should be removed carefully with a pair of tweezers grabbing it near the head. Squeezing to hard may rupture the body contents with tiny spirochetes taking flight. After removal, apply a drop of 35% hydrogen peroxide (not alcohol) directly on the bite. Multiple applications may be necessary if using 3 percent hydrogen peroxide. The first cleaning is important to prevent the infection from spreading not just from tick bites but from any bug bite. If the rash has already developed, the hydrogen peroxide and applications of ozonated olive oil rubbed on and around the rash may keep the infection from spreading. You should follow-up with oral H_2O_2 , ozone treatments, fresh garlic, and colloidal silver to kill any spirochetes in the surrounding tissue or those in the blood.

When the disease has progressed and you are experiencing most or all the symptoms complete detoxification is necessary. A clean colon is more of a necessity with age but is equally important with the younger population. The older we become the more accumulated wastes lining the colon; this hinders the absorption of nutrients and slows the healing process. The removal of old junk initiates the cleansing of the liver and other organs so they can rebuild and function more efficiently.

All plant-derived vitamins, minerals, and friendly flora are essential. Tropical Sunrise has the necessary ingredients. Start by taking 1 ounce daily for a few days and work your way up to one ounce four times a day for the first bottle. Use 2 ounces daily thereafter. Herbs like echinacea, goldenseal, milk thistle, red clover, or suma used in conjunction with your supplements will aid in the detoxification process. Eat healthy!

MALABSORPTION

When the body loses the ability to properly detoxify itself in getting rid of the waste products it leads to digestive disorders that result in malabsorption. Malabsorption is a condition when nutrients, vitamins and minerals from the diet are not absorbed through the intestinal tract. This causes starvation to all parts of the body.

Digestive disorders are one of the most common health problems of today. The results of malabsorption are early aging, a stressed immune system, and the beginning of any degenerative disease.

Some symptoms of malabsorption are anemia, bad vision, constipation, depression, diarrhea, dry skin, fatigue, gas, hair loss, loss of concentration, muscle cramps, physical problems, (PMS) premenstrual syndrome, steatorrhea, weakness, weight loss or obesity in some.

If the colon is lined with any substance at all, the body will not absorb vitamins, minerals, and all the other nutrients although an adequate diet is eaten. Candida, parasites, or any inflammation on the intestinal walls will also limit the absorption of nutrients. The body needs enzymes and acids for the digestive system to properly break down the foods for future use of their nutrients. Blood testing can determine exactly which nutrients are lacking in your diet.

If a person is extremely weak from malnutrition, it is necessary to build up the body with nutrients before colon irrigation. This is vital for healing and restoring all body organs that are degenerating. The colon of a long-term deficiency may be thin and weak and the contractions may tear the walls of the colon. Start by taking Oxy-Mega colon cleanser for a month or two. If

an attempt is made to proceed with colon irrigation, start with a low flow of water.

Injections of vitamin B complex, B₁₂ and several other supplements are vital in cases of extreme malnutrition. You should consult with your physician first.

All vitamin-mineral and other supplements are essential; especially A, B complex, B₆, B₁₂, C, D, E, K, calcium, magnesium, zinc, essential fatty acids, a complex form of digestive enzymes, friendly bacteria, and a complex of all amino acids. For better absorption, it is better to take everything in extract, liquid, or trace-form like those in Tropical Sunrise.

If problems exist in the colon, eat a diet high in complex carbohydrates and low in bad fats. Eat plenty of fruits, drink lots of water or herbal teas, well-cooked brown rice, millet and steamed vegetables.

Avoid all junk, processed, canned, refined foods, acid forming citrus, alcohol, antibiotics, caffeine, chocolate, cokes, dairy products, drugs that bind, cause constipation or block absorption, fats, hydrogenated oils, pharmaceutical laxatives, meat, MSG, mucus forming foods, saturated fats, table salt, sugar, spices and white rice.

Herbs and Foods for Malabsorption

Alfalfa	Irish Moss
Aloe Vera	Nettle
Chlorella	Papaya
Coconut	Peppermint
Dandelion Root	Pineapple
Fennel Seed	Primrose Oil
Fiber	Propolis
Fish	Rhubarb
Flax Seed Oil	Royal Jelly
Garlic	Sea Vitamins-Minerals
Ginger	Spirulina
Golden Seal	Wheat grass Extract
Goats Milk	Yellow Dock

Note! Use foods & herbs to your blood type.

MENTAL DISORDERS

Studies show that one in five Americans experience a mental disorder in any given year and half of the total population will suffer from them at some time in their life but will never seek treatment. The effects from these disorders can range from alterations in behavior, mood, or thinking that impairs your ability to function. The impairments associated with these conditions include Alzheimer's, anxiety, attention deficit syndrome, depression, dementia, hyperactivity, nervousness, phobias, or schizophrenia.

Several drug companies have developed new drugs for the treatment of mental disorders. Recently, the Mental Health Department in Los Angeles lifted its ban on testing psychotropic drugs on the severely disabled. The pharmaceutical companies pay big money for test subjects used in their research. Its easier to change lifestyles for the better instead of being committed to a mental hospital where you will be treated like a guinea pig with a fresh diet of toxic drugs. Medical science says the causes of these disorders are unknown and more research is needed. They will never admit that most mental disorders are mainly the effects of past and present used chemicals, drugs and vaccines.

The latest play is to suggest these disorders are an illness caused by genetics or biologically based to persuade the insurance companies to cover more in their treatments. Again, more of our federal and state government tax money used to promote public awareness and gain sympathy. Proposals for new mental health reform are currently in the works. They know the problem will get worse because most of them helped create the situation and this shifts the blame from them to you. Another scam simply to benefit the pharmaceutical companies.

Some cases of mental disorders may be caused from complications during birth, environmental or from head injuries. Many researchers feel these synthetic chemicals and drugs are the main causes of mental disorders. One drug (Thorazine) is prescribed for behavioral disorders, hyperactivity, manic-depressive, and schizophrenia. Over eighty side effects are listed in the PDR of which some may be the same symptoms you are trying to alleviate. The effects may seem minor in the beginning but are lethal in the end.

A recent newspaper article says nursing homes that harm patients can receive fines up to \$10,000 under a new federal law. The dictionary defines harm as a physical or psychological injury or damage, or to do harm to. The states could collect huge amounts of money if they apply this law to pharmaceutical drugs; they could use that money to care for the homeless. Any chemical injected or ingested into the body that it can not make use of naturally is poisonous and harmful. All synthetic drugs create other normal chemical imbalances and cause further degeneration, which are harmful to normal body functions.

Eliminating and removing the causes through complete whole body detoxification is the first step in regaining normal functions. Ozone oxidizes the causes, cleansing will help remove them. Nutrients rebuild and nourish the functions.

Eat fresh fruits and vegetables rich in chlorophyll, and foods that help promote oxygen to the blood. Avoid copper, high gluten, pharmaceutical vitamins, and processed foods. Avoid those foods that cause allergies and eat by your blood type. All vitamins and minerals are essential, especially A, B complex, C, D, E, folic acid, calcium, germanium, manganese and zinc. The other essentials are amino acids, enzymes, fatty acids, friendly bacteria, herbs, CoQ₁₀, chlorophyll, and lecithin.

MULTIPLE SCLEROSIS

Multiple sclerosis (MS) is a degenerative disease that progresses to the central nervous system. It destroys the myelin sheaths that cover the nerves, causing an inflammation. Medical books say there is no known cause or cure for MS.

Some symptoms may include allergies to foods and gluten, bladder and bowel problems, blurred vision, chemical sensitivity, dizziness, emotional problems, difficulty in breathing, tingling and numbness, slurred speech, impotence in men, paralysis, and weakness. Multiple sclerosis may be associated with mucus, bacterial, viral and yeast imbalances.

Ozone counteracts any bacteria, virus, or other agent that plays a role in MS causes, and it improves the nervous system. Ozone air purifiers help with the physical and chemical sensitivities around the home. Allergies and fatigue due to environmental conditions are also improved.

Those suffering from multiple sclerosis seem to be deficient in most all nutrients because of malabsorption. Cleaning the colon should be the first step in detoxification for the proper absorption and healing from your nutritional supplements. Use Oxy-Mega colon cleanser for a few weeks before colon irrigation to avoid the cleansing effect. This is due to the increased amount of toxins the body is going to release. Only after the colon is clean will ozone rectal insufflation be beneficial.

The most essential vitamins are A, B complex, B₆, B₁₂, C, D, E, and K. Digestive enzymes, essential fatty acids (linoleic acid and lecithin), and amino acids are essential. The fortified daily power drink, whole lemon drink and friendly flora

are also beneficial. CoQ-10, Oxy-Mega and Tropical Sunrise improves cellular oxygenation. Use Juice Plus+® as an added supplement to vegetables for chlorophyll. Other multiple conditions are associated with MS. It may be necessary to treat for candida, bacterial, parasites, and especially cleaning the colon for proper absorption.

An immune enhancing diet is essential that is high in fresh organic fruits, vegetables, grains, seeds, eggs and raw sprouts.

Avoid all junk, processed, canned, frozen, or refined foods, alcohol, caffeine, chocolate, diet drinks, fats, gluten, hydrogenated oils, mucus forming foods, saturated fats, table salt, sugar, spices and white flour.

Minerals

Calcium	Manganese
Choline	Phosphorus
Germanium	Potassium
Inositol	Selenium
Magnesium	Silica
Magnesium Phosphate	Sodium Chloride

Herbs and Foods for Multiple Sclerosis

Alfalfa	Lobelia
Aloe Vera	Maitake
Ashwagandha	Mistletoe
Bee Pollen	Mullein
Red Beets	Olives
Black Cohosh	Onions
Brewer's Yeast	Oxygen/Ozone
Chaparral Leaf	Pau d'arco
Chlorella	Peach Seed
Dill Pickles	Primrose Oil
Echinacea	Propolis
Essiac Tea	Reishi Mushrooms
Fiber	Royal Jelly
Flax Seed Oil	Sauerkraut
Garlic	Shiitake Mushrooms
Golden Seal	St. Johnswort
Horehound	Suma
Horsetail	Wheat grass Extract

Note! Use foods & herbs to your blood type. Avoid all forms of Canola and Hydrogenated Oil.

OSTEOPOROSIS

Most everyone feels the density of bone decreases with osteoporosis and they become more brittle and fracture more easily. They believe this is a normal process of aging that occurs mostly in women over the age of thirty or after menopause because their ovaries no longer produce the estrogen hormone that helps maintain bone mass. Statistics show that osteoporosis affects more than 20 million people alone in the USA costing about \$4 billion annually.

Others think osteoporosis, or porous bone is a disease characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures, especially of the hip, spine and wrist, although any bone can be affected.

Other reported causes of osteoporosis are alcohol abuse, anticonvulsants, calcium deficiency, corticosteroid drugs, gastrectomy, inherited, lack of exercise, lactose intolerance, small bones or short stature, smoking and others.

Some of these causes can contribute to this degenerative disease but lets look at some other causes of osteoporosis. First, osteoporosis should not be called a disease but more of an imbalance or nutrient deficiency with other causes like eating processed foods, drugs that block and prevents the minerals from absorbing into the body. Dirty colons or eating food products with hydrogenated oils build up on the walls of the intestinal tract and decrease the absorption of the nutrients needed for bones.

All foods are wholesome and good for you before processing. When foods are processed, they undergo high heat that destroys the vital nutrients and enzymes. To make up for this loss they add the

synthetic vitamins and minerals so it looks wholesome on the label. This includes milk, juices, cereals, canned foods and fruits or just about anything you think is good. The same fake nutrients are also added to livestock feed and to your pets food. When the body does not receive the right nutrients it needs in an emergency and the reserves are empty it will rob Peter to pay Paul. When you rely on these types of foods for nourishment, you are asking for future health problems.

Other osteoporosis causes relating to common sense and proper functions of the body or an out-of-balance condition. The thyroid gland produces calcitonin, which participates in the regulation of parathormone and phosphate metabolism in the bones. Calcitonin acts to regulate calcium levels in our bodies. Low calcium levels in the blood will inhibit the calcitonin output. Calcitonin is a single-chain polypeptide containing 32 amino acids.

The major mechanisms which pH controls are all biochemical reactions, hormonal and electrical energy. All are sensitive to pH and effect many human functions.

The complex biochemical processes taking place constantly is an attempt to keep blood pH as near perfect as possible. These are known as the pH buffering systems. These buffering systems need a good balance of minerals (especially calcium) to work effectively and minerals have different pH levels at which they can be assimilated. The more perfect your pH range is the more minerals will be assimilated. If we are not getting an adequate mineral intake from the foods we eat, we will have problems balancing pH.

Calcium helps maintain pH balance by neutralizing the acids and toxins in the body. Calcium forms mono-ortho calcium phosphate that is the main buffering agent that maintains the acid and alkaline balance in the body. When the body is

continually over acidic it will take a little calcium here and there from the bones or teeth to help buffer the condition. When it runs out of the calcium it will produce ammonia to help buffer.

Aluminum toxicity and its symptoms mimic Alzheimers disease and osteoporosis, which may interfere with the metabolism of calcium. Read the pages on the thyroid gland, hydrogen potential for pH balance and Alzheimers to avoid the types of aluminum to help prevent osteoporosis.

Many will tell you what to do for treatment and for the prevention of osteoporosis and recommend a balanced diet rich in calcium and vitamin D but these are not the only nutrients your bodies need. Taking extra calcium supplements like calcium carbonate, oxalate or phosphate but taking too much of these types will build up as gall bladder or kidney stones and accumulate in the blood vessels as plaque.

Use calcium that is absorbable and high in other trace elements. The calcium that conforms to your electrical pathways and used most effectively are derived from vegetables or citrus.

Bone is 9 percent calcium carbonate, and 85 percent tri-calcium phosphate, that are produced by phosphorus. Too much promotes calcium loss or too little Phosphorus encourages calcification.

Magnesium as magnesium phosphate is about 2 percent. Fluoride increases bone mass and about 4 percent of calcium fluoride is needed to harden bone. Silicon, usually taken in the form of Silica is another trace mineral that helps in the prevention of osteoporosis, Manganese helps to keep calcium soluble or bio-available. Zinc, assists with calcium absorption. Other minerals needed besides calcium for bones are Boron, Chromium, Copper, and Manganese.

If you are young, you may only have to avoid the bad and eat the good to prevent any future degeneration due to osteoporosis. First the body has to be able to absorb the nutrients in the smaller intestine and colon into the blood stream. The older we become, the more important it is to detoxify, clean the colon for proper absorption and being able to assimilate the vitamins and minerals to make use of them. You should replenish your supply of lost nutrients with extra supplements. This is essential to rebalance all body functions.

Avoid all junk, processed, canned, refined foods, acid forming foods, alcohol, antibiotics, caffeine, cokes, dairy products, drugs that bind minerals and cause constipation or block absorption, hydrogenated oils, meat, mucus forming foods, pharmaceutical laxatives, products that contain aluminum, saturated fats, steroid drugs, table salt and sugar. Foods containing oxalic acid like beet greens, cranberries, currants, gooseberries, plums, spinach and rhubarb will bind calcium. Aspirin or other NSAIDs reduce magnesium, and eventually calcium levels.

All plant derived vitamin and mineral supplements like Tropical Sunrise are essential; especially A, B complex, B12, C, D, E, K, boron, calcium, iodine, manganese, magnesium, phosphorus, silicon, sulfur, zinc, essential fatty acids, a complex form of digestive enzymes, friendly bacteria, and all amino acids.

Herbs and Foods for Osteoporosis

Asparagus, Astragalus, Alfalfa, Aloe Vera, Bee Pollen, Broccoli, Celery, Cucumbers, Dandelion Greens, Dong Quai, Eggs, Feverfew, Fish, Flax Seed Oil, Garlic, Goats Milk, Horsetail, Hijiki, Kale, Kelp, Kombu, Lobelia, Oatstraw, Onions, Panax Ginseng, Parsnips, Rosemary, Sage, Shavegrass, Strawberries, Turnip Greens, Wakame, Wheat grass, and White Oak Bark.

OVERWEIGHT PROBLEMS

Reducing your food intake (dieting) is unnecessary unless you are a glutton. Dieting lowers the immune system. It leads to muscle breakdown and it rarely helps in weight reduction. Diets and low fat foods usually result in increased poundage and turn normal eaters into people who are afraid of eating good nutritional food.

Recent studies are showing that obesity is increasing at an alarming rate in the United States and it is turning into an epidemic. The number of obese Americans has risen from 12 percent in 1991 to 17.9 percent in 1998. Another study at Tufts University shows that 63 percent of men and 55 percent of women over the age of 25 are obese. The greatest consequence obese people face is to their health that results in early death. Over 300,000 deaths a year in the United States are directly related to people being obese or overweight. This costs the health care system about \$102 billion annually.

Within the last 10 years, the availability of low fat and non-fat foods on the store shelves has drastically increased. The more weight some people try to lose by eating these types of foods the more overweight they become. When a person diets on these types of filler foods, you compromise your nutritional needs of the body. If the body is starving and not receiving the desired nutrients it needs it can trigger your desire to eat more. The body needs real vitamins and minerals for every function from living foods so it can burn up those excess calories. The body can not survive on filler foods with non or synthetic vitamins added to them.

Some possible explanations for people getting fatter are cited by many in the health field. Some of these causes are associated with food allergies, the increase

of calories with more fat, fast foods, snack foods, and a lack of exercise. One woman doctor said it was mainly due to the environment and that obesity originates in your genes. It seems like everything originates these days from our genes. Its always our parents fault not our lifestyle or bad eating habits.

Americans spend about \$34 billion yearly on weight loss programs and 95 percent of those that lose weight will gain it back. You may lose some weight using drugs or hormones with other side effects or you can use natural methods with guaranteed results. Many of the topics already covered in this book help in weight reduction. The elimination process through the colon must be clean and flowing properly. The waste products must be removed from the body for any weight loss program to work. Otherwise it builds up and recirculates to the parts from where it originated. In a few days or weeks, colonics can flush out 10-35 pounds of unwanted waste products that have accumulated in the intestines over the years. The combination of exercise, herbs, vitamin-mineral supplements, better absorption, better eating habits, Oxy-Mega and ozone/oxygen can result in drastic weight reduction.

Excess fat accumulates because our bodies do not burn up the excess fuel (calories) in the muscles from the foods consumed. This is mainly due to a lack of physical activity. Raising the body temperature higher than normal will activate the immune system, thereby burning up the fat and waste products at a faster rate. Foods that raise body temperature are included in the section about Body Balance (natural remedies to raise body temperature and energy levels).

Ozone treatments help in oxygenation of the blood, which is carried to various organs and tissues, thus oxidizing the waste products and facilitating their

elimination. When the waste is oxidized, body heat is produced by the chemical action of carbon and the ozone/oxygen. When the principles of oxidation are used for improvements of the body, it is referred to as "**Oxidative Therapy.**" Breathing oxygen is a natural oxidative process. A body without the oxidative process is not a living organism.

Ozone therapy increases the body's metabolism without the expenditure of vital energy and special stress during a weight reduction program.

Foods to Avoid

The body needs good natural fats for energy not fake fats. Avoid carbohydrates in processed foods and low fat or diet foods. When consumed they are not all used for energy but instead they are converted into fat and stored in the body. Avoid anything with artificial sweeteners, breads, cereals, crackers, desserts, hydrogenated oils, pasta, starch, sugar, soft or diet colas, white flour, white rice, yeast, and all diet or low fat products.

All plant derived vitamin and mineral supplements like Tropical Sunrise are essential for weight reduction. Vitamins of B complex, B₁₂, C and E. Minerals like chlorine, chromium, iodine, iron, manganese, molybdenum, phosphorus, sulfur and others have their known effect. The essential fatty acids, a complex form of digestive enzymes, fiber, friendly bacteria and a complex of all amino acids are other aids for weight loss.

When the body's insulin levels rise from eating starches and sugar it locks fat into the fat cells and prevents it from being burned into energy. More fat gets into the cells than what gets out. Chromium picolinate helps to make the body's insulin work more efficiently, this causes fat to move from fat cells to the muscles. This

will prevent muscle loss that usually occurs when trying to lose body fat.

The amino acid L-carnitine is essential for moving fats into the mitochondria's cells. Here the fats are burned and energy is released. The combination of chromium picolinate and L-carnitine will reduce body fat and lower LDL cholesterol levels in a few months. Other supplements like choline, hydroxycitric acid (HCA), and lecithin help persuade the body into moving fat so it can be used for other purposes. HCA also helps to suppress the appetite but appetite suppressants should not be taken if the body is already suffering from malnutrition.

The body has a lot more waste to get rid of during weight loss. The metabolized fats must be flushed out with adequate amounts of water. Water helps maintain proper muscle tone, keeps the body fluids in balance and helps prevent sagging skin that usually follows weight loss. The average person should drink eight 8-oz. glasses of water a day. The overweight person should drink one additional glass for every 25 pounds of excess weight.

The herb spirulina is a natural food supplement that helps balance the diet. It is easily digestible and strengthens the body when it is weak. It provides nutrients that satisfy the hunger that the body will crave when not getting enough essential nutrients.

Chickweed dissolves fat in blood vessels and helps eliminate the craving for food. Other herbs that can be used as reducing aids in combination are mandrake, fennel, licorice, safflower, echinacea, black walnut, gotu kola, hawthorn, papaya and dandelion.

Eat all food by your blood type.

Avoid all forms of Canola Oil.

OXYGEN DEFICIENCY HYPOXIA

When there is an inadequate supply of oxygen to tissue its called hypoxia which causes an impairment or reduction in partial pressure of oxygen, inadequate oxygen transport, or the inability of the tissues to use oxygen.

When the oxygen carrying capacity of the blood is reduced due to circulation, liver, or heart disorders, it prevents the blood from being adequately oxygenated and results in tissue death.

Different types of Hypoxia include:

Anemic hypoxia is an oxygen deficiency in which arterial oxygen pressure is normal, but total oxygen content of the blood is reduced.

Cerebral hypoxia refers to a condition in which there is a decrease of oxygen supply to the brain even though there is adequate blood flow.

Brain cells are extremely sensitive to oxygen deficiency and can begin to die within five minutes. Drowning, strangling, choking, suffocation, cardiac arrest, head trauma, carbon monoxide poisoning, and complications of general anesthesia can create conditions leading to cerebral hypoxia. When this condition lasts for longer periods, it causes coma, seizures, and even brain death.

Generalized hypoxia occurs in healthy people when they ascend to high altitude, where it causes altitude sickness, or while diving underwater with closed-circuit re-breather systems that control the amount of oxygen in the air.

Histotoxic hypoxia is defined as the inability of the tissues to use oxygen. Examples are carbon monoxide and cyanide poisoning. Certain narcotics,

chewing tobacco, and alcohol will prevent oxygen use by the tissues.

Hypemic hypoxia is defined as a reduction in the oxygen carrying capacity of the blood. It is caused by a reduction in the amount of hemoglobin in the blood or a reduced number of red blood cells. A reduction in the oxygen transport capacity of the blood occurs through blood donation, hemorrhage, or anemia. Reduction in the oxygen carrying capacity of the blood occurs through drugs, chemicals, carbon monoxide or smoking.

Hypoxic hypoxia is a reduction in the amount of oxygen passing into the blood. It is caused by a reduction in oxygen pressure in the lungs, by a reduced gas exchange area, exposure to high altitude, or by lung disease.

Stagnant hypoxia is an oxygen deficiency due to poor circulation of the blood or poor blood flow.

When hypoxia leads to a complete absence of oxygen in tissue its called anoxia. In this condition the metabolism of cells are disrupted and die in a few minutes. The body recuperates from temporary hypoxia due to exercise, but over time simple hypoxia could lead to other more serious problems.

Severe hypoxia symptoms include brain death, changes in levels of consciousness, seizures, coma and death occur. Severe hypoxia induces a blue discoloration of the skin when there is no oxygen.

Oxygen deficiency causes most illness and degenerative disease. Without this vital earth element, human life would end.

Serious disease conditions we find a concomitant low oxygen level.

PAIN

Most everyone is aware that pain is a symptom or reaction from the body informing us that something is wrong from within or something that hurts. The body lets us know this through special receptors that transmit messages or electrical impulses along the nerves through the spinal cord and then to the brain. This will trigger a reflex action or give us a general idea of the area or which makes us aware of the problem.

This simple four-letter word (pain) seems to be the most dreaded and feared word by almost everyone. Some people can tolerate pain very well while others cannot. Just the thought of being in pain and dwelling on it can trigger emotional disorders such as anxiety, fear, stress that can bring on other physical or psychological problems which then amplifies any existing pain. Unfortunately, the spouse, family members, relatives and even friends can go through similar or worse emotional upsets in their lives taking care of someone in pain. This creates a great burden for the main caregiver, almost too much to ask of one person.

Then there are those who propagate your fears and pain through their greed and prosper quite well. As an act of showing compassion, the medical establishment is committed to lessen your pain by making available numerous synthetic painkillers to everyone especially for critical patients so their death is without pain. All painkillers come free of charge with other bad side effects, which also include pain or problems in other body parts. However, most critical patients do not know where they are let alone who they are. They just want it to all end and die in peace.

We are constantly being bombarded with everyday assaults against our health, which can result in pain. Because we are

so gullible, we lay trust in those who think they create no harm because of their sacred oath. Treating the symptoms and covering them up only allows the original condition to worsen bringing to birth a deluge of yet more tormenting and uncontrollable symptoms. At this point, you are under their complete control and will do anything they suggest just to be pain free. Soon after, all hope is lost.

It is important to find and use a natural pain relief that does not have continuing bad side effects. The main side effect from all synthetic painkillers is constipation. The body cannot detox or heal itself from any health problem if the intestinal tract is not clean and working properly.

Ozone is effective in treating the causes from where most pain originates thereby eventually eliminating the pain. Along with the right nutritional supplement (Tropical Sunrise) helps healing and restoration takes place without drugs. A life of pain is hell; life without pain is pure joy.

The necessary supplements to help pain are vitamins A, B complex, C, D, calcium, folic acid, primrose oil, germanium, magnesium, and DL phenylalanine.

Herbs for Natural Pain Relief

Black Cohosh	Meadowsweet Tea
Bugleweed	Mullein
Capsicum	Pennyroyal (stomach)
Caraway	Pleurisy Root
Catnip	Sea Vitamins-Minerals
Chaparral	Skullcap
Comfrey Root	St John's Wort
False Unicorn (side)	Taheebo
Feverfew	White Willow Bark
Ginger	Wild Lettuce (chronic)
Guaiacum	Wild Yam
Hops	Wood Betony
Jamaican Dogwood	Wintergreen
Lady's Slipper	Valerian
Lobelia	Shepherd's Purse
Marshmallow	Siberian Ginseng

Note! Use foods & herbs to your blood type.

PARASITES

Parasites may very well be America's number one epidemic and the third leading cause of health problems. There can be over 100 different types of parasites living within the human body. Some are microscopic in size while others can be seen quite easily. These organisms can be found everywhere in our environment, in the air, in the water, or in the foods we eat.

Parasite comes from the Greek word *para* that means "beside," and *sitos*, which means "food."

A parasite is "an organism that lives on or in another organism from which it obtains nutrients and causes harm in the process."

Most parasites require a host (you) to complete their life cycle. Animals can also serve as a host. A parasite will vary in size from the smallest one one-thousandth of a micron to whale tapeworms a hundred feet long.

Parasites can invade your body through food and water intake, through a transmitting agent (like a mosquito), sexual conduct or through the nose and skin. Once established in the body, they will eat the same foods you eat or they will eat you.

People with parasitic infections are usually under-nourished and weak, infected with viral, fungal, or bacteria, and have various types of chemical and metal poisoning. Parasites can be present in any disease, in any person, at any age. Parasites are responsible for many health problems because they secrete toxins and steal the vital nutrients of our body. Parasites can irritate or exaggerate other health problems you may be experiencing.

Everyone is at risk of being infected and under the mercy of parasites.

We create the perfect living environment for parasites when the bowel becomes ineffective in the elimination of our waste products. The build-up of fecal material on the walls of the colon is attributed to constipation and the amounts of junk foods, chemicals, bad fats and sweets we consume. We poison ourselves from our own toxic waste and the waste from parasites (autointoxication) when this ideal habitat for parasites is created.

Testing for parasites are only available for about five percent of the known varieties with twenty-percent accuracy.

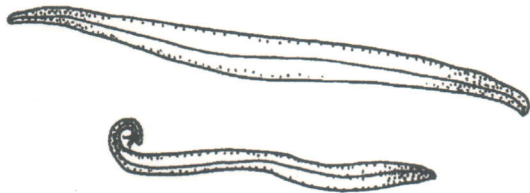
All types of cancer cases are afflicted with worms that often lump together to form tumors. Female worms can release 3,000 to 200,000 eggs per day depending on their type. This is a topic that most people do not want to discuss, let alone think about, but now reality must be faced. This topic is very important for total detoxification and your well being. Doctors are not trained to recognize the symptoms of parasite infections. The only way to avoid the health problems associated with parasite infections is by educating yourself.

Some Different Varieties of Parasites

There are 3200 varieties of parasites in the four major categories, Protozoa, Trematoda, Cestoda and Nematoda.

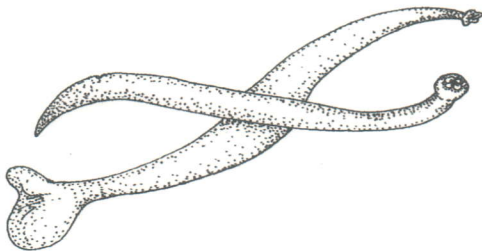
1. Nematodes; common roundworm (*Ascaris lumbricoides*), hookworms, whipworms, pinworms, heartworms, strongyloides, stercoralis, ancylostoma, caninum, toxocara worm and trichinosis. Size can vary from .2 to 35 centimeters.

Roundworms look similar to an earthworm and can produce 200,000 eggs a day. Approximately 1,008 million people are infected, making it the most common worldwide. The most frequent symptom is upper abdominal discomfort. Other symptoms are asthma, eye pain, insomnia, and rashes due to the secretions or waste products from the worms. In large numbers they can cause blockages in the intestinal tract, hemorrhage when penetrating the intestinal wall, appendicitis, peritonitis, abscesses in the liver, hemorrhagic pancreatitis, loss of appetite, and insufficient absorption of digested foods. Adults grow to 15" long.



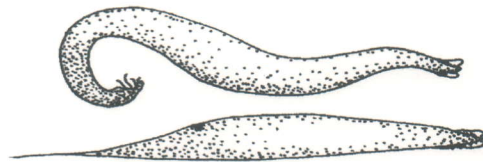
Ascaris lumbricoides

Hookworm larvae penetrate the skin. When they reach adulthood, they can sap the victim's strength, vitality and overall well being. Young worms use their teeth to burrow through the intestinal wall and feed on your blood. Symptoms are Iron deficiency, abdominal pain, loss of appetite, craving to eat soil, protein deficiency, dry skin and hair, skin irritations, edema, distended abdomen, stunted growth, delayed puberty, mental dullness, cardiac failure and death. (1/2")



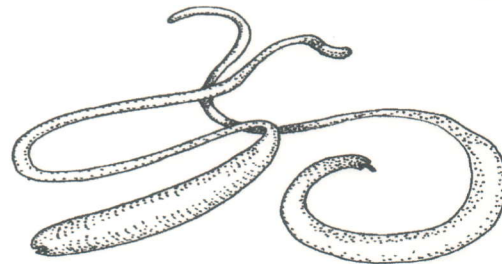
Ancylostoma duodenale

Pinworms can infect one in five children. Symptoms are itching and irritation of the anus or vagina, digestive disorders, insomnia, irritability or nervousness. Female worms crawl out of the anus and lay about 15,000 eggs per day. Once airborne, the eggs can survive about two days anywhere in your living environment. Worldwide, about 500 million are infected with pinworms. The worm is white and can grow to about a half inch in length.



Enterobius vermicularis

Whipworm infections are estimated at several hundred million worldwide. Symptoms are bloody stools, pain in the lower abdomen, weight loss, rectal prolapse, nausea and anemia. Hemorrhage can occur when worms penetrate the intestinal wall and bacterial infections usually follow. 1" to 2" in length.

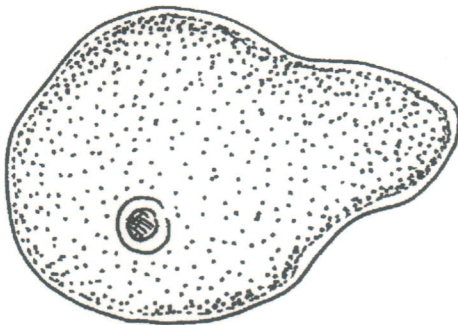


Trichuris trichiura

2. Protozoa, the single cell parasites; amoebae, protozoa infections, neospora, toxoplasmosis, cryptosporidium, giardia, sarcocystis and trichomonas vaginalis.

Amoebae (ameba) are an irregular shaped microorganism that infects the end of the small intestine and colon. Amebiasis is the most common infection and caused by the species *Entamoeba histolytica*. They release an enzyme that causes ulcers or abscesses where they

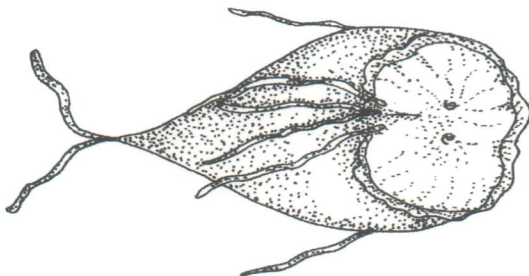
can enter the bloodstream. They can eventually reach other organs like the brain or liver. (25 micro meters in diameter)



Entamoeba histolytica

Cryptosporidium is associated with water-borne outbreaks. The victim might experience diarrhea and abdominal pain lasting for about ten days.

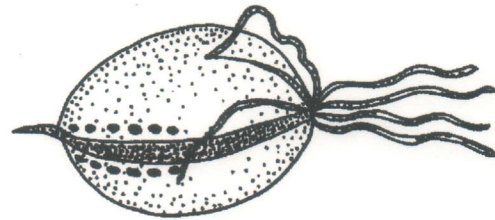
Giardia is the most prevalent intestinal parasite in humans and found in drinking water. Giardia resides in the small intestine and at times in the gall bladder. Millions of these organisms will coat the intestinal walls, prevents the absorption of nutrients and later causing illness. Symptoms are mild to moderate abdominal cramps, intestinal gas, light colored stools, malabsorption, weakness, chills, bloating and diarrhea. (14 um x 10 um)



Giardia lamblia

Trichomonas vaginalis is a pathogen that resides in the vagina in females and the urethra, epididymis, and swelling in the prostate gland in males. In women there is

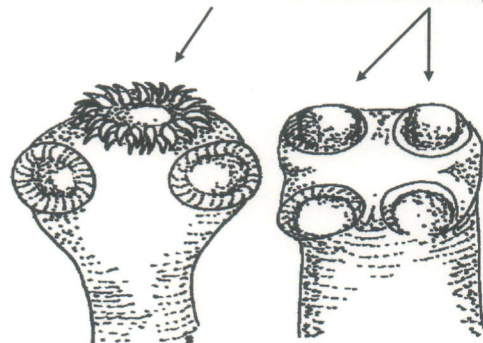
a yellowish discharge accompanied by itching and burning.



Trichomonas vaginalis

Malaria, the most prevalent and debilitating disease among the protozoa type is caused by *Plasmodium*. About two million people die annually from Malaria.

3. Cestodes (Tapeworms); bladder worms, pork tapeworm, broad fish, dog tapeworm, dwarf tapeworm and rat tapeworm. A broad fish tapeworm may grow to 35 feet long and live ten years inside a person's intestines. Some tapeworms can lay as many as a million eggs per day. Their bodies are in separate segments. The following picture is an amplification of two types of tapeworm heads with their hooks and suction cups..

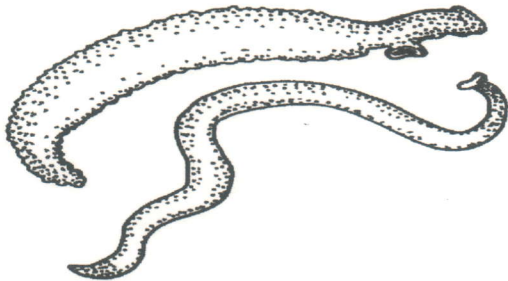


Taenia solium

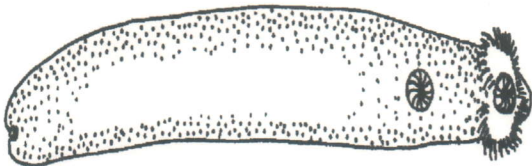
Taenia saginata

4. Trematodes (Flukes); Flatworms, bladder, blood, liver, lung, kidney and intestinal flukes. Human infections of flukes (schistosomes) are in excess of 250 million worldwide. They can cause severe disease of the gastrointestinal tract,

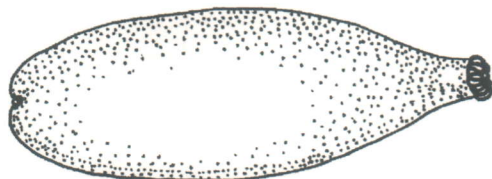
bladder, liver and destroy blood cells. Size varies from 1 - 2.5 centimeters in length (1/2" to 3" long).



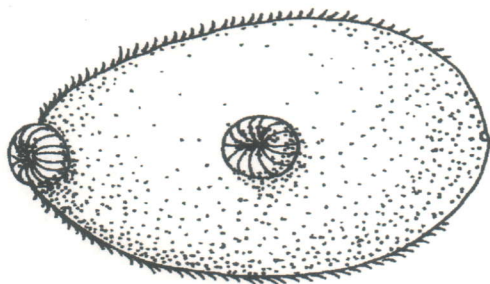
Blood Fluke (*Schistosoma haematobium*)



Intestinal Fluke (*Echinostoma revolutum*)



Liver Fluke (*Opisthorchis viverrini*)



Lung Fluke (*Paragonimus westermani*)

5. Spirochetes are very small organisms that are spiral-shaped, and multiply in the blood and lymphatic system. Spirocheta

(largest), saprospira, cristispira, treponema (smallest), and many more. The host or carrier is usually lice, ticks, fleas, mites, and flying insects, which is then transmitted to humans. Spirochetes are responsible for relapsing fever, infectious jaundice, Lyme disease, sores, ulcers, Vincent angina and Wyles disease.

Some parasites have the ability to fool the body into thinking they are a normal part of the tissue or organ and the immune system will not fight off the intruders.

When these alien invaders are established in the body, they do several things.

1. Worms can make "Swiss Cheese" out of your organs. Worms can cause physical trauma to the body by perforating (burrowing) the intestines, the circulatory system, the lungs, the liver or the whole body.

2. Worms can erode, damage or block certain organs by lumping together in balls or tumors. They can be mistaken for cancer tumors. Worms can travel into the brain, heart and lungs.

3. Parasites rob us of our vital vitamin-mineral nutrients and amino acids needed for digestion. Some become anemic and are drowsy after meals.

4. Worms give off certain metabolic waste products (toxic waste) that poison our bodies. This particular condition is called "**verminous in-toxification.**" The body has trouble disposing of the toxins that are reabsorbed through the intestines. The body has to work twice as hard to remove these toxic waste products.

5. Depresses the immune system, which leads to further degeneration and illness.

6. Parasites can destroy cells faster than cells can be regenerated.

Some conditions that promote parasite are excess mucus, an imbalance in the intestinal flora, chronic constipation, and a humid internal environment.

The nose is supposed to act as a natural airway for respiration and the main inlet for oxygen. It also acts as an air conditioner, by filtering, moistening and warming the air that is breathed. The hairs and mucus membranes help prevent dust from entering the rest of the respiratory tract. The nose is responsible for smell and gives your voice its own characteristic tone.

Problems associated with the nose are sinus (sinusitis, an inflammation), nasal polyps and tumors. These can cause restrictions in the nasal passage hinder the amount of oxygen needed.

The bones surrounding the nose contain honeycombs (air filled cavities between the outer and inner layers of the skull) known as the facial sinuses. These comprise of 2 frontal, one sphenoidal, 2 ethmoidal and 2 maxillary sinuses. Each sinus drains mucus into the nasal passages through tiny ducts or channels.

Sinus inflammation or infections can be caused by an abscess in an upper tooth or from bacteria and viruses. Parasites or candida can also take up residence in all those little nooks and crannies, and they are the hardest to eliminate. After time, the sinuses can become encrusted in toxic matter like in the colon.

The polyps or tumors, which bulge out into the nasal passage may also be filled with parasites. It's important to clear the nasal passages so you can breathe in the **"Breath Of Life,"** more oxygen.

Self-examination of the nasal passages is possible with a mini-maglite held in the front of the nose and looking in the mirror. You should see a clear airway almost to

the throat. If you can only see in about an inch, problems may exist.

If cleaning is required, dip an ear swab into 3% H_2O_2 and swab inside the nose. It may be necessary to plug the other side and breathe in slightly to get the hydrogen peroxide past the obstructions. Let it sit until the sinuses open and then blow out the excess mucus. Repeated use will show the areas where parasites may be dwelling under the tissue by the bubbling and oxidation effect of the H_2O_2 . With the aid of tweezers, it is possible to pull out the parasites and waste matter for disposal. Another test for parasites is using black walnut oil on the swab. One or two drops are sufficient to start. If there is a burning sensation and twitching of the toes or it feels like a rock inside after a few days or scaling may appear on the outside are indications that parasites may exist. Applying ozonated oil or vitamin E on the dry skin will help soften the tissue.

Another method is direct applications of the ozone in the ears and in the nose. Insert the hose into each nostril while closing eyes and holding breath during each treatment. Sneezing will occur and the sinuses will open. **Do as tolerated.**

Extreme skin reactions can occur when drinking black walnut oil in water for the elimination of worms. When the oil is exposed to the worms, they will eliminate their toxins to protect their living environment. The poisons are absorbed into the blood causing a rash on the skin. To avoid this condition, start out slow and increase dosage over a longer period of time.

Treatments can be followed up by adding the oils to your vitamins and supplements for a daily maintenance.

If a person is infected with parasites, they may feel bloated, tired or hungry, allergies, asthma, gas, digestive disorders, unclear

thinking or feel toxic. Damage to the body and symptoms will vary on the type of parasite infection.

Some people may not have any symptoms from infection. About 25% may only have a few aches and pains that they can ignore. The quality of life and health may be compromised in another 55% of those infected. Those who are disabled from parasites are about 5%.

Signs Of Parasites in Adults & Children

Allergies • Many allergies are caused by parasites. Body tissue becomes inflamed and reactions to foods are the result when eosinophils (WBCs) are increased in the body due to parasites.

Anemia • Worms leach nutrients from the body. When they are present in large numbers, they can create enough blood loss to cause iron deficiency in some people.

Constipation • Some worms can obstruct certain organs like the colon, liver and the bile duct.

Diarrhea • This is nature's way of removing toxins from the body.

Fatigue • Symptoms include tiredness, flue-like symptoms, apathy, depression and a lack of concentration.

Gas and Bloating • Some parasites live in the upper intestine, which can cause both gas and bloating.

Immune Dysfunction • Parasites depress the immune system by decreasing immunoglobulin A.

Nervousness • The waste products from parasites irritate the nervous system, resulting in anxiety and restlessness.

Other Signs of Parasites in Children

Blisters appear on the inside of the lower lip, wiping of the nose, restlessness and grinding of the teeth at night, dark circles under the eyes, hyperactive, bed wetting, headaches, sensitive to light, twitching eyelid, gum, rectum, or nose bleeding are signs they may have parasites.

There are many natural foods, herbs, and essential oils that one can take to rid the body of parasites and worms. When taking herbal combinations, it is best taking them on an empty stomach. The best way to treat parasitic infection is to detoxify the whole body using a nutritional rebuilding program that will restore body balance and the immune system. Everyone infected with worms is deficient in the essential nutrients. All the vitamin and mineral supplements are necessary.

I highly recommend reading a book called "**The Parasite Menace**," by Skye Weintraub. The author gives some great herbal and Homeopathic remedies for the prevention, treatment and elimination of parasitic infections.

A few good oxygen colon cleansers like Oxy-Mega have some of the natural ingredients with anti-parasitic properties needed for the reduction of parasites. Parasites can not live in an oxygenated environment.

Another product for killing a variety of parasites is a product called PARA 90, an herbal cleansing supplement. It is manufactured by AIM. The ingredients in PARA 90 are: american wormseed, sweet annie, peppermint, garlic, butternut bark, black walnut hulls, male fern root, boldo leaves, kamala, white oak bark, pumpkin seed, cramp bark, grapefruit seed extract, thyme, clove, neem, bromelain and magnesium stearate (606 mg total). Each capsule is 720 mg.

Herbs with Anti-Parasitic Properties

* Effective as an herbal combination for worms called "Wormwood Combination."

+ Combination called "Rascal."

< Effective for bladder worms with Pine Needles.

> Effective by itself on worms. Grated raw apples sprinkled with Anise seed on a salad are also effective.

American Century	Lemon Leaves
Areca Nut	* Male Fern
Artemesia Annua	> Mandrake Root
Betel Nut	> Marigold
Betony	Onion
Birch	> Papaya Latex
Birds Tongue	> Peach Bark
Black Walnut Oil * < >	Pink Root
Blessed Thistle >	Plum
Blue Cohosh	Pomegranate
Blue Vervain	Pride of China
Butternut Bark / Root	+ Pumpkin Seeds
Capsicum +	* Quassia
Carrot	> + Thyme
Cascara Sagrada	> Sage Tea
Chaparral	< Sassafras
Cloves *	> Senna
Comfrey Leaves	Sesame Seeds
Cramp Bark +	Santonica
Elecampane	Southernwood
Everlasting	Tamarind
Fennel Seed	Tansy
Fern-Female	Turtlebloom
Fraxinella	Walnut Hulls
Garlic +	Wafer Ash
Grapefruit Seed Extract	> White Oak Bark
Hedge Garlic	Wormseed
Hyssop Leaves >	> * Wormwood
Kousso	Woundwort

Note! Use herbs to your blood type.

If parasites are a problem, it is very important to take mega-doses of plant derived nutrients due to deficiencies. Some worms suck your vitamins and minerals directly out of the blood. Others absorb your nutrients through their outer skin layer. The nutrients need replacing on a daily basis.

A high carbohydrate diet, low in protein, and high in alkaline has been found to make parasitic infections worse. Sugar should also be avoided because parasites thrive on it and it is possible you could have candida. Candida infections create an environment in the colon that equals the environment needed for parasites to thrive.

Foods that lower pH from high alkaline conditions is apple cider vinegar and cranberry juice.

Pumpkinseeds and onions mixed with soymilk is another remedy for worms.

Herbal combinations for blood flukes are milkweed, pennyroyal and black walnut.

Herbal combinations for liver flukes are cloves, goldenrod and goldenseal root.

Bitter melon is effective against pinworms.

Fasting on raw pineapples for three days helps with tapeworm infestations.

Another remedy for prevention is mixing one or two teaspoons of apple cider vinegar in a glass of water. Alternatively, you can take one tablespoon daily of 1 part apple cider vinegar - 2 parts apple juice - 1 part apple brandy.

Constipation problems can be helped with acidophilus, cascara sagrada bark, chamomile tea, elder flowers, Oxy-Mega with Tropical Sunrise. Licorice added to herbal teas has a slight laxative action.

Oxy-Mega colon cleanser is effective against parasites and cleaning the intestinal tract.

You can save money and create your own herb formulas by buying herbs in bulk, capsules, and a capsule machine for filling the capsules. Mix the herbs equally and purchase high quality only.

How to Prevent Parasites

A strong healthy immune system is the best defense against parasites. Some of the things you can do to reduce the risk of parasitic infections are as follows.

- **Wash all fruits and vegetables.** Scrape off the wax substance on the outer surface on any fruit or vegetable with a knife before washing. Anything with a nick or recess can harbor just about anything and should be cut out. Avoid eating grapes with open splits. Washing in ozonated water, hydrogen peroxide (1 teaspoon per gallon of water), or Clorox™ bleach (add 1/2 teaspoon to each gallon of soak water for 10 minutes) will kill parasites. Rinse well after to remove bleach residue. Some prefer to wash them in chlorinated water, but these things are organic in nature. Chlorine and organics do not go well together because of the carcinogenic compounds that are produced.

- **Thoroughly cook meats and fish.** Do not eat raw or uncooked meats or fish. Check for worms, especially on fish. Spray with hydrogen peroxide or wash in ozonated water before cooking. Keep all work surfaces clean.

- **Drink pure water.** Parasites are associated with many water-borne outbreaks and are highly resistant to conventional methods of disinfecting. Water that is properly purified with ozone is free of parasites.

- **Practice good personal hygiene.** Wash your hands before eating and after going to the bathroom, changing diapers, or handling pets. Keep your fingernails short and clean. Parasites can live for two months under the fingernails.

- **Keep your living environment clean.** Breathing the dust in your house can contain human skin, soil particles, or fecal

material from dust mites and cockroaches. An easy test to determine if this is a problem is by looking across the room when the sunlight is shining through a window and checking for particles floating in the air. Then let the kids run around for a few minutes and recheck. The elimination of carpets reduces this problem considerably.

- **Do not walk barefoot on warm, moist soil or while working in the garden.** Parasites are abundant in soil and can absorb (penetrate) through skin cells. Fertilizers are added to garden soil and it is the pet's favorite place to go. Use gloves and shoes for protection.

- **Swimming in rivers, lakes, ponds, or public swimming pools.** Avoid swallowing or drinking the water while swimming anywhere. Avoid swimming if cuts or open sores are present.

- **If pets are infested with parasites, deworm and keep them outside.** You are at a higher risk in contracting worms when pets are allowed indoors. Dogs and cats is host to many parasites that humans can contract. A little garlic added to their food will help control some parasites. Animals can spread 240 diseases to humans because of parasites.

- **Overuse of antibiotics.** Reducing the numbers of friendly bacteria in the colon allows for the proliferation of parasites.

- **Global travel.** Ten years ago you might have been at a higher risk for parasite infections when traveling to another country. Today, you may be at a higher risk to infection by staying home.

- **Use more cloves with every meal.** Adding some cloves to foods will help kill the eggs from parasites in the intestinal tract. A pinch of cloves added to coffee or herbal teas adds a little different taste.

An article in The Nutrition & Dietary Consultant/May 1996, says, **"It is estimated that 200 million people are infected by intestinal parasites."** It also estimates that one in four people worldwide is infected by roundworms.

No one knows the total number or types of parasites living in our environment. They hardly ever get full credit for the destruction they do to the human body. Only a few parasites get credit for the people they harm.

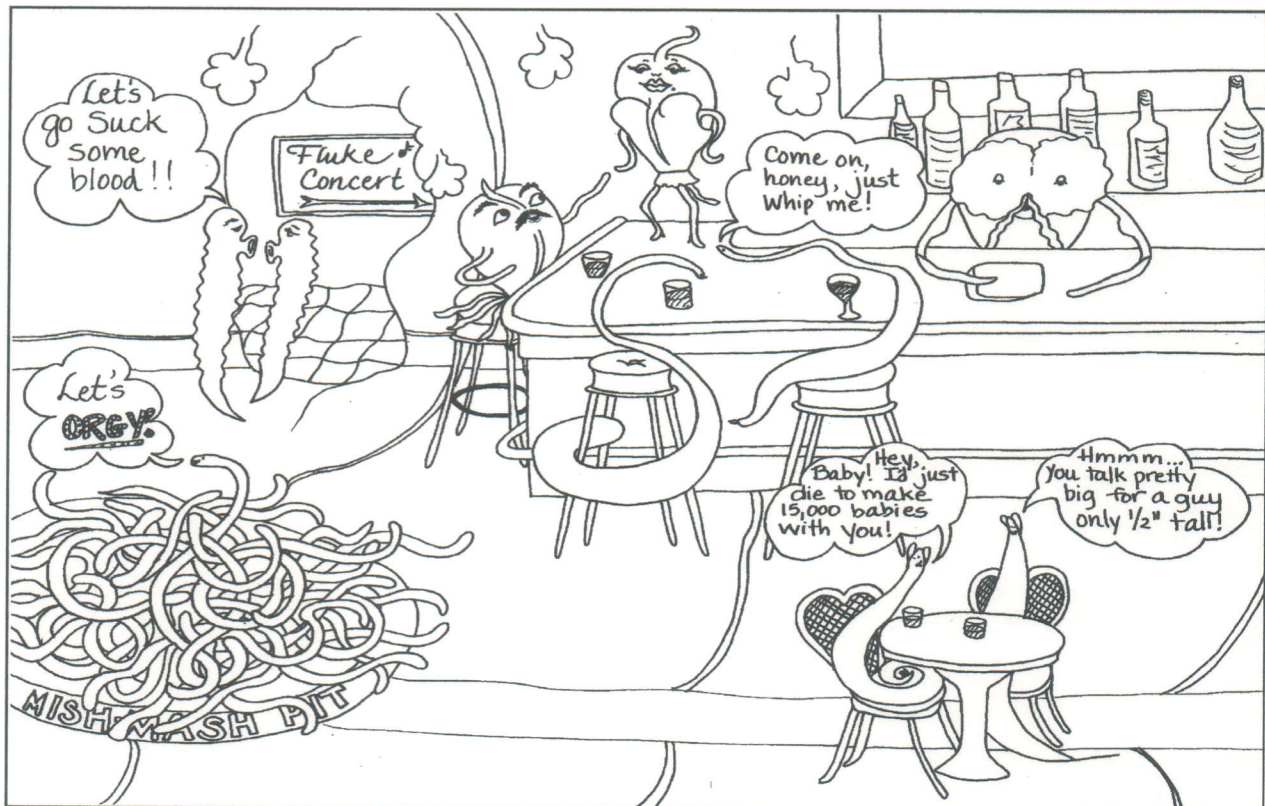
The high infection rate of parasites in the United States is surprising to many, but most of these parasites have always been living within our bodies.

When the immune system weakens, the parasites can grow to numbers that cause physical harm.

When we poison our bodies with chemicals, drugs, processed and overcooked foods, it starts the process that allows the parasites to take over our inner environment. When they take over, they are in control, whether you know it or not. When we make the wrong choices and do not take preventive measures, the parasites win.

The most effective treatment for the **elimination of parasites** in the colon is to cleanse with ozonated water and hydrogen peroxide. This method is extremely lethal to parasites. As the colon becomes cleaner, the ozone-oxygen will reach other organs where parasites may be a problem.

Are Parasites Having A Cocktail Party in Your Colon?



PARKINSON'S DISEASE

Parkinson's is reported as a degeneration of nerve cells within the *basal ganglia* in the brain, which affects muscle movement and tension. The disorder appears when there is a lack of transmitting agents called dopamine or acetylcholine that are supposedly produced in the brain. The lack of these transmitting agents result with symptoms of muscle shaking, stiffness, tremors, and weakness in the arms, hand, or legs. Symptoms grow as it progresses. About fifty thousand cases have been reported yearly in the U.S. Medical books suggest there is no cure for Parkinson's disease, drugs can minimize symptoms but cannot halt the degeneration of brain cells.

The other important transmitting agents include epinephrine, L-aminobutyrate, norepinephrine, serotonin, glycine, and glutamate. These, as well as other agents are needed to transmit to the whole entire network. Any shortage will create an imbalance leading to degeneration or shorts in the network. The transformations taking place in the human body for creating these complex chemicals occurs mostly in the liver from the most common elements consisting of carbon, hydrogen, and oxygen. A lack of the amino acid Tryptophan has been linked to Parkinson's but all the amino acids; enzymes, vitamins, and minerals are essential for complete synthesis or the manufacturing of all the other transmitting agents.

Some synthetic drugs act as blockers that inhibit these transmitting agents from being produced or thereby preventing their function. Plant toxins like strychnine, or morphine, and atropine or scopolamine in cold remedies inhibits the effectiveness of neurotransmitting agents. About one third may develop signs of dementia, hallucinations, or paranoia as side effects form the currently used drug treatments that only cover-up the symptoms. There is

never a cure but there is always a drug to make the economy moving into certain pockets helping the world go around in a mass of misfortunes.

Ozone has been used by enriching the blood (100 ml) with 1,800 ug ozone in 6-8 treatments every 2 days and then reducing treatments to 2 times per week (The Use of Ozone in Medicine, by Renate Viebahn). Others have used ozone successfully in the past for Parkinson's without any reoccurring symptoms. Ozone treatments should always be used in conjunction with all nutritional supplements like Tropical Sunrise. Most of all, cleaning the colon along with total detoxification helps with better absorption and total elimination of all symptoms.

Some medical experts will agree that Parkinson's is a result of malnutrition from not eating properly. If the cause is the bodies inefficiently to properly digest the foods and not being able to absorb the nutrients then malabsorption or other chemical imbalances are possible causes.

All junk and processed foods, alcohol, and sugar should be avoided. Diet should consist of fresh fruits, raw nuts, seeds, and vegetables. Whole grains like spelt instead of wheat are more beneficial.

The essential nutrients include vitamin B complex, B₆, C, E, calcium, magnesium, the amino acid GABA (gamma-amino butyric acid), bee pollen, enzymes, and flax seed oil is also helpful.

Herbs can be used as nerve relaxants, stimulants, or as tonics. Damiana and scullcap have been found useful for Parkinson's. Ginkgo biloba extract increases levels of dopamine and stimulates the release of other neurotransmitters. Soy lecithin contains phosphatidylserine, which aids in the release of acetylcholine.

PERIODONTAL DISEASE

Healthy bone and gum tissue is essential for supporting each tooth in your mouth. The foundation for this support must be maintained with a balance of plant derived nutrients for proper healing.

The body can not protect you from bacterial infections that cause inflammation in gums, teeth and bones if your natural defenses are weak. The bacterium and other causes of *gingivitis* (inflammation of the gums) like toxins (plaque) or inorganic mineral deposits (tartar) can not be eliminated but they can be controlled. Neglecting *gingivitis* leads to (*periodontitis*) an inflammation of the tissues and membranes around the base of the teeth, and erosion of the bone takes place.

Some consider periodontal disease a reflection of what is going on in the rest of the body. An unhealthy mouth is considered a polluted body full of poisons and toxins that originate in the colon. If the blood is feeding toxins and poisons to the bones and gums from the colon instead of nutrients, you may end up with periodontal disease. Getting a good deep root cleaning of the teeth every few months at your dentist may keep it in control, but it does not eliminate the cause.

Regular cleaning at the dentist may be good for some and bad for others. Many are at a higher risk at the dentist because the water that some may be using or their instruments may be contaminated with bacteria. Bacteria can hide and multiply in drill sprays, tubing, pipes or on instruments used for cleaning. The office may look hygienic, but if they have not taken steps to purify their water, you may be at risk.

One woman had a seizure two weeks after a routine dental cleaning. She was rushed to the hospital where they found a brain

abscess. She lost basic motor skills and some of her memory. Her doctor tested the water in the dentist's office and matched it with the bacteria in her abscess. Dr. Margaret Johnston, a dentist fighting for education and legislation on dental water found that most dental water has more bacteria than pond water.

A study published in 1971 in the *Journal of Dental Research* by Abel, Miller, Micik, and Ryge of the United States Public Health Service's Division of Dental Health in San Francisco, California stated: "Water sprays from a dental handpiece and air-water syringe were evaluated for bacterial content. Bacterial concentrations that far exceeded limits permissible for public water supplies were observed. Their conclusion states, "If 100 or more colonies are formed on a plate, the water should be considered polluted, and corrective action should be taken to provide potable water to the dental patient."

In 1995, the American Dental Association issued the following Statement on Dental Unit Waterlines. *"Water Quality Improvement: Dental unit water systems currently designed for general dental practice are incapable of delivering water of an optimal microbiologic quality. The Council recommends an ambitious and aggressive course to encourage industry and the research community to improve the design of dental equipment so that by the year 2000, water delivered to patients during nonsurgical dental procedures consistently contains no more than 200 colony forming units per milliliter of aerobic mesophilic heterotrophic bacteria."* Unfortunately, the ADA has not taken steps to enforce their 1995 statement because they have no governing or enforcement authority that can ensure that the quality of water meets safety standards or that manufacturers will improve the design of dental equipment.

Assembly member John Longville introduced Assembly Bill Number 498 to the California State Legislature on February 17, 1999. When passed it will become Section 1681.5 of the Business and Professional Code and will read: *"In addition to other acts constituting unprofessional conduct within the meaning of this chapter, it is unprofessional conduct for a person licensed under this chapter who owns, operates, or manages a dental office to allow water exiting a dental unit waterline to contain more than 200 colony forming units per milliliter (CFU) of Aerobic Mesophilic Heterotrophic bacteria on and after January 1, 2001."*

Dental water contamination is a potential life threatening risk. If dentists want to do the **"right thing"** and guarantee the health and safety of their patients, they should follow a protocol for the patient. Investing in a good ozone generator to purify the water can insure a zero plate count and the possibility of any unwanted law suits.

Regular cleanings at the dentist are a necessity to avoid periodontal problems, but make sure their water is safe. Before and after any dental visit, you should thoroughly rinse with 3 percent hydrogen peroxide to prevent bacterial infection.

For healing of the gums and restoration of bones, the body must be completely detoxified. All the necessary nutrients must be taken. The body must make use of the minerals supplied and discard any excess properly. The immune system must be built up to fight off bacteria and prevent infection. To eliminate or slow the progression of bacteria and gum disease a change in lifestyle may be necessary. Tips for healthy gums are avoiding processed foods and sugar, eating fresh fruits and vegetables, brushing after every meal, flossing with unwaxed floss and brushing the tongue are very important. The tongue is like a filter that collects waste products.

The nutrients for gums and teeth are plant derived vitamins A, B complex, C, D, E and folic acid. Plant derived forms of calcium, choline, copper, biotin, boron, iodine, iron, magnesium, manganese, molybdenum, selenium, phosphorus, zinc and mineral salts for cells are all essential.

Other supplements helpful for gum health are friendly bacteria, Coenzyme Q10 (50 mg to 100 mg daily), GSE, and aloe vera. Topical applications of Q10 and aloe vera gel rubbed into the gums and around teeth at bedtime have been shown to improve adult periodontitis. Rubbing vitamin E on the gums or making a paste from baking soda and 3 percent hydrogen peroxide are other alternatives for inflamed gums.

Hydrogen peroxide (35%) works well on an abscess under a tooth or in the gums. Clean the area well with a small cone brush or plaque tool. Squeeze one drop from an eyedropper on or in the infected area. This is like giving yourself a root canal when the abscess is under the tooth. The extreme burning sensation only lasts for a few minutes but is very effective. One or two treatments are sufficient. A garlic clove held in the area helps with infection. Propolis, royal jelly or any herb with antibacterial and antiviral properties can also be taken until the infection is gone. One to three ear treatments daily with ozone are very beneficial. Periodontal disease is another result of a dirty colon. Cleaning it is most beneficial.

Morning cleaning is important because of bacterial growth during sleep. Clean by dipping brush into baking soda with two drops of 35% hydrogen peroxide to kill bacteria and whiten teeth, follow-up using a natural paste to polish. Another method is rinsing the mouth with 3 percent hydrogen peroxide for a few minutes before brushing. A last resort for stubborn stains, dip an ear swab in bleach to clean if you can stand the smell and taste.

TOXIC METALS

Metal elements from aluminum, arsenic, cadmium, lead, mercury, and nickel are taken into the body through the air, food, and water. The toxins from these metals remain in the body for years and are linked to Alzheimer's disease or mercury poisoning.

Cadmium is used in amalgam fillings, weakens the immune system, retained in the kidneys and liver, and replaces zinc levels in the body. Symptoms are anemia, appetite loss, dry skin, dull sense of smell, hair loss, high blood pressure and sore joints.

Lead is found in car exhaust from fuels, foods, environmental pollution, plumbing fixtures, water and some paints. Lead causes brain damage and cancer.

Mercury is the most toxic element that causes damage to the body. It is found in shellfish and some fish. It is also used in dental amalgam fillings, bactericides, fungicides, paint and thermometers. Mercury can cause changes in the lymphoid tissue; it effects the immune system, nervous system, kidneys, and it produces resistance to antibiotics. Mercury is extremely toxic and poisonous to the body. Symptoms of mercury toxicity include fatigue, indigestion, muscle and joint weakness, nervousness, depression, or weight loss. Mercury poisoning has been linked to Alzheimer's, Multiple Sclerosis and Parkinson's Disease.

Nickel in small amounts is useful for some body functions. In high amounts, it can cause heart problems, skin rashes, respiratory problems, and it interferes with enzymes for cell energy.

Ozone can oxidize most all metals in the right concentration except for gold, iridium, platinum and stainless. It oxidizes them in

their highest oxidation states, oxides to oxides of higher oxidation number or to peroxides, sulfides to sulfates, carbon to carbon dioxide, and ammonia to ammonium nitrate. Heavy metals that can be oxidized include cadmium, cerium, lead, mercury, nickel and silver.

Foods that help remove toxic metals are alfalfa, apples, barley grass, garlic, kelp, miso, mung beans (lead), pectin, Tropical Sunrise, seaweed and wheat grass. Drinking lots of fresh ozonated water is also beneficial for the removal of toxic metals.

Cleaning the colon is the first and the most important step for complete detoxification.

Essential Nutrients for Toxic Metals

Aluminum • Multivitamin and mineral complex especially calcium, magnesium, B complex and lecithin.

Cadmium • Calcium, copper, iron, magnesium, and zinc. Beta-carotene, vitamins E, K, and lecithin. Amino acids (lysine, cysteine and methionine) are essential.

Lead • Calcium, magnesium, selenium, and zinc. Vitamin's A, B complex, C, D, E, and K. Amino acids (lysine, cysteine, glutathione and methionine) are essential.

Mercury • Zinc and selenium. Vitamin's A, B complex, B₆, B₁, C, E, and K. Amino acids (cysteine, glutathione and methionine) are essential. Other aids are lecithin, beta-carotene, brewer's yeast, milk thistle and hydrochloric acid.

Nickel • Selenium, beta-carotene, vitamin's A, C, E, and K. Amino acids (cysteine and methionine) are essential.

TUBERCULOSIS

Tuberculosis is one of the fastest growing contagious diseases among women today. Tuberculosis is caused by the bacteria *Mycobacterium tuberculosis* that affects the lungs, intestines, kidneys, liver, spleen, and spreads to the bones. These bacteria can lie dormant in the liver and other parts of the body for years, and reappear when the immune system weakens through malnutrition. In 1902, tuberculosis was the leading cause of death in the U.S., today over three million people die every year worldwide.

The first symptoms may be a cough and the release of bloody matter from the respiratory tract. Other symptoms are chest pain, fatigue, fever, infected urine, shortness of breath, lymphatic system, weight loss, and not being able to speak when the larynx is infected.

Ozone kills the bacteria associated with tuberculosis. Any ozone application can be used for tuberculosis. Air applications using an ozone air purifier help control the air-borne particles and minor infections in the lungs. Use in low concentrations or as tolerated due to coughing.

Since the bacteria travels in the blood, it is necessary to get the ozone into the blood. Once in the blood, the ozone travels to all other body organs oxidizing the responsible bacteria. For any therapy to work the colon must be kept clean and free of the bacteria so it will not be reabsorbed back into the bloodstream. Proper cleansing of the colon with ozonated water and hydrogen peroxide will kill and flush out the culprits. If you have already gone through a colon-cleansing program, rectal insufflation is sufficient.

Ozone is also mixed with the blood (autohemotherapy) or injected into the portal vein by a trained professional.

Essential Nutrients for Tuberculosis

All plant derived trace minerals from Tropical Sunrise, the most essential is calcium, iodine, germanium, magnesium, selenium, and zinc. Vitamin A, B complex; C, D, E, enzymes and amino acids are essential. The fortified daily power drink, whole lemon drink and friendly flora will also be beneficial. CoQ-10 improves cellular oxygenation.

To raise the immune system, eat a balanced diet of fresh raw fruits and vegetables, carrot and pineapple juice, eggs, fish, fowl, raw seed and nuts, and whole grains. Avoid all junk, processed or refined foods, saturated fats, salt, sugar and white flour.

Herbs for Tuberculosis

Aloe Vera	Irish Moss
Barley Juice	Marjoram
Bee Pollen	Mullein
Black Cohosh	Myrrh
Black Walnut Oil	Pau d'arco
Bugleweed	Pennyroyal
Coltsfoot	Plevrisy Root
Comfrey	Saffron Root
Echinacea	Suma
Garlic	Watercress
Grapefruit Seed Ext.	Wild Cherry
Iceland Moss	Witch Hazel

Note! Use foods & herbs to your blood type.

In cases of miliary tuberculosis when the lymphatic system is infected, the helpful herbs are; blue violet tea, black walnut, blue flag, burdock, cayenne, chaparral, echinacea, golden seal, mullein and poke root.

ULCERS

Ulcers can appear as an open sore on the skin, in the cornea of the eye, canker sores in the mouth, stomach, or along the gastrointestinal tract and colon. Most skin ulcers occur on the legs and at times develop into a form of skin cancer called *basal cell carcinomas*.

Some feel that ulcers result from stress and the destruction of surface tissue by strong stomach acids from insufficient mucus that protects the stomach lining. Others say ulcers are caused from bacteria. Bacterium thrives in mucus and can reside behind the mucus on the stomach lining and munch away. This will protect them from the acids that should otherwise kill them. When the ulcer becomes infected enough to bleed the acid will irritate it further.

An ulcer may be a deep or shallow crater-shaped sore that is inflamed and painful. Symptoms will vary from headaches, stomach pain, back pain, choking and itching. Symptoms for ulcerative colitis may include bloody diarrhea with pus and mucus, abdominal pain, tenderness, fever, distended colon, feeling ill or depressed.

The first recorded use of ozone gas for decubitus ulcers was by, Dr. Albert Wolff in 1915, a physician in Berlin, Germany.

The Cubans have treated duodenal ulcers with ozonated water, and treated gastroduodenal ulcers and peptic ulcers with capsules of ozonated sunflower oil. Varicose ulcers were treated with ozonated oil and all were cured in 15 to 30 days. Drinking ozonated water will neutralize the acids in the stomach, kill the bacteria, and help heal the ulcer.

Ozone may also be applied directly to skin ulcers, used rectally in the colon, or used in water for colon irrigation.

Essential Nutrients for Ulcers

All trace minerals, the most essential is iron, and zinc. Vitamins A, B complex, C, E, K, pectin, enzymes and amino acids like glutamine, histidine, and lysine are essential. The Tropical Sunrise, GSE, whole lemon drink, primrose oil, and friendly flora will also be beneficial. CoQ-10 and Oxy-Mega improves cellular oxygenation.

Eat a balanced diet of fresh soft fruits and well-steamed vegetables if there are severe ulcers in the digestive tract. Juice or blend if necessary.

Avoid all junk, fried, processed or refined foods, alcohol, aspirin, caffeine, chocolate, milk, soft drinks, saturated fats, spices, and table salt. Some may have to avoid vitamin C and pineapple with peptic ulcers. Steroids, anti-inflammatory drugs and aspirin may contribute to ulcers.

Herbs and Foods for Ulcers

Alfalfa	Figwort
Aloe Vera	Garlic
Avocados	Honey
Bananas	Licorice Root
Bayberry	Marshmallo Root
Black Walnut Oil	Myrrh
Cabbage Juice	Pau d'arco
Catnip Tea	Pennyroyal
Cayenne	Periwinkle
Chamomile Tea	Plantain
Chaparro Armagosa	Prickly Ash
Chickweed	Plevrisy Root
Chlorophyll	Sage
Cucumbers	Slippery Elm
Goldenseal Root	Violet
Echinacea	White Oak Bark
Fenugreek	Yogurt

Note! Use foods & herbs to your blood type.

UTERINE FIBROIDS

Fibroid tumors are usually non-cancerous growths that develop from the cells in the pelvis or muscle lining of the uterus. They occur in about 20-25% of all women between the ages of 30-45. Fibroids occur more often and grow more quickly in African American women.

Many women who have fibroids are not aware of them because the growths can remain small without causing any problems. However, larger fibroids can cause problems due to their number or location. They can range in size from 1 cm up to 5-6 inches or large enough to completely fill the pelvis or abdomen. Fibroids that protrude from inside the uterine cavity walls are attached by a stalk and identical to polyps that form in the intestinal track.

Small tumors in the form of polyps on the inside of the uterus can be twisted or sniped by a doctor while others have resorted to myomectomy or hysterectomy for large tumors. About 250,000 hysterectomies are performed yearly in the United States because of fibroid tumors. Some methods used have dangerous side effects including swelling of the brain and death. Removal of some tumors may be necessary when they become infected with bacterial toxins, parasites, or poisons to prevent rupturing in the abdominal cavity.

Most fibroids do not produce symptoms but when symptoms occur, they often include anemia from excessive vaginal bleeding with irregular changes in menstruation cycles of longer or more frequent periods, and painful menstrual cramps. Larger tumors that exert pressure on the bladder cause difficulty in urinating or frequent urination. Pressure on the bowels will cause constipation, pain in the abdomen, or lower back or rectal pain

during difficult bowel movements. Infertility and some miscarriages may also be experienced. When fibroid tumors become infected they can cause nausea, or fever. In rare cases when there is a lack of blood flow and oxygen, they can become cancerous.

The cause of fibroids is unknown to the medical experts but many feel the female hormone estrogen increases the growth of fibroids. The levels of estrogen in the body can rise or fall based on medications or during pregnancy, which causes an increase. A decrease of estrogen after menopause causes shrinkage. With the increased sales of synthetic estrogens these days, it is understandable why so many women suffer from fibroids.

Currently there are about 10 million women taking oral contraceptives (birth control pills) that include these same synthetic hormones and other harmful chemicals. These estrogens can also act on the kidneys causing salt and water retention leading to edema. A description of the ingredients in Ovral-28 tablets, each containing 0.5 mg of norgestrel (dl-13-beta-ethyl-17-alpha-ethinyl-17-beta-hydroxygon-4-en-3-one), a totally synthetic progestogen, and 0.05 mg of ethinyl estradiol (19-nor-17alpha-pregna-1,3,5(10)-trien-20-yne-3,17-diol), and 7 pink inert tablets. The inactive ingredients present are cellulose, D&C Red 30, lactose, magnesium stearate, and polacrillin potassium.

The side effects of birth control pills are numerous, some may include; abdominal pain, chest pain, heart disease, high blood pressure, shortness of breath, coughing up blood, gall bladder disease, headaches, liver dysfunction, numbness of lips, tongue, arm or leg, eye problems - vision loss or blurring, leg pain - redness, or swelling of calf or thigh. Birth control pills can also cause breast cancer to grow more rapidly.

The use of tampons made with synthetic materials that boost absorbency contains dioxin (a carcinogen) from chlorine by-products and rayon from synthetic fibers, the main cause of Toxic Shock Syndrome in young females. Some of the conventionally grown cotton used in tampons may also contain synthetic fertilizers, herbicides, pesticides, and defoliants. Dioxins are believed to be endocrine disrupters that may disturb the body's hormonal communications, which wreak havoc on the reproductive and immune system. Use all natural organic, unchlorinated cotton pads (Organic Essential or Naturecare) instead of the synthetic types.

Normally, there are about 25-30 friendly microorganisms living in the vagina that normally protect it. Studies show that Rayon creates an ideal environment for the growth of the *Staphylococcus aureus*. Dr. Philip Tierno at the New York University Medical Center states; *"Somehow the synthetics change the physical and chemical environment of the vagina, shifting the micro-ecology in favor of toxin production and growth of the bacteria responsible for TSS."*

In addition, the synthetic chemicals and other ingredients found in douches, diuretic drugs (water pills) and vaginal creams for infections can also contribute to uterine fibroids in women. Any foreign agent that is unnatural to the mucosa membranes and causes irritation is considered an antigen. The immune system (white blood cells) will collect and store these into the uterus lining as toxic waste sites or growing tumors or disposed into the nearest lymph node or gland.

The shrinkage and elimination of any growth in the form of cysts, polyps, or tumors begins with complete detoxification and energizing the immune system. Colonics, diet, herbs, vitamins, minerals and the elimination of all unnatural

substances used in the uterus and vagina are essential. Ozone should be used daily in the uterus and rectally for either benign or malignant tumors for maximum results.

Essential Nutrients for Fibroids

All trace minerals, the most essential is germanium, iodine, magnesium, potassium and selenium. A multivitamin supplement especially A, B complex, E, C, amino and fatty acids, enzymes and lecithin. The Tropical Sunrise, whole lemon drink, and friendly flora will also be beneficial. Beta-1, 3-glucan in NSC-24 and MGN-3 are potent immune stimulators. CoQ-10 and Oxy-Mega improves cellular oxygenation. L-arginine helps retard tumor growth. Some liquid nutrients helps stop excessive bleeding from fibroids in about five days through testimonials.

Eat organic fruits and vegetables to avoid any unnecessary chemicals. Avoid dairy products, junk, processed or refined foods, meat, saturated fats, salt, sugar, and flour.

Herbs and Foods for Uterine Fibroids

Barberry	Juniper Berries
Black Cohosh	Kelp
Blessed Thistle	Licorice Root
Capsicum	Lobelia
Cleavers	Marshmallow
Chaparral	Pau d'arco
Comfrey	Propolis
Dandelion	Red Clover
Elder	Royal Jelly
Fenugreek	Sea Vitamins-Minerals
Figwort	Slippery Elm
Garlic	Sweet Violet
Horseradish	Thuja
Mandrake	Violet
Mistletoe	Witch Hazel

Note! Use foods & herbs to your blood type.

Diuretic herbs for water retention are bearberry, celery, cleavers, dandelion leaf, or yarrow. Use hydrogen peroxide or ozonated water for douching. Use ozonated olive oil for candida or bacterial infections instead of vaginal creams.

WEAKENED IMMUNITY

Your immune system is the first line of defense against the everyday health risks. For proper immune function you must have the proper balance of vitamins, minerals, all immune builder supplements, and provide the right living environment for you and your family.

The immune system weakens as a result of disease, bad nutrition, living habits, stress, and from chemical agents. To keep your immune system strong you need to understand what it is and how it works.

The defense mechanism of our body is made up of several organs in the body. The appendix, bone marrow, intestines, lymphatic system, spleen, thymus, and tonsils are where the combat soldiers are produced, organized, and distributed to kill the foreign invaders. The invaders are called antigens. Anything that makes the immune system respond is called an antigen. These invaders consist of bacteria, chemicals, dust, fungi, molds, parasites, pathogens, pollen, proteins, toxins, or viruses.

The immune system can determine if the antigen is friend or foe. Natural antigens are present in all body cells that are chemical markers or fingerprints. The power antigen (fucose) determines your blood type (O, A, B, or AB) or the special chemical structure of your red blood cells. A reaction occurs when the fingerprints do not match or the chemicals do not conform to each other. The alarm goes off triggering the immune system to respond.

When the enemy penetrates the outer defenses of the body they are met by the white blood cells called phagocytes. They will engulf and digest microorganisms and debris at the infection site. The

phagocytes are produced in the bone marrow and spleen.

Another white blood cell that plays a central role in the immune system is the lymphocytes. Most of these are formed in the lymph glands. The spleen may also produce lymphocytes. There are two types of lymphocytes called B-lymphocytes and T-lymphocytes.

When B-cells encounter the enemy they can enlarge and divide into plasma cells that secrete immunoglobulin or antibodies into the blood. The antibodies will attach and then destroy the antigen or bacterium. They memorize their actions for future responses to the same antigen.

The T cells are produced (mature) in the thymus as helper, suppressor, and killer cells. Helper cells stimulate B and T-cells to respond to antigens. Suppressor cells regulate the response or to keep it in balance. When cells are infected with a virus or cancer, the killer cell will attach and destroy the abnormal cell with *cytotoxin* contained within the killer cell. T-cells can multiply to outnumber the enemy and retain a memory for future attacks.

Lymphocytes travel throughout the body in lymphatic fluid called lymph. This fluid becomes milky as it absorbs fats from the intestinal lymphatics and constantly drains into the bloodstream. The lymphatic system consists of vessels connected to several lymph nodes located throughout the body. As the microorganisms travel in the lymph fluid, the lymph nodes act as a filter to trap them. Then the lymphocytes destroy them. The lymph nodes can become swollen during this process. The lymphoid tissue forms antibodies to help fight infection and macrophages that engulf bacteria and antigens in the nodes.

The life span of red blood cells is about 120 days. White blood cells last a much shorter time. Phagocytes remain in the

blood for about nine hours before moving into the skin tissue and last for a few days. Lymphocytes may survive from 3 months to 10 years if you stay healthy. When we take a vaccine (antigen) for a disease that we do not have or synthetic antibiotic drugs (also antigens) for something we do have, the immune system will go to work (if it is working) getting rid of those antigens. If the immune system is already weak, it will really be suppressed after taking any drug that is considered an antigen. This can open the door to any or several new invaders wanting to create havoc on your health. The bad guys win and the good guys lose the battle.

The appendix and tonsils are an important part of the lymphatic system, the immune system. The appendix protects against lower infections in the colon and the tonsils protect against upper respiratory tract infections. The intestinal region is where B-cells mature and where antibodies are produced. Many in the field of medicine believe these organs have no function and you can get along just fine without them. An appendectomy or tonsillectomy, the most often performed operations will hinder your immune system. When they are inflamed it may mean they are doing the job, they were met to do. Do not have these precious organs removed unless it means life or death.

Stress effects the adrenal glands by depleting them of hormones when the sympathetic nerves are stimulated. The excess of hormones in the blood supply constricts blood vessels in the intestines, liver, and kidney. The thymus gland will shrivel under stress. The effects of stress suppress the immune system by slowing down the response of B and T-cells, and the production of lymphocytes.

Our immune system is constantly fighting the battle to keep us healthy. It is our best friend and ally that never receive any medals for fighting the never-ending war.

For the immune system to be strong, it requires the right nourishment in large amounts. Deficiencies result in a weakened immune system.

Try to imagine a war going on within your body since the day you were born. This is a daily war, minute by minute, second by second, going on from within. This is a never-ending constant "**tug of war**" being fought between the good guys and the bad guys. This silent war has been going on since the beginning of humanity and will continue always. What you feed the armies fighting the battle determine the final victor. If you feed the bad guys with their preferable food your internal environment will be taken over by the hostiles and the bad will prevail. If you feed the good guys with nutritious and wholesome food, it will starve out the bad guys making their army weak. Good can prevail in the end with the final victor being you. The "**war within**" will always continue, but the battles will always be won when you make the right choices.

In the past scientists thought the thymus vanished after childhood. Just recently, they discovered that adults have a thymus. If this startling new discovery is confirmed, it means the immune system might be able to rebuild itself after chemotherapy or infection with the AIDS virus. Is it magic or just plain stupidity that we lost the thymus? For the thymus to function properly it requires vitamin A and zinc.

Trying to get the immune system to respond or to start working with nutrients is useless unless the colon is clean. The immune system has to get rid of the waste from neutralizing the antigens. All waste goes through the colon. A dirty colon is the biggest destroyer of the immune system. The body has to absorb the nutrients for the immune system to rebuild and respond because it is so complex.

Organs that make up the immune system, the 29 types of lymph nodes, the nervous system, and brain all have their own specific function. For the production of antibodies, hormones, or to produce all the elements of the immune system requires all the nutrients in balanced portions.

The gun you use for fighting the war is the immune system. The ammunition you use is the nutrients. The type of nutrients determines if you are shooting silver bullets or blanks at the enemy.

Achieving Maximum Immunity

Most people may have to jump-start, use a higher-octane fuel, or add a turbo charger to their engine for more horsepower. When we step on the gas pedal, we want our engine to respond quickly. We do not want our immune system to be lazy, confused, all mixed up, working against itself, or not knowing what it is supposed to be doing. It has an important job and if it does not respond quickly, we get sick.

There are compounds found in all foods that can effect the body in several ways. Lectins are proteins found in most all animal and plant life. They can have positive or negative effects on the immune system depending if they are compatible or incompatible with your blood antigens.

Some lectins produce receptors on the surface of lymphoid cells called patch and cap formation. They may also bind to small lymphocytes that induce division and differentiation into larger metabolizing cells, or bind to bacteria and other microbes in the blood. This effect of binding (clumping, gluing, sticking, patch and cap) is called agglutinating.

Starches from grains have a similar effect as the lectins. When grains are heated over 125 degrees, the enzymes are destroyed and incompatible to the assimilative and digestive process

because they are not water-soluble. This plugs small capillaries, accumulates in the lymph system and in the intestines.

Have you ever wondered why some people can cure their cancer by eating certain types of food but those same foods do not help others? Have you ever asked the question why you are sensitive to certain types of foods? There are many that have a gluten intolerance to grains. Gluten is the most common form of lectin found in wheat and sticks to the intestinal lining.

The invaders (bacteria, virus and other organisms) use lectins to stick on the walls of the digestive tract as a defense and to multiply. The acids the body produces for digestion do not break down the lectins.

The negative effects of lectins suppress the immune system. When the lectins are incompatible with your blood antigens, they work against the immune system by clumping the blood cells together. When they coagulate in masses, they can plug up the filters. We can change our oil filter on our car or the air and water filter in our home, but not our body filters. We have to rely on our body's' natural garbage collectors to haul the trash to the disposal site. The pathways for cleaning up the mess as well as the vessels of the immune system have to be kept clear and flowing freely. We do not want our immune system working against itself by destroying good cells that are supposed to be protecting us from infection and disease.

Achieving maximum immunity requires eating by your type of blood. This is extremely helpful in the building up and maintenance of the immune system. At a period of time after the colon is cleaned and all symptoms have disappeared and you feel great, you may still have days when you feel a little sluggish. The following information will explain why.

When the colon is dirty, you may only absorb five percent of the lectins you consume. A clean colon will raise the percentage of lectins absorbed.

Immune System Nutrients

Flavonoids (catechin) can help stimulate antibody production, T-cell formation and aid in the transformation of lymphocytes.

All colds, flu, disease, or other disorders is associated with a weak immune system. If the immune system is weak or not working at all, it will require all the nutrients for full restoration. All plant derived trace minerals, the most essential is calcium, copper, germanium, iodine, iron, selenium, and zinc. Beta-carotene, Vitamins A, B complex, B₅, B₆, B₁₂, B₁₅, C, E, enzymes, essential fatty acids, and amino acids are essential. The Tropical Sunrise, whole lemon drink, evening primrose oil, and friendly flora will also be beneficial. CoQ-10 improves cellular oxygenation. Eat grains that are unprocessed or raw. Grains can sit in water overnight and reheat (under 125°F) for breakfast cereal.

Just because something sounds good for you does not mean it is necessarily good for your health. Good ingredients are used with bad ingredients to make them better or more appealing. Words help sell products like healthy or natural.

It is important to train yourself to read all labels on the foods you buy. Labels with dark colored backgrounds are harder to read and may be hiding the bad ingredients. Use a magnifying glass if necessary and read those labels. Avoid all junk, processed or refined foods, alcohol, cokes, hydrogenated vegetable oils or saturated fats, white table salt, starches from grains (cereals), sugar and flour.

Avoiding all the risk factors will help you achieve maximum immunity!

Nutrients for the Immune System

Barley Juice	Lobelia
Beta Carotene	Mullein
Blue Vervain	Parthenium
Burdock	Pau d'arco
Cayenne	Plantain
Catnip	Parsley
Chaparral	Red Clover
Chinese Ginseng	Rose Hips
Comfrey	Sarsaparilla
Echinacea	Sea Vitamins-Minerals
Fennel	Schizandra
Garlic	Shepherd's Purse
Ginger	Siberian Ginseng
Golden Seal	Stinging Nettle
Juniper Berries	Suma
Kelp	Watercress

Note! Use foods & herbs to your blood type.

Achieving maximum immunity requires eating those foods that are beneficial and avoiding those foods that damage the immune system. Eating those foods that conform to your blood type does this. This not only maintains the immune system but benefits detoxification by not adding new antigens to the old or making the immune system work against itself. If you do not know your blood type ask your doctor or go to a blood bank and donate some blood with the understanding they tell you your type.

More information on blood types, eating the foods that benefit your blood type can be obtained from a great book called, ***Eat Right For Your Type***, by Dr. Peter J. D'Adamo and Catherine Whitney. This book is highly recommended!

The following foods may be incompatible to your blood type and should be avoided when possible. Use them as reference for all conditions listed where foods and herbal aids are given for any disease. Some you may tolerate quite well and others not as well. The first signs of incompatibility are excess mucus (phlegm) and itching.

Avoid For Blood Type O

Beans and Lentils	Pepper (white & black)
Copper, Kidney,	Red clover
Navy, Tamarind beans	Rhubarb
Domestic lentils	Saint-Johnswort
Green and red lentils	Senna
Breads	Shepherd's purse
All wheat breads *	Strawberry leaf
Bagels	Yellow dock
Corn & English muffins	Vanilla
Multi-grain breads	Juices and Beverages
Oat breads & muffins	Apple, Cider, Cabbage,
Pumpernickel	Orange, Black tea,
Cereals and Grains	Coffee, Liquor, Sodas
All corn cereals	Meats
Familia	Bacon, Ham, Pork
Farina	Goose
Grape nuts	Nuts and Seeds
Oat cereals	Brazil
Seven-grain cereals	Cashew
All wheat cereals	Litchi
White, oat, wheat flour	Peanuts
Condiments	Pistachios
Dill pickles	Poppy seeds
Ketchup	Oils
Kosher pickles	Corn, Cottonseed,
Sweet pickles	Peanut, Safflower oils
Sour pickles	Pasta
Relish	All oat & wheat pasta
Dairy	Graham flour
All dairy products *	Soba pasta
Most all cheeses *	Spinach pasta
Fruits	Seafood
Blackberries	Barracuda, Catfish
Cantaloupe	Caviar, Conch
Coconuts	Octopus,
Honeydew	Pickled Herring
Oranges	Smoked Salmon
Plantains	Vegetables
Rhubarb	Alfalfa sprouts
Strawberries	Avocado
Tangerines	Brussel sprouts
Herbs and Spices	Cabbage (Chi. r, w)
Alfalfa, Aloe	Cauliflower
Burdock, Capers	Corn (white & yellow)
Cinnamon, Coltsfoot	Eggplant
Corn silk	Mushrooms (dom., shi)
Echinacea	Mustard greens
Gentian	Olives (bl, Gr. Sp.)
Goldenseal	Potato (red & white)
Nutmeg	Vinegar (all)

* Substitute with sprouted seed or brown rice bread. Use butter, farmer, feta, goat, mozzarella, or soy cheese. Drink rice or soymilk. Avoid sodas with corn fructose as a sweetener and vitamin E tocopherol from wheat.

Avoid For Blood Type A

Beans	Red clover
Copper, Garbanzo,	Rhubarb
Kidney, Lima, Red	Vanilla
Tamarind, Navy beans	Wintergreen
Breads	Yellow dock
All wheat breads *	Juices and Beverages
English muffins	Black tea
Multi-grain breads	Orange, Papaya,
Pumpernickel	Tomato, Beer, Liquor
Wheat bran muffins	Seltzer, Sodas (all)
Cereals and Grains	Meats
Familia	Bacon, Ham, Pork
Farina	Beef, Lamb, Venison
Granola	Duck, Goose, Partridge
Grape nuts	Pheasant, Rabbit, Quail
Seven-grain cereals	Nuts and Seeds
Wheat cereals (all)	Brazil, Cashew
White & wheat flour	Pistachios
Condiments	Oils
Ketchup, Mayonnaise	Corn, Cottonseed,
Worcestershire sauce	Peanut, Safflower,
Dairy	Sesame oils
All cow milk & butter *	Pasta
American cheese,	All wheat pasta
Blue, Brie, Camembert,	Spinach pasta
Casein, Cheddar, Colby,	White flour pasta
Cottage, Cream, Edam,	Seafood
Emmenthal, Gouda,	Anchovy, Barracuda
Gruyere, Jarlsberg	Bass, Bluefish & Bluegill
Monterey jack, Munster,	Catfish & Caviar
Parmesan, Provolone,	Clams, Conch, Crab
Neufchatel, Swiss,	Crayfish, Eel, Flounder
Whey, Ice Creams,	Frog, Grays, Haddock
Sherbets	Hake, Halibut, Herring
Fruits	Lobster, Mussels
Bananas	Octopus, Oysters
Cantaloupe	Scallop, Shad, Shrimp
Coconuts	Sole, Smoked Salmon
Honeydew	Squid, Tilefish, Turtle
Oranges	Vegetables
Papayas	Cabbage (Chi, r, w)
Plantains	Eggplant
Rhubarb	Mushrooms (domestic)
Tangerines	Olives (bl, gr, Grk, Sp.)
Herbs and Spices	Peppers jalapeno, g-r-y
Capers	Potato (sweet, red & white)
Cayenne	Shiitake mushrooms
Corn silk	Tomatoes
Gelatin	Yams
Pepper (white & black)	Vinegar (all)

* Substitute with sprouted seed, brown rice, soya, or sprouted wheat bread. Drink goat, rice, or soymilk. Avoid vitamin E tocopherol from wheat.

Avoid For Blood Type B

Beans and Lentils Aduke, Azuki, Black, Garbanzo, Pinto, Lima, Lentils (domestic, G & R Black-eyed peas	Juices and Beverages Tomato juice Liquor, Seltzer water Sodas (all)
Breads All wheat breads Corn muffins Multi-grain breads Rye breads, Rye crisp Wheat bran muffins	Meats Bacon, Ham, Pork, Beef, Chicken, Cornish hens Duck, Goose, Partridge Heart Quail
Cereals and Grains Amaranth Barley Buckwheat Corn flakes, Cornmeal Kamut, Kasha, Rye Seven-grain cereals Wheat cereals (all) Wheat flour, Wild rice	Nuts and Seeds Cashew, Filberts Peanuts, Pignola, Pistachio, Poppy seeds, Pumpkin seeds, Sesame and Sunflower
Condiments Ketchup	Oils Canola, Corn, Cottonseed, Peanut, Safflower, Sesame, Sunflower oils
Dairy American cheese Blue cheese Ice Cream, String cheese	Pasta Artichoke pasta Soba noodles Wheat flour pasta
Fruits Coconuts Persimmons Pomegranates Prickly pear Rhubarb Starfruit	Seafood Anchovy , Barracuda Beluga, Bluegill bass, Clam, Conch, Crab, Crayfish, Eel, Frog, Lobster, Mussels Octopus, Oysters Sea bass, Shrimp Smoked Salmon, Snail, Squid, Striped bass, Turtle, Yellowtail
Herbs and Spices Allspice, Aloe, Almond extract Cinnamon Coltsfoot Corn silk Cornstarch Corn syrup Gelatin Hops Pepper (white & black) Red clover Senna Shepherd's purse Skullcap Tapioca (cassava root)	Vegetables Artichokes (dom. & Jer.) Avocado Corn (white & yellow) Olives (b.y, g, Grk, Sp.) Pumpkin Radishes Sprouts (mung, radish) Tempeh Tofu Tomatoes Vinegar (all)

* Avoid all sodas that contain corn fructose as a sweetener. Avoid vitamin E tocopherol from wheat.

Avoid For Blood Type AB

Beans Aduke, Azuki, Black, Fava, Garbanzo, Kidney Lima, Black-eyed peas	Juices and Beverages Orange juice, Black tea, Liquor, Sodas (all)
Breads Corn muffins	Meats Bacon, Ham, Pork, Beef, Chicken, Cornish Duck, Goose, Partridge Heart, Quail, Veal, Venison
Cereals and Grains Buckwheat Corn flakes, Cornmeal Kamut, Kasha,	Nuts and Seeds Filberts Poppy seeds, Sesame butter, seeds Sunflower seeds
Condiments Ketchup, Pickles Relish Worcestershire sauce	Oils Corn, Cottonseed, Safflower, Sesame, Sunflower oils
Dairy Ice Cream American, Blue cheese Brie, Butter, Buttermilk, Camembert Parmesan, Provolone, Sherbet, Whole milk *	Pasta Artichoke pasta Buckwheat kasha Soba noodles
Fruits Bananas Coconuts Guava Mangoes Oranges Persimmons Pomegranates Prickly pear Rhubarb Starfruit	Seafood Anchovy, Barracuda Beluga, Bluegill bass, Clam, Conch, Crab, Crayfish, Eel, Flounder Frog, Gray Sole, Haddock, Halibut, Herring (pickled) Lobster, Octopus, Oysters, Sea bass, Shrimp, Smoked Salmon, Striped bass, Turtle Yellowtail
Herbs and Spices Allspice, Aloe, Almond extract, Capers, Cayenne Coltsfoot, Corn silk Cornstarch Corn syrup Fenugreek Gelatin Hops Linden Mullein Pepper (white & black) Red clover Senna Shepherd's purse Skullcap Tapioca (cassava root)	Vegetables Artichokes (dom. & Jer.) Avocado Corn (white & yellow) Mushroom (abalone) Olives (black) Peppers (jal., G, R, Y) Radishes Shiitake mushrooms Sprouts (mung, radish) Vinegar's Apple, Balsamic, Red, White

* Drink goat, rice or soymilk. Avoid all sodas that contain corn fructose as a sweetener.

BODY BALANCE

The human body is 2/3 water, 90% of it in the lymph and 19% in the blood. When toxins accumulate and build up in the system, the water gets dirty resulting in the body being out of balance. When the body is out of balance, the results are disease.

The medical term used for balance is **homeostasis**, which describes the state of the body when it is in a dynamic state of equilibrium. To maintain homeostasis our body is constantly working to balance all our internal components with the effects of the external elements we consume. We set the thermostat on our heater at a certain point, and this temperature is maintained in the room depending on the differential set into the thermostat. All body functions and organs are required to operate within certain set points for optimum performance. When it varies from its built-in set points, the body must be able to counteract or regulate the imbalance. For our automatic regulatory mechanisms to act constantly and efficiently, the body needs the proper nutrients to convert and eliminate the excess.

The human body contains millions of living cells that hold an electrical charge. If the battery in your car does not keep a charge it will go dead and not start. Cells need the proper nutrients to eliminate the excess waste that clogs your blood, cells, organs, and tissue. The motor in your car has to be in balance just like our body; otherwise, at high speeds it will fall apart. The gas we use today in our car contains chemicals, the more they add, the lower the performance with more pollutants added to the environment. Compare this to the foods you eat and the waste left behind. A balance of proper nutrients will provide the energy to keep your motor running strong.

Not only do cells hold and generate energy but also the expenditure of it is required (cellular respiration) for its transfer. This vital life process is done through the oxidation and reduction reactions of amino acids, carbohydrates, enzymes, fatty acids, hydrogen, iron, and proteins into carbon dioxide and water. If the carbon dioxide is not eliminated properly from the blood it increases its acidity and reduces oxygen to the body's cells. Oxygen is the ultimate supply fuel for generation of this energy and vital for all body functions. When the cells are bathed and nourished with oxygen, the burn is complete and clean. When the cells (generators) produce the required amount of voltage, the electrical frequency of the body raises to normal with a constant flow of electrons.

In the process of respiration, waste products are exposed to the action of the oxygen of the air and are burned up, thereby producing body heat. Body heat is continually being generated through the chemical action of carbon and oxygen.

When there is an inadequate supply of oxygen to tissue its called **hypoxia**. When the oxygen-carrying capacity of the blood is reduced due to circulation, liver, or heart disorders, which then prevents the blood from being adequately oxygenated, results in tissue death. If this condition leads to a complete absence of oxygen (anoxia), the metabolism of cells is disrupted and die in a few minutes. The body recuperates from temporary hypoxia due to exercise, but over time simple hypoxia could lead to other more serious problems.

Most degenerative diseases originate in the intestines. With this fact in mind, it makes good sense to use ozone in getting right to the heart of the problem.

The therapeutic action of ozone is due to oxygenation of the blood by the loose molecule (free radicals) of oxygen in the O₃ compound. It travels to various organs

and tissues of the body. When the ozone is absorbed it oxidizes the waste products and facilitates their elimination. Ozone increases the metabolism without the expenditure of vital energy. **"Ozone is a natural remedy."** Ozone has the ability in raising the white blood counts, normalizing blood pressure and pulse rates, simply by drinking ozonated water and its absorption through the skin tissue.

A sufficiency of an active form of oxygen for the blood means better blood, better circulation, better digestion, better elimination of waste, and less chance of infection and disease. Ozone is one of the greatest blood-building, oxidizing and antiseptic agents within reach of humanity.

Viruses, fungus, parasites, and unfriendly germs will thrive in an environment that is low in oxygen, high in carbon dioxide and high in acid or a low pH factor. Any one of these can cause mental and physical stress on the body, which in turn interferes with homeostasis.

Stress on the body can also originate from work, a physical injury, or lack of sleep. The detoxification system of the body can also become stressed from excessive chemicals and processed foods.

The concept of stress is described by Engel (1953), as *"any influence, whether it arises from the internal environmental or from the external environmental, which interferes with the satisfaction of basic needs or which disturbs or threatens to disturb the stable equilibrium."*

Stress will leach nutrients out of the body and causes headaches, sleeplessness, and the formation of free radicals. Stress effects the physical and chemical response of the immune system, raises blood pressure, and slows the digestion and elimination of foods.

The body's' first line of response against emotional and physical stress starts in the adrenal glands. During the first stage or **alarm reaction**, the adrenal glands produce extra amounts of hormones as a response to help counteract the moments of stress. In the next phase, the adrenal glands go through a stage called **resistance**. The body becomes weakened from continued stress when the adrenal glands have used up the nutrients it needs and resorts to the reserves of the body. Additional vitamins and minerals are needed when the supplies are exhausted to keep you from entering the final stage of **exhaustion**. When both your energy and nutrients are completely exhausted and not replenished you lose what's necessary to maintain the functions of life. The body can only take a certain amount of abuse.

If you want to deal with stress now or in the future and avoid the second and final stages, the body needs the proper nutrition to fight against it. To help guard the adrenal glands during stress they need vitamin C, B complex, pantothenic acid, manganese and zinc. The main nutrients that are depleted during stress are calcium, copper, magnesium, potassium, sodium and zinc.

We all experience anger, anxiety, fear and grief on a daily basis. We must learn how to deal with our problems as soon as possible because the longer you wait the worse they become. Do not overload yourself with multiple problems. Deal with them one at a time, and provide your body with the foods and nutrients that help you to handle them easier. Mastering the techniques of dealing with stress successfully will help you to maintain balance. You will continue to grow, learn, and raise your abilities and self-confidence. Ignoring and running away from your problems does not cure them nor does it enhance your health.

The thyroid gland is an important organ because it regulates the physical and chemical processes that occurs at the cellular level. It regulates the manner and rate at which the tissues utilize food and natural body chemicals for the production of energy and to expend that energy into body heat and muscular energy. The thyroid produces hormones called triiodothyronine (T3) and thyroxine (T4) to regulate our metabolism. These hormones are comprised of iodine, the amino acids histidine, thyronine, and tyrosine, as well as other important elements. The pituitary gland controls the release of hormones from the thyroid. A deficiency of these hormones can effect all body functions. The thyroid also produces calcitonin, which participates in the regulation of calcium metabolism. Calcitonin is a single-chain polypeptide containing 32 amino acids.

Symptoms from a deficiency (underactive) of thyroid hormones are constipation, dry skin, hair loss, sensitivity to cold, slow growth, tiredness, and weight gain. An overproduction of hormones may cause anxiety, diarrhea, fatigue, heat intolerance, palpitations, sweating, and weight loss. For proper growth and development, the storage and distribution of water and salt, the thyroid needs the right nutrients to function. Iodine and all the amino acids are necessary for the body to complete this natural cycle of synthesis. The process does not happen without every component. As the blood circulates through the thyroid gland every 17 minutes, germs are rendered weaker and eventually killed in the blood if there are sufficient reserves of iodine. If the iodine intake is low, the thyroid gland is deprived and becomes less efficient.

A second function of iodine is to calm the body and relieve nervous tension. When tension from stress runs high, there is irritability and difficulty in sleeping. Iodine will lessen nervous tension, relax the body,

and enable it to reorganize, if the body has enough stored in reserve or replenished with all the other nutrients on a daily basis.

A third function of iodine in the human body relates to clear thinking. The mind works better when the body is supplied with iodine. Iodine also helps to metabolize the stored excess fat in the body. It acts as a catalyst that touches off the fire from within, burning up the foods we consume. If this food is not properly burned off, it may be stored as unwanted fat.

Foods rich in iodine are asparagus, bananas, carrots, chard, cod-liver oil, egg yolk, garlic, lettuce, lima beans, kelp, mushrooms, onions, potatoes, peas, radishes, rhubarb, seafood, spinach, strawberries, squash, and tomatoes. Foods that may block the utilization of iodine (in excessive amounts) are Brussel sprouts, Brassica (cabbages), cassava root, cauliflower, kale, millet, mustard, peaches, peanuts, pears, pine nuts, soybeans, and turnips. Chlorine in drinking water and excessive amounts of white table salt will also deplete iodine levels. Some forms of synthetic drugs will also inhibit the action of iodine in the thyroid. The recommended daily dosage for adults is about 200 mcg. When the body becomes saturated with an excess of iodine, there is an increase of moisture in the nose. Cut back on your iodine intake until the nose returns to normal.

Hydrogen potential or pH is measured on a scale of 0 to 14 of the hydrogen ions in a solution. Zero is high acidity and 14 is high alkaline. A neutral pH is around 7.0. Normal saliva pH for **correct body balance** is 6.4. This is the controlling factor for body enzymes that control proper digestion, assimilation, absorption of nutrients from foods or supplements, and for the production of energy in the cells.

The major mechanisms which pH controls are chemical, hormonal and electrical. All are sensitive to pH and effect many body functions. The greater the pH moves away from 6.4 in either direction, the more it creates an out of balance within the body. When saliva or urine pH falls below 6.0, the nutrients are not being absorbed. The liver, blood become toxic, and body cells are bathing in acid.

All cells of the human body were designed to be alkaline so they can perform their task of respiration. The body works double time to neutralize the acidic wastes that are secreted from the cells during respiration. If the body can not remove these waste products, they build up around the cells and they degenerate. The end results of an acid environment are ill health and disease. Alkalinity helps build up the body while acidity helps it to degenerate. Maintaining a balance is essential for a healthy body.

The ideal pH for urine after a main meal (2 to 3 hours) is between 6.4 to 6.8. The blood must be kept at a constant pH of 7.45. To check your pH you must purchase the pH paper tape at your local drug store or health food store. Collect a small sample of urine in a cup 2 or 3 hours after your noon meal and do not consume anything but water after you have eaten. Dip a small piece of the pH tape into the urine and match the color to the corresponding color on the chart.

This same procedure can be followed for checking the saliva without the cup. Do not use the end of the tape that you touch because it may give you a false reading. If the body has been highly acidic for a long period of time and your pH is around 8.0, the body may have depleted its reserves of minerals and recruited its supply of ammonia as an alkali buffer to restore balance. This occurs when the body has

used up its reserves of calcium it uses as the main buffer.

You may also want to check the pH of your drinking water. If the body is already in an acidic condition you should not be drinking acid rain water. You should avoid drinking water with a pH below 6.0. Minerals or alkalizing agents can be added to water with a low pH. Test kits for water can be purchased at a local pool supply.

A diet that is high in fresh vegetables and fruits, low in grains, will make the body less acidic and more alkaline. Apple cider vinegar also has the ability to normalize the acid/alkaline balance of the body. Body Rescue contains a supplement formula of high alkaline foods that helps correct over-acidity, and they sell pH tape for around twelve dollars.

Calcium helps maintain pH balance by neutralizing the acids and toxins in the body. Calcium forms mono-ortho-calcium phosphate that is the main buffering agent that maintains the acid and alkaline balance in the body. Use a form of calcium like Coral Calcium that is absorbable and high in other trace elements. The calcium's that conform to your electrical pathways and used most effectively are derived from vegetables or citrus. Dosage levels will differ from person-to-person. A person with normal pH should not need over 250 mg per day. A person with high acidity may require 1,250 mg per day to achieve a balance. See Foods for Detoxification.

The normal body temperature is 98.6 degrees. Studies show that below normal temperature inactivates their immune system and makes it less efficient. A person with infection and low body heat will have a sluggish and ineffective immune system with long term infections. The person with a fever may feel fatigued, but has a better chance of recovery because his bone marrow will produce

more white blood cells to fight off the infection. The increase of body temperature increases the production of red blood cells and B-lymphocytes cells in the bone marrow and better absorption of B-12. The B-cells helps produce antibodies that raise the immune system level. Fever is a normal reaction of the body to fight off infection, but the body can enter a cold phase where temperature goes below normal after it exhausts its storage of nutrient reserves. The immune system will not be activated if the nutrients are not replaced with the proper supplements.

Natural remedies to raise body temperature and energy levels are: B vitamins, niacin, cayenne, enzymes, ginger root, kelp, kombu, nori, arame, dulse, hijiki, irish moss, purple laver, agar-agar, sea cabbage, mekabu and sea palm. Also, lemon, orange juice and olive oil drink raises temperature and reduces acidity.

There are many natural remedies to raise the body's immune system to regain balance and our health, but one has to take responsibility over their health. As the food chain continues to deteriorate in vitamins and minerals, the need for more supplements and proper eating habits will rise.

When we make up our minds to take supplements for a certain condition, we are faced with a vast array of choices on the store shelves. When shopping, we normally think a mineral is a mineral and a vitamin is a vitamin, and usually buy the cheaper brand. The more we read, the more confused we get because the information between books, magazines and literature differs greatly. Buying each supplement individually will fill the cupboards with no room to spare. A blood or hair analysis can determine what nutrients you are deficient in, or you can take a supplement that includes most of the essentials and eat fresh foods.

There are several things to consider before you purchase supplements. Otherwise, you may be wasting your money and even create additional health problems. Find out where they originate from, how they are treated, and their type. Do they degrade completely and absorb easily? Are there any toxic substances or heavy metals included? Are they easily ionized? What else is needed for them to be most active? Will there be any reactions to foods or drugs? Supplements derived from organic plant life are the only ones your body thrives for and will not reject. Your body will make use of and properly use each one for the synthesis or the making of all other substances needed for correct body balance. Every organ and cell in your body will rejoice and dance with delight with the new offerings. It will reward you with new life that at times may have seemed impossible.

Full absorption is important for full value; both health-wise and money-wise. It is important to remember that all living cells produce an electrochemical gradient (charge) which is positive on the outside and negative on the inside. Plant derived (natural) minerals carry a negative bioelectrical charge while the inorganic minerals carry a positive charge. Most of the time the intestinal walls are positive charged and will attract negative charged minerals for absorption. The inorganic types with a positive charge will be repelled and prevented from absorption. Why buy the junk when you can purchase one that fulfils all the requirements for less!

"Keeping The Body In Balance" involves amino acids, diet, digestive enzymes, exercise, friendly flora, minerals, oxygen, water, vitamins, body frequency, pH of the body and a clean colon.

The Fortified Daily Power Drink May Be Needed To Maintain A Balance.

Take 2 ounces of Tropical Sunrise daily for the first bottle. For maintenance, 1 ounce daily. 2 ounces twice per day if you are sick and require extra nutrients. Children under 80 pounds need ½ teaspoon daily. Adults can add two drops of Liqui-Kelp Iodine per ounce for underactive thyroids.

1,500 to 3,000 mg of natural plant derived vitamin C (unprocessed and nonsynthetic).

1,500 mg of Essential Fatty Acids. Essential Balance from Omega, Flaxseed oils or Efamol Evening Primrose Oil.

1 to 2 tsp. of Bee Pollen or as tolerated with 1-3 capsules Royal Jelly and Propolis.

1000 mg of Friendly Flora (multiple types).

The friendly bacteria and other capsules may be taken with the power drink with water or juice. Drink one a day for maintenance. For extreme malnutrition, drink two a day or as tolerated.

Your condition of health or deficiencies will determine what nutrients you add to your own customized power drink. You may want to experiment with the different types of vitamins and minerals to find out which types are most compatible. Tropical Sunrise is balanced, compatible and complete.

The Oxy-Mega colon cleanser or salt-water detox cocktail can be used as an intestinal flush for a quicker elimination of the *Candida*, poisons, or toxins.

These types of "intestinal flushes" remove the toxins that normally absorb into the bloodstream through the intestinal walls. However, this causes extreme diarrhea. The friendly bacteria and nutrients will have to be replenished more often. This will continue as long as the body is toxic.

Wheatgrass juice can also be added to your daily nutrients depending on your condition. Wheatgrass is one of nature's richest sources of vitamins A, B, C, and contains most of the known mineral elements when grown in organic soil. It also contains amino acids, proteins and enzymes. What makes the juice so rich is, it contains 70% chlorophyll and liquid oxygen. Chlorophyll is the basic of all plant life and the first product of light. It contains more light energy than any other element.

Wheatgrass juice is an excellent detoxifier for neutralizing and washing toxins out of the body. It increases the function of the heart, vascular system, the digestive system, uterus, and the lungs. The juice also acts as a blood-liver purifier, increases red blood cell count, improves blood sugar problems, lowers high blood pressure, and removes heavy metals. As a supplement it inhibits the metabolic activation of carcinogens, and has been used successfully to treat peptic ulcers, ulcerative colitis, constipation, diarrhea, and other gastrointestinal tract disorders. Being an anti-bacterial agent it will stop the growth of unfriendly bacteria.

You should be able to purchase wheatgrass locally or you can obtain organic seeds and grow it yourself. Juicing requires a special grinder; blenders or other juicers may not work as well.

Chlorella is another source of Mother Nature's nutrients. It originates from a single-celled alga plant and considered as whole food. Chlorella is rich in antioxidants, beta-carotene, chlorophyll, nucleic acids and protein. This helps the body in detoxification by binding and removing chemicals and toxins from cells through the intestines. The nutrients you take have to reach the cells to nourish, protect and maintain your body balance.

Glutamine, vitamin E, cats claw, bee pollen and aloe vera help the immune system to be more effective.

The prevention and cure of disease are not by treating pain or symptoms with drugs. The cause must be eliminated to maintain body balance and good health. What goes into the system must come out. There can be NO accumulated waste left behind that will hinder the functions of the body.

Some may clean their house by continually sweeping the dust under the carpet and the waste builds up over time. If the colon is not swept clean it will eventually build-up and plug-up, and you get sick. Good housekeeping is essential to eliminate the cause of disease.

The ashes from combustion must be removed properly through the organs and colon to maintain a clean burn. The burn will not be clean unless you have sufficient amounts of oxygen. Take for example, the flame on a welding torch. If there are insufficient amounts of oxygen, the flame will be yellow with lots of smoke and soot. When the supply of oxygen is correct, the flame is blue and burning clean. There are fewer by-products the body has to get rid of when the flame is clean. The type of calories you consume determines the energy output from the cells. Processed foods equals low wattage output from the cells and more by-products from oxidation. Fresh foods will raise the wattage and make the flame from within glow bright. Tropical Sunrise dietary supplement helps fulfill all the requirements needed for an efficient burn.

Foods that help eliminate the waste products are beets, fruits like apples and berries with lots of fiber, vegetables, the hulls and outer parts of grains and rice. Prunes, radishes and flaxseed are also helpful.

The further the foods are broken down by chewing, the easier they can be acted on by bacterial, bile and enzyme activity. This allows the nutrients to be absorbed through the intestinal walls and the body does not have to work as hard in the digestion process.

Many do not chew their foods at all. This is quite evident after colon cleansing when you see whole pieces of corn, kidney, green beans, or mushrooms without a tooth mark. This can cause a blockage or constipation if there are any abnormalities in the intestinal tract. Try not eating your meals under stressful conditions like yelling at the kids or arguing with your spouse. Make new household laws if you must to promote peace and quiet during meals.

**"Chew Your Foods Well."
Take your time and enjoy it.**

To achieve the proper balance, the whole digestive and eliminative tract must be clean and flowing freely. When this is accomplished, other systems of the body will receive the proper nutrients. They will balance themselves out equally over time if you are making the right choices. Eating foods that are compatible and used efficiently will strengthen and maintain all body functions.

You have to prepare and educate yourself for whole body detoxification to achieve a balance. Look forward to making better choices and especially the **"healing crisis"** with a firm commitment to getting well.

Keeping the "scale of life" in balance is the KEY to your physical, mental and spiritual well being. The flame from within is your strongest counterweight for keeping this scale in balance.

ALOE VERA

The aloe vera plant (*aloe barbadensis*) is a succulent perennial that grows two to three feet tall. The gel is derived directly from the plant stalks. Its yellow to orange-red flowers bloom from June through September. The aloe vera plant is one of the most versatile plants on earth.

When you buy aloe vera it is important to get pure 100% cold pressed. Any heating or pasteurizing will destroy the valuable enzymes.

Most people think of the aloe vera plant as only for burns but many use it externally for animals and humans. This plant is used in tea, gel, juice, salve, and decoction form. Its many uses are abscesses, AIDS, arthritis, athletes foot, childbirth, colic, constipation, chronic fatigue, diabetes, eye disorders, improves weak eyesight, fevers, gastric ulcers, headaches, hemorrhoids and other rectal problems, immune suppression, relieves the symptoms of peptic ulcers, improves vascular flow, influenza, meningitis, menstrual problems, nail fungus, promotes healing, reduces inflammation, relieves glandular enlargements of the abdomen and spleen, sores, snakebite, ringworm's, toothaches, tuberculosis, venereal disease, weaning, periodontitis, and to reduce scarring.

Aloe vera benefits the digestive system, and improves its function by increasing protein digestion and decreasing bowel putrefaction. Aloe vera juice has an alkalizing effect on gastric acid, which improves the pH level in the gut. Its buffering and alkalizing action is the reason for helping peptic ulcers.

Aloe vera also shows anti-bacterial and anti-fungal properties and reduces yeast overgrowth in the intestines.

To determine all of the components of aloe vera would be difficult because it contains over 200 different kinds. Some of the elements the plant contains are anthraglycosides, amino acids, anti-biotic principles, biogenic stimulators, enzymes, hormones, lignin's, magnesium lactate, mannins, minerals, monosulfonic acid, organic acids, polysaccharides, protein, resins, tannins, saponins, steroids and vitamins.

Another component found in aloe vera is acemannan, which is a complex carbohydrate with both immune-stimulating and anti-viral properties. Acemannan is a potent interferon inducer, which interferes with viral glycosylation. This compound is a potent immunostimulant that also promotes macrophage activity and helps stimulate bone marrow activity.

Studies conducted at the College of Veterinary Medicine in Texas implanted mice with sarcoma cells. The study lasted 60 days. By the 48th day all mice without acemannan died and by the 60th day, 40% of the mice receiving acemannan injections were still living. These mice were re-implanted with the sarcoma cells and failed to produce tumors.

Another study at Dallas/Fort Worth Medical Center found that one of the factors for progressing from HIV positive into ARC and AIDS was poor nutrition. This study lasted 180 days, all 29 patients improved at various levels.

The aloe vera is so effective in its natural state that no reason has been found to spend the time and money to develop a synthetic version.

AMINO ACIDS & ENZYMES

Amino acids are the building blocks of protein and are essential to life and health.

A balance of amino acids will build up the immune system and regenerate the digestive system. **Any imbalance can create problems.** Amino acids build and maintain all body tissues; help form antibodies to fight infections, are an important part of enzymes, help produce hormones and body fluids, and they give you energy. **Amino acids are the life giving components of protein.**

There are ten essential amino acids that the body needs and cannot make from other substances; arginine, cystine, glutamic acid, histidine, lysine, methionine, phenylalanine, threonine, tryptophan and valine.

The other amino acids considered nonessential that the body still needs are alanine, aspartic acid, arginine, cycteine, cystine, glutamic acid, glycine, histidine, proline, serine, thyroxine and tyrosine. All essential amino acids must be in the bloodstream at the same time and in equal proportion for the body to do its job of tissue growth and repair. If an amino acid is missing, the proteins are impaired and not used for tissue protein synthesis. This results in an increased excretion of nitrogen and a negative nitrogen imbalance. **This imbalance will usually result in cellular deterioration.**

Healthy body cells require an alkaline environment, while cancer cells require an acid pH for their survival. Cancer cells cannot live in an alkaline environment or when the pH is **balanced**.

Being classified as amino acids, they are the opposite of acidic. Most amino acids

are neutral or alkaline and help to **balance** body pH.

Functions of Some Amino Acids

Arginine helps filter out toxic waste, detoxify, and stimulates the release of a hormone that helps the body burn fat and builds muscles.

Cystine helps supply insulin for the assimilation of sugars and starches. It helps against toxic chemicals and heavy metals.

Glutamic acid helps in mental and physical well being.

Histidine is needed for the auditory nerve that provides good hearing.

Lysine helps in the formation of antibodies and nourishes the blood. Helps in reducing cold sores and tooth decay.

Methionine is needed for cell regeneration in the kidneys and liver. It helps remove toxins from the liver and relieves arthritic disorders.

Phenylalanine is essential for the thyroid gland to produce the hormone, thyroxine. It stimulates signals between the brain and nerve cells, controls chronic pain, raises energy levels and mental alertness.

Threonine helps in the digestion of foods for greater assimilation and absorption.

Tryptophan helps utilize vitamin B complex for proper digestion, rich blood, hair and skin.

Valine is needed for the function of the nervous system for mental and muscular coordination.

Enzymes are proteins that are found in all living plants and animals. There are thousands of these enzymes that are essential in maintaining all body functions

and balance. Enzymes help breakdown food material such as protein, carbohydrate and fat into smaller particles that are more easily absorbable into the body. Each enzyme has a specific function that no other enzyme can fulfill.

The digestive enzymes that breakdown proteins are called proteases. Carbohydrates-hydrates are called amylases and fats are called lipases.

Enzymes are the workers, some of their functions are. They help to construct new bone, glandular tissue, muscle tissue, nerve cells, and skin. They liberate oxygen from hydrogen peroxide; they promote the oxidation process for energy; they aid in the elimination of toxins by the colon, kidneys, lungs and skin, and they help protect the blood.

Enzymes are destroyed by cooking because they are extremely sensitive to heat. A temperature of 118 degrees starts the destructive cycle of these important enzymes. It is important to eat fresh foods raw in your diet in order to obtain these vital enzymes. Deficiencies of zinc and manganese affect the conversion of enzymes, resulting in digestion problems.

When body pH is acidic, it will deactivate valuable enzymes that are necessary for the conversion and production of various hormones and neurotransmitting compounds. Foods rich in enzymes are avocados, bananas, mangos, pineapples, papaya, and wheatgrass. Sprouts contain the highest source. Enzymes are available in supplement form. Tropical Sunrise contains some of these vital enzymes. Amylase helps break down carbohydrates. Cellulase helps break down fiber. Lipase helps break down fat. Protease helps break down protein. Without these enzymes, the foods you eat will never be completely utilized by the body.

ANTIOXIDANTS

Antioxidants protect against cellular wear and damage. Defense strategies against aggressive radicals are through enzymes and antioxidants that occur naturally in the body, (glutathione, uric acid, ubiquinol-10 and others) and radical scavenging nutrients, such as vitamins A, C, E, selenium and carotenoids. There are hundreds of plants known with natural antioxidant properties, some are:

Allspice	Ivy
American Ginseng	Leek
Angelica	Lemon Balm Tea
Anise	Lemon Grass
Areca Nut	Licorice
Avender	Mace
Balm	Marjoram
Bay Laurel	Milk Thistle
Basil	Mint
Bell Peppers	Motherwort
Beans	Mugwort
Bearberry	Myrtle
Bergamot	Nettle
Betel Leaf	Nutmeg
Betony	Oak
Blackberry	Oats
Black Pepper	Olive
Boneset	Onion
Borage	Opium Poppy
Catnip	Oregano
Celery	Papaya
Cinnamon	Paprika
Citrus	Peanut
Cloves	Pennyroyal
Coriander	Pimento
Cocoa	Plantain
Cranberry	Raspberry
Cumin	Rice
Dogwood	Rosemary (Tea)
Elecampane	Sage
Eucalyptus	Saw palmetto
Evergreen	Sesame
Frankincense	Schizandra
Garlic	Siberian Ginseng
Ginger	Spinach
Ginkgo	Tarragon
Ginseng	Tea (black and green)
Horehound	Thyme
Horseradish	Tumeric

BODY FREQUENCY

Frequency is a measurable rate of electrical energy that is constant between two points. Everything has an electrical frequency.

Electrical appliances, lights and other alternating current (AC) devices have incoherent chaotic frequencies that operate around 60 hertz AC. These frequencies are normally measured in cycles per second called Hertz. One Hz is one cycle per second.

People, plant life, herbs and oils (natural things) operate on direct current (DC) that is on a coherent, harmonic frequency. The AC frequency is incoherent with the DC frequency of the body. The normal body frequency is between 62-78 Hz. The immune system will begin to shut down when it falls below 62 hertz.

Problems of ill health and cold symptoms begin at 58 hertz. Research shows flu symptoms at 57 Hz., candida at 55 Hz., Epstein-bar at 52 Hz., cancer at 42 Hz.

Processed canned foods have a zero Hz frequency. Fresh vegetables show up to 15Hz. Dried herbs show from 12 to 22 Hz. Fresh herbs are 20 to 27 Hz. Essential oils have the highest DC frequency of any substance known. Oil frequency ranges from 52 Hz to a high of 320 Hz in rose oil.

If low body frequency is linked to ill health, it makes no sense in eating processed foods. If synthetic foods or drugs have the same frequency as dead foods what effect will they have on your health? Balance is creating a stable internal equilibrium between the elements. When anything opposes the body, it creates an imbalance. When there is harmony between the foods you eat and the body there is balance.

ESSENTIAL FATTY ACIDS

The two main essential fatty acids (EFAs) are gamma-linoleic acid (Omega-6) and eicosapentanoic acid (Omega-3). The human body does not produce EFAs. They must be obtained through supplements or through a balanced diet in equal portions to maintain optimum health. This is why they are classified as "essential fatty acids."

Fatty acids are commonly known to some as vitamin F, and used in natural cosmetics for their anti-bacterial and skin-soothing effects.

When fatty acids are depleted in the body the immune system loses strength, which then results in disease and ill health. Omega-6 oils are derived from plant and botanical sources. Omega-3 oils are from fish and marine life.

Essential fatty acids are important in the function of nerve, muscle, and the immune system. They are a major source of energy and a crucial ingredient of the membranes in all body tissues. Fatty acids are an important factor in determining the biological properties of those body tissues. In the end of their biochemical pathway through the body they become prostaglandins.

EFAs promote the health and growth of prostaglandins. There are three different kinds of prostaglandins that must be kept in balance for the body to benefit. They are PGE1, PGE2, and PGE3. The body will encounter problems like arthritis and inflammation when it produces too much of the PGE2, and not enough PGE1-3. PGE1 and PGE3 are anti-inflammatory.

A deficiency of essential fatty acids can cause health related problems like; an increase in the permeability of the mucosal membrane of the digestive tract;

incomplete digestion of foods; allowing toxins to enter the bloodstream; causing inflammatory reactions in the body; dehydration, and lowering of the immune system. Clinical studies have led some to believe that a lack of essential fatty acids could turn out to be one of the most significant factors in many diseases.

Some of the ailments essential fatty acids have helped or alleviated are alcoholism, asthma, arthritis, coronary disorders, diabetes, cystic fibrosis, eczema, high cholesterol, hyperactivity, hypertension, obesity, premenstrual syndrome, and Sjogren's Syndrome (dry eye).

The differences among fatty acids are important. Fatty acids can be saturated, monounsaturated, or polyunsaturated. When fatty acids have all the hydrogen atoms it can carry, they are called saturated. These fats are derived from animals and solidify at room temperature. A few vegetable fats like coconut and palm oils, and certain hydrogenated oils are rich in saturated fatty acids. Damage is caused to the body by saturated fats in raising cholesterol levels and low-density lipoproteins (LDL's = fat particles mixed with protein), which increases the risk of heart disease. **"AVOID AT ALL TIMES."**

Monounsaturated fatty acids are missing one pair of hydrogen atoms while polyunsaturated fatty acids are missing two or more hydrogen atoms. Both have been proven to displace saturated fats and neutralize their negative effects in the body. Polyunsaturated fatty acids tend to lower blood-cholesterol levels and the risk of heart disease but EPA says chlorinated water causes the cholesterol to switch from HDL's to LDL's which raises the risk. Drinking chlorinated water alters and destroys unsaturated fatty acids. The free radicals created by chlorine will oxidize the EFAs and cause them to turn rancid. (May/June 1992 *Chemical Research In Toxicology*)

Therapeutic Effects of Some EFAs

Gamma-linoleic acid is used in the prevention or treatment of arthritis, heart disease, skin problems, PMS, and it stimulates the growth of hair and nails. Evening Primrose Oil has been shown to stimulate T-cells of the immune system, revert cancer cells back to normal cells through test tube experiments, reduce liver damage caused by alcohol and helps repair other cellular damage caused by alcohol.

Eicosapentaenoic acid inhibits blood clotting, reduces inflammation, and lowers cholesterol levels, reduces high blood pressure and many cancers.

Docosahexaenoic acid is capable of thinning blood, inhibits blood clotting, and lowers blood fat and cholesterol levels.

Lecithin may lower cholesterol levels, helps strengthen nerve sheaves and used in multiple sclerosis treatments.

Food Sources of Fatty Acids

Cis-linoleic acid is found in vegetables and seeds, such as corn, safflower and sunflower oils. PGE1

Gamma-linoleic acid is an Omega-6 oil that is found in black currant oil, borage, hemp, mother's breast milk and primrose oil. PGE1

Dihomo gamma linoleic acid is found in small amounts in certain organs. PGE1

Arachidonic acid is found in animal meat, freshwater fish, other marine life, eggs and milk products. PGE2

Alpha linoleic acid is found in beans, chestnut oil, flaxseed oil, soybean oil, walnut oil, dark green leafy vegetables and winter plants. PGE3

Eicosapentaenoic acid is an Omega-3 oil found in cold saltwater fish like; salmon, herring, tuna, cod, mackerel, sardines, haddock, halibut, sea bass, crappie and trout. PGE3

Lecithin is a fatty acid found naturally in egg yolks and soybean oil.

Essential fatty acids help foods and waste to move through the digestive tract easier, thereby reducing the effect of constipation.

ESSENTIAL OILS

The Egyptians used aromatic oils in their bath water thousands of years ago. The oils are described as having hormonal qualities that hold the life force from each living substance that they were derived from. Used in the right way they can improve our health and well being in many ways.

Aromatherapy is the term used today in the use of essential oils as a form of health care. The term aromatherapy means to treat with aroma through inhalation. Therapists believe the aromas from oils can reach and influence the deepest of ones human instincts. These oils can easily absorb through the cell membranes of the skin and into the bloodstream because the oils have a unique lipid-soluble structure.

Essential oils originate from flowers, trees, shrubs, herbs, bushes, roots, seeds, leaves, stems and petals. Oils are the regenerating and oxygenating immune defense properties of these plants. There are about 200 different types of these oils being used today. Trace elements found in these oils have nutrients, hormones, enzymes, vitamins, minerals and antibodies. Oils are antifungal,

antibacterial, anti-infectious, and antiseptic with immune-stimulating properties.

One of the most important common agents found for sustaining and regenerating these oils is oxygen. Essential oils have been found to increase oxygen because they are antioxidants. They have also been found to; increase oxygen in the cells, aid in digestive enzyme secretion, prevent unfriendly bacteria growth, increase cell metabolism, help **balance** body cell pH, help cleanse the intestines of toxic debris and parasites.

Oils like rosemary, peppermint, clove, cinnamon, melissa, oregano, and thyme increase the production of adenosine triphosphate (fuel for the body) and increases oxygen absorption within the cells. Circulation of the blood is enhanced which is vital to good health.

Sesquiterpenes are found in frankincense and sandalwood oils. It increases the secretion of antibodies, endorphins and neurotransmitters, oxygen production in the pituitary and pineal glands.

Massage therapists use essential oils in their treatments because the oils produce a regenerative and healing effect on the whole body. They combine vegetable oils with the essential oils that penetrate through the fatty tissue in the body. This type of treatment when combined with colon cleansing will remove the toxins from the fat and muscle tissue at a faster rate.

Start with small doses to avoid allergic reactions when taking internally. One drop on a tissue and inhaled can help relieve head or sinus problems.

Oils can also be used to freshen up and remove old stale odors around the home. A few drops near a fan or placed on the air conditioning return air filter will be circulated throughout the home. Add about six drops for bath water.

ESSIAC TEA

For centuries, Indians have been treating a multitude of aches and pains, and other ailments with herbs. Over 3,000 plant species have been used by natural healers for the treatment of cancer and other health problems. There is an abundance of scientific evidence on plants and herbs that prove their anti-cancer effects in lab studies, clinical tests, and human experiences.

Essiac tea originated from the Ojibwa Indians in Northern Ontario, Canada. When combined, herbs have great healing powers. The Ojibwa believed that a single plant possessed a unique soul-spirit, lacking in material form or substance, but when joined with other plants would form a unified spirit.

In the early 1900s, an English woman was cured from breast cancer by an old Ojibwa medicine man. She was told he had a remedy that was given to his people by the grand fathers **"a holy drink that would purify her body and place it back in balance with the Great Spirit."** The old medicine man gave the recipe for his holy drink to the English woman, which is now called Essiac tea.

In 1922, this same person passed the formula for this herbal tea to Rene Caisse, she was the head nurse at the Sisters of Providence Hospital in Haileybury, Ontario, Canada. Rene fought and sacrificed everything in her personal life for more than fifty years to bring Essiac to those in need, resisting temptation to capitalize on what she felt was truly a gift from God. Rene endured in her efforts in healing people with cancer up to her death in 1978. She was 90 years old.

More on the life of Rene Cassie can be found in the book **"The Essiac Report,"** by Richard Thomas. I would strongly

recommend this book to anyone wanting to gain more information about Essiac tea as an alternative health treatment.

Ozone, like Essiac tea is a simple, inexpensive, highly effective, natural treatment with no bad side effects. Both are suppressed by the Medical Establishment who refuses to admit them and other alternatives as credible treatments for AIDS, Cancer, and other health related problems.

Essiac tea when added to ozone treatments and the other topics covered in this book will speed up detoxification and the healing process.

The original herbs in the formula contained *Burdock Root*, *Sheep Sorrel leaves*, *Slippery Elm Bark*, and *Turkey Rhubarb Root*. Later, Rene Cassie added *Watercress*, *Blessed Thistle*, *Red Clover* and *Kelp* because of the additional healing properties that exist in these herbs.

The herbs mentioned are present in the Flor • Essence brand of Dry Herbal Tea Blend, which can be obtained at most health food stores. If you purchase your herbs at a health food store make sure there are no pesticides, insecticides, or herbicides used, and that they are not irradiated. Buy the highest quality only.

An excellent book that covers more in depth information on herbs is **"Today's Herbal Health,"** by Louise Tenney, M.H. This book is an essential reference guide to understanding herbs used for medical purposes.

Essiac Tea Ingredients

The ingredients for the original Ojibwa formula of Essiac Tea are:

- 1 lb. 4 oz. Burdock Root, c/s (6 1/2 cups)
Arctium lappa
- 1 lb. Sheep Sorrel Leaves, pwd.
Rumex acetosella
- 4 oz. Slippery Elm Bark, pwd.
Ulmus fulva
- 1 oz. Turkey Rhubarb Root, pwd.
Rheum paimatum

This amount makes 10 - 2 gallon batches.

Other herbs that can be added to the original formula for greater detoxification of the liver and blood are:

Watercress (*Nasturtium officinale*)
Blessed Thistle (*Cnicus benedictus*)
Red Clover (*Trifolium pratense*)
Kelp (*Fucus vesiculosus*)

Supplies Needed

- 2 - 3-Gallon Stainless Steel pots with lids.
- 1 - Strainer
- 1 - Wooden Spatula
- 1 - Funnel
- 12 - 16 ounce Amber Glass Bottles with caps (when smaller amounts are made use wide mouth 16 oz. canning jars).

Preparing Essiac Tea

1. Bring two gallons of pure water to a hard rolling boil for about 30 minutes with the lid on at all times.
2. Remove from heat, stir in 8 oz. of Essiac from mixed materials, and bring to a rolling boil for 10 minutes.

3. Remove from heat and scrape sides of pan and lid with spatula of excess herbs back into the liquid.

4. Let the tea sit for 6 hours with the lid on and then stir the mixture well; then, let sit for another 6 hours. (Total of 12 hours)

5. When properly steeped, stir and heat the tea solution to scalding (just before boiling). Let settle for 20 minutes.

6. Strain the mixture into another pan and then transfer the tea into sterilized glass jars or bottles and seal (some sediment is OK). Refrigerate when cooled. Shake before using, the sediment that accumulates is good fiber. **Do Not Use If Any Mold Develops In The Tea!**

Suggested Use

Adults • For maintenance and prevention, measure out 1 to 2 ounces of the concentrate tea and dilute with an equal or double amount of purified hot or cold water and sip slowly once a day.

Extra Strength • Mix 2 ounces (4 table tablespoons) of tea with an equal amount of purified water twice a day.

Maximum Strength • Take the same amount 3 times a day, when there are signs of improvement, revert to 2 x daily.

Children • Take 1 1/2 to 2 ounces with an equal amount of water are the daily maximum amount.

Infants • Take 1 ounce with an equal amount of water is the daily maximum amount.

Note! For best results, shake tea well before mixing. Take on an empty stomach 1-hour before breakfast in the a.m. and 2 hours after eating in the evening or just before retiring. Essiac Tea is not recommended for pregnant or nursing mothers.

EXERCISE

Exercise improves our health in many ways. There are many different ways to exercise. It should be done in a way that is comfortable and enjoyable. Choose a way that is not a big effort or turns out to be a bad experience. For some, it may be necessary to start out slowly and do only as tolerated.

Exercise improves flexibility, joint mobility, lipoprotein in the blood, muscular strength, psychological disorders such as depression or stress, physical endurance, improves the efficiency of the heart, cardiovascular and respiratory systems.

The most important factor of exercise is that it provides the most vital element needed for life, oxygen. Blood and all body cells need oxygen and it's necessary for the oxidation process to occur. The higher the level of oxygen in the blood, the higher the level of health and your well being.

Exercise keeps body fluids from becoming stagnant by moving them around to areas where they are needed.

Exercise helps the body burn excess carbohydrates for the reduction of body fat, aids the digestive process, and helps in the elimination and buildup of waste in the colon.

Exercise enlarges the diameter of arteries to handle increased blood flow, thins the blood, increases good cholesterol, reduce high blood pressure, and allows more oxygen to the brain for better mental performance.

Exercise increases the functional activity of the bone marrow in the production of red blood cells. These cells carry oxygen and nutrients to the tissue for oxygenation and

removes carbon dioxide leftover from the oxidation process.

When circulation slows down from a lack of exercise we become sluggish and our digestion does not work well, this can then lead to constipation. When the muscles are affected from a lack of nourishment and exercise, they can build-up toxins from digestive waste. This condition can be very painful in the shoulder and neck area if the toxins become hardened in the muscles. At times, this may restrict the flow of blood to the brain making you even more sluggish and fatigued. The lymphatic system relies on muscle contraction for the circulation of lymph fluid. Body cells need lymph fluid for nourishment, this is part of our immune system for fighting disease.

Exercise is a hard thing to do during sickness; especially when you can hardly move or even get out of bed. It would be very beneficial when in this condition to have a physical therapist or massage therapist do treatments to get the blood flowing and those muscles working the way they should. A little physical activity is better than none at all.

Ozone is very beneficial in toning up weak muscles but it is equally important in getting the toxins out of the muscle tissue and out of the body. Hot tubs or spas using ozonated water will open the skin pores, which helps in the elimination of toxins from the muscles. This will also help some of those aches and pains.

You may not be aware of some condition that may exist. It may be wise to consult your doctor before you exercise or if problems occur during a workout. Some danger signs you should be aware of when exercising are severe shortness of breath, tightness in the chest, heart palpitations, dizziness or feeling faint, chest pain, or pain in the arms or jaw.

FOODS FOR DETOXIFICATION

Fresh fruits and vegetables have therapeutic or medicinal benefits to the human body. Each food has its own function and specific job to benefit the body. Each chemical, mineral and vitamin found in certain fruits and vegetables have disease-preventing and disease-healing benefits.

The natural ingredients found in foods can be utilized for each specific illness. Foods that are acidic, create an acidic reaction in the body, which then produces unbalance and disease. Foods containing salts of potassium, sodium, silicon, and magnesium helps neutralize over-acidity. Sickness is a result from over-acidity. It is important to eat alkaline and sodium rich foods to get the body back in balance. A high alkaline balance is the body's first line of defense against illness.

Eat good organic fruits and vegetables in their natural state, not dead food that has been through irradiation or sprayed with herbicides and pesticides. When cleaning or detoxifying the body, it does not make sense to replenish the toxins while trying to eliminate them from the body. Some may feel that organic foods are too expensive but they contain almost twice as many vitamins and minerals as do the others. You get your money's worth with organics.

Raw foods are important because they contain all the nutrients, fiber and enzymes. Some plants are richer in natural chemicals than others. The human body needs a variety to stay in balance. Foods will lose their high nutrient value when canned, over-cooked or processed.

Juicing will allow the body to absorb the nutrients more effectively. This allows the nutrients normally used in the digestive tract to be utilized elsewhere. If a juicer is not available, try drinking V8 Juice or a

juice from your local health food store that is unprocessed and free of pesticides.

When there is an excess of elimination and the body is in distress or weak, more protein or starch will slow down the process.

Foods have many benefits in helping the body to detoxify and heal. Some effects from each are:

They are alkaline foods or will have alkaline reactions in the body. They help in cleansing the gall bladder and other organs. Are powerful blood purifiers. They stir up inactive acids and inactive toxic settlements in the body. Help to eliminate the toxins and poisons more effectively and remove impurities from the liver. Helps in bowel elimination and aids the digestion process. They help soothe irritated membranes in the intestines.

Foods That Heal

Apples	Lemons
Asparagus	Lentil
Avocados	Mangos
Bananas	Melons
Beets	Mulberry
Broccoli	Okra
Cabbage	Onions
Carrots	Oranges
Celery	Parsley
Cherries	Parsnip
Chicory	Peaches
Collard	Peppers
Cucumbers	Pineapple
Currant	Potatoes
Dandelion	Radish
Elderberries	Raspberries
Figs	Squash
Garlic	Strawberries
Gooseberries	Swiss Chard
Grapes	Tangerines
Grapefruit	Tomatoes
Huckleberries	Turnips
Leek	Watercress

Note! Use foods & herbs to your blood type.

Acid Forming Foods

Barley	Lentils
Beans (white-lima)	Lobster
Beef	Macaroni
Butter	Mackerel
Buttermilk	Maize
Bread	Millet Rye
Cashews	Milk
Cereals	Molasses
Cheese	Mutton
Chestnuts	Nuts
Chicken	Oatmeal
Chocolate	Oyster
Clams	Peanuts
Cocoa	Pomegranates
Cod Liver Oil	Pork
Corn	Pumpkin
Corn Meal	Rabbit
Corn Starch	Raw Sugar
Cottage Cheese	Rice
Cottonseed Meal	Rhubarb
Cow Peas	Roman Meal
Crab	Rye Flour
Cream	Salmon
Crackers	Sauerkraut
Duck	Smelt
Eggs	Smoked Herring
Farina	Sole
Flour (all)	Spaghetti
Frog Legs	Squab
Gluten Flour	Sugar (white)
Goose	Syrup
Grapefruit	Tapioca
Halibut	Tomatoes (cooked)
Ham	Turkey
Hazelnuts	Turtle
Hominy	Veal
Jell-O	Wheat Grains
Kohlrabi	Whey
Lamb	Wine

Reduce the intake of acidic foods if indigestion is a problem. Refrain from eating spicy and fried foods. Reduce the amount of coffee or liquids while eating because they wash down the enzymes needed for proper digestion. There may also be a shortage of hydrochloric acid that helps breakdown food for digestion.

Alkaline Forming Foods

Alfalfa	Lettuce
Apples	Limes
Apricots	Mangos
Asparagus	Melons
Avocados	Mulberry
Bananas	Mushrooms
Beans (string-whole)	Okra
Beets	Olives
Berries	Onions
Broccoli	Oranges
Cabbage (white-red)	Oysterplant
Cantaloupes	Parsley
Carrots	Parsnip
Cauliflower	Peaches
Celery	Peas
Cherries	Pears
Chicory	Peppers (sweet)
Coconut	Persimmons
Collard	Pineapple
Cranberries	Plums
Cucumbers	Potatoes
Currants	Prunes
Dandelion	Radish
Dates	Raisins
Eggplant	Raspberries
Elderberries	Rutabagas
Endive	Savory
Figs	Sea Lettuce
Garlic	Sorrel
Gooseberries	Soybeans
Grapes	Spinach
Grapefruit	Sprouts
Honey	Squash
Horseradish	Strawberries
Huckleberries	Swiss Chard
Kale	Tangerines
Kohlrabi	Tomatoes
Leek	Turnips
Lemons	Watercress

The lists of foods are taken from *Ranger Berg of Germany* and the book *Foods That Heal*, by Dr. Bernard Jensen.

FRIENDLY BACTERIA

When helpful bacteria are introduced into the gastrointestinal tract will help in the restoration of body balance and health.

The "friendly bacteria" manufacture B vitamins such as biotin, niacin (B3), folic acid and pyridoxine (B6). This then produces lactase and natural antibiotics that kill disease-causing bacteria. They also change the acid/alkaline balance that deprives the harmful bacteria of the nutrients they need to survive. Friendly flora improves the digestive tract functions through the breakdown and absorption of proteins. This helps prevent the reabsorption of toxins.

Friendly flora aids in the assimilation of calcium and hormonal balance, helps relieve food sensitivities, bloating, constipation and diarrhea. They also help fight vaginal yeast infections and *Candida* in the intestinal tract, which aids the immune system. Friendly bacteria help maintain balance during the use of antibiotics, chemotherapy, sulfa drugs and other medications.

The approximate dosage levels for *Candida* control using Natren Healthy Trinity are:

For the first 30 days, take 1/4 to 1/2 teaspoon 1-3 times daily on an empty stomach of MEGA dophilus, TRENEV Bifido Factor and Digesta Lac. Mix with a 1/2 glass of water (unchlorinated) or juice and drink. Digesta Lac taken with your meals will help indigestion problems.

Depending on your specific condition after 30 days, dosage can be reduced to one a day. If an excess of *Candida* is present after 30 days, continue with the program for another 30 or 60 days.

Examination of the waste is the easiest way to determine if excess *Candida* is still present in the colon. The *Candida*'s roots may be attached to the stools, which has a furry like appearance on the outer edges.

When excessive amounts of *Candida* are present, the body will also eliminate it through the tongue, skin pores and mucous membranes during the cleansing process. When these are clean, is an indication you may be free of *Candida*.

The tongue should be cleaned on a daily basis by scraping or brushing with a toothbrush.

Cultured Cabbage Juice

This drink contains lactic acid, sulfur, cysteine and methionine. It will kill pathogens and viruses in the digestive tract, cleanse the intestines and implant the intestines with the friendly bacteria called Lactobacteria.

Fill blender with chopped green cabbage, add pure water until 2/3 full, and blend for 1 minute on high. Make three batches. Placed in a covered (tightly sealed) bowl and let sit for only 48 hours at room temperature. Save 1/2 cup to add to future batches and let sit for only 24 hours. Drink 1/2 cup 2 or 3 times daily. (Not for blood types A or O)

These chlorophyll rich and other foods contain or enhance the growth of friendly bacteria.

Alfalfa	Pickles
Avocados	Raw Sauerkraut
Bananas	Wheat Grass
Kifir	Yogurt
Miso	

Note! Use foods & herbs to your blood type.

HERBS

Herbs are the oldest natural remedies from plants that contain sources of vitamins and minerals. They also have properties in the bark and roots that are bactericidal and fungicidal. Herbs are safe and do not leave any bad residues that produce side effects as those produced from chemical drugs. Avoid any herbs in liquid or extract with alcohol added.

Herbs are most beneficial when the body is cleaned and free of toxins. Herbs are also high in amino acids, enzymes, and other essential compounds that the body needs to maintain health.

Herbs can be used in powder form in capsules, compresses, decoctions in teas, in essential oils, extracts, ointments, poultices applied directly to skin, salves, syrups for coughs or congestion, or as tinctures for external applications. Some herbs should not be used if pregnant.

Some of the herbs that cleanse and detoxify the body are as follows:

Alfalfa is good for all conditions of ill health. It is antifungal, good for colon and digestive disorders, and loaded with nutrients that alkalizes and detoxifies the body.

Barberry helps bile flow from the liver and removes old waste from the digestive tract. Good as an antiseptic, and for high blood pressure and inflammation.

Black Walnut cleanses the body from some forms of parasites, oxygenates the blood, and helps oxidize excessive toxins and fat.

Burdock Root has antibacterial and antifungal properties that purify the blood, and promotes gallbladder, kidney and liver function. It is also used to reduce swelling

around joints from calcification and helps balance hormones in the body.

Cascara Sagrada is one of the best herbs for chronic constipation and stimulates secretions of the gall bladder, liver, pancreas and stomach.

Cayenne increases the power of other herbs, helps digestion when taken with foods, rebuilds tissue in the stomach and intestinal ulcers, and it improves circulation and heart action.

Chaparral is a natural antibiotic, antioxidant, pain killer, has an anti-tumor agent, cleans the blood and liver, and rebuilds and cleans tissue walls in the colon.

Chickweed has antiseptic properties that reduce mucus buildup, purifies the blood of toxins and fat, aids digestion, effective against cancer and inflammation in the digestive tract.

Comfrey is an aid for digestion, promotes cell regeneration, and helps relieve inflammation from bruises, skin conditions, wounds and broken bones.

Dandelion stimulates the liver to detoxify poisons for better liver function, relieves inflammation in the gallbladder or liver, purifies the blood and increases circulation.

Devils Claw cleans deep into muscles and tissue walls to remove toxins, purifies the blood, restores elasticity to vascular walls, and used as an anti-inflammatory for decreasing uric acid.

Echinacea is considered one of the best blood cleansers. Helps fight bacterial and viral infections by increasing the activity of white blood cells, helps maintain tissue structure and promotes healing.

Elder Flower has the ability to detoxify cells of toxins, purifies the blood, increases circulation, and used for constipation and digestive disorders.

Fennel helps move waste material out of the body but depresses the appetite.

Fenugreek softens and dissolves masses of hardened mucus, lubricates the intestines, expels toxic waste through the lymphatic system, and the antiseptic properties kill infections in the lungs. The lecithin contained in fenugreek dissolves cholesterol and it dissolves fat deposits.

Garlic detoxifies and is good for any disease or infection. It effects all body functions by stimulating cell growth and the lymphatic system for the removal of waste, and helps lower cholesterol.

Gentian is used for weakened muscles in the digestive organs by stimulating circulation and aids digestion by increasing gastric secretions, and it's considered to be the best stomach tonic of all herbs. It also stimulates the appetite for those in a weakened condition, helps breakdown protein and fats, and good for parasite infections.

Golden Seal cleanses the body and helps inflammation in the colon. It improves digestion and acts as an antibiotic; is antibacterial and used for infections in the digestive, respiratory and urinary tract, and has anti-inflammatory properties. Do not use during pregnancy.

Irish Moss is very high in nutrients that effect all body functions. It is good for intestinal disorders due to inflammations, it strengthens cell structure, and it purifies fluids in the system.

Licorice Root has an anti-inflammatory effect on the digestive tract, and helps heal stomach inflammations and ulcers. It

cleanses the blood, helps purge the lungs of excess phlegm and works as a laxative.

Lobelia removes obstructions in the body.

Mandrake is used for bile flow, chronic liver disease, constipation, digestion and skin problems. Not recommended during pregnancy.

Myrrh has antiseptic and anti-inflammatory properties on the mucous membranes, kills bacteria in the mouth and used for ulcers. Has a cleansing and healing effect on the stomach and colon.

Oregon Grape Root cleanses the blood and colon, stimulates the liver and thyroid, and increases appetite and aids digestion.

Red Clover purifies the blood and acts as an antibiotic for bacterial infections. Also used for bowel inflammations.

Safflower is used for jaundice, gallbladder problems, removes hard phlegm, clears the lungs, and it helps a sluggish liver to remove the waste.

St. Johnswort helps remove phlegm in the chest and lungs, used for wounds and skin ulcers, purifies the blood; helps with mild pain in the gallbladder, stomach, and intestines, and it's a great nerve sedative.

Yarrow is used to cleanse the blood, heal the glandular system, helps liver function, and for the stomach and colon for toning the mucous membranes. It is also used to stop internal and external bleeding, and it promotes the opening of skin pores for the elimination of waste.

Yellow Dock is one of the best blood builders and used in all diseases of the blood. It is a good laxative for constipation and improves bile flow. Improves colon and liver function.

HYDROGEN PEROXIDE

Hydrogen peroxide (H_2O_2 or liquid oxygen) is a natural by-product of most ozone oxidizing processes. Hydrogen peroxide is another great "natural" alternative for your health.

Hydrogen peroxide is a normal product of aerobic metabolism. It occurs naturally in the environment by action of sunlight. It is also produced by photorespiration; by the oxidative deamination processes; and by photochemical reactions involving humic materials in water, copper, and zinc in surface and ground waters.

H_2O_2 is created during thunder and lighting storms when ozone in the air combines with water molecules. It is also formed by a high voltage discharge through a mixture of hydrogen, oxygen and water vapor.

Hydrogen peroxide, like ozone is also an effective anti-microbial agent in reducing pathogens, viruses, endospores, algae, yeast and fungi. Hydrogen peroxide and ozone work well together, they are like two peas in a pod. It decomposes with a rapid degradation by air and light into water and oxygen.

Hydrogen peroxide has FDA approval as a food additive on foods. Those foods are; milk, whey, eggs, tripe, herring, wine, starch, tea, corn syrup, cheese, wine, vinegar, and emulsifiers. It has insignificant toxicity to humans, has no bad effect on flavor or smell, is noncarcinogenic, is effective in short times at low concentrations, and helps control food spoilage.

Papers published in 1904 on ozone and hydrogen peroxide in *The Journal of American Medical Association*, shows its use in medicine between 1880 and 1900. In these early days of use, Marchand's H_2O_2 (medicinal) was a 4.5 percent

aqueous solution of anhydrous H_2O_2 . Hydrozone was twice the strength at 9 percent. The American Medical Association in 1933, because of the chemical and the pharmaceutical industry suppressed hydrogen peroxide and ozone. This therapy was considered quackery then and this attitude continues today.

Dr. J. Budwig of Germany has shown that for proper cellular utilization of oxygen to take place, our diets must contain adequate amounts of unsaturated fatty acids. The food industry would rather use the synthetic fats and hydrogenated oils that the body cannot digest.

Hydrogen peroxide is produced naturally in the body in different amounts for different functions. H_2O_2 helps the body utilize the oxygen you breathe. It regulates all living cell membranes and regulates hormones. It helps the body produce estrogen, thyroid, regulates blood sugar, and aids in the production of energy. It helps the body regulate certain chemicals necessary to operate the brain and nervous system, and stimulates the enzyme systems throughout the body. It helps regulate the immune system, triggers an increase in the metabolic rate and causes small arteries to dilate. It increases blood flow, and enhances the body's distribution and consumption of oxygen. It kills bacteria, virus, yeast, parasites, and raises body temperature. (*Proceedings of the International Conference on Bio-Oxidative Medicine, 1989, 1990, 1991*).

Vitamin C helps certain cells produce hydrogen peroxide in the human body, which in turn stimulates the production of prostaglandins. This process is part of our natural immune system and is essential to life. Friendly bacteria (lactobacillus) in the body produce hydrogen peroxide. This same process takes place in animals and plants as well.

There are three methods used for administering hydrogen peroxide for detoxification; orally, intravenous and through colonics. These applications are called "Oxidative Therapy." Diseases that have benefited from oxidative therapy are heart disease and cardiovascular disease, pulmonary diseases, infectious diseases, immune diseases; in addition, Cancer, Parkinson's and Alzheimer's.

Oral Treatments

Most prefer a 25-day program using 35% food grade H_2O_2 for cleansing the body. They usually start with 3 drops mixed in an 8-oz. glass of unchlorinated pure water, juice or milk and taken 3 times a day. Dosage is increased by 1 drop per day as they work up to 25 drops 3 times a day. After this program, most people will continue on a daily or weekly program for maintenance, which may last for 1 to 6 months. A small eye dropper bottle can be purchased at most drug stores.

The same anti-oxidant vitamins taken for ozone should be taken for H_2O_2 , especially Vitamin E. For best results take on an empty stomach 1-hour before a meal or 3 hours after each meal. If nausea is felt afterwards, eat a banana or other fruits. If the stomach is still upset cut back 1 or 2 drops for a while and continue. Lecithin taken daily will also help nausea.

Your condition of health will determine if you experience the "healing crisis." Some reactions that may take place during the cleansing are boils on the skin, chest or head cold, diarrhea, ear infections, fatigue, headaches and sleepiness. Keep in mind this is only "temporary" and should only last a few days.

Intravenous Treatments

This is done the same way hospitals do intravenous feeding. A weak solution of H_2O_2 (0.0375%) is added to a sugar or salty water solution and injected into the arm over a period of 1 to 3 hours. The amount of treatments depends on the illness. Some physicians may recommend from 1 to 20 treatments.

Colonics and Douches

Some will add 8 ounces (1/2 pt.) of 3% H_2O_2 to 5 gallons of purified water for cleaning the colon. Start with less and increase as tolerated. For a douche they will add 6 tbs. of 3% to a quart of water or no more than 15 drops of 35%.

Other Uses of Hydrogen Peroxide

Feet: Use 1 1/2 oz. of 35% to 1 gallon of water to soak feet.

For Detoxification: Use 6 oz. of 35% to a tub full of water to start; can be increased up to 16 ounces.

House Plants: Mix 1 ounce of 3% to 1 quart of water for watering and misting plants or 1 teaspoon of 35% to 2 gallons of water.

Laundry: Add 8 ounces of 3% to wash instead of bleach.

Mouthwash and Gargle: Use 3%.

Pets: Mix 1 ounce of 3% to 1 quart of water for dogs or cats drinking water.

Sprouting Seeds: Add 1 ounce of 3% to 1 pint of water and soak seeds overnight.

The formula to make 3% H_2O_2 from 35% is: Add 1 ounce of 35% to 11 ounces of pure water. This makes 12 ounces of 3% hydrogen peroxide. Use 35% with caution. If spilled on skin; wash off immediately. Label all containers of such contents and store in freezer to extend its storage life.

MAGNETIC THERAPY

The first use of magnetic therapy dates back to 2000 BC in Chinese writings. Over the last 155 years, scientists have recorded a decline in the strength of the magnetic field of the earth. The effects of the decline in the magnetic field on human health were realized when early cosmonauts experienced bone-calcium loss and muscle cramps when in space above the earth's magnetic field. When artificial magnetic fields were placed in the space capsule, the astronaut's health increased. Their research proves the body is dependent on magnetic fields and nutrients to maintain health.

Magnetic therapy helps to re-balance the body by improving and strengthening homeostasis, and it energizes all the systems of the body. Every cell and atom of the body is a small magnetic field.

Magnetic therapy works by reforming, reviving and promoting the growth of cells, rejuvenating the tissues of the body, strengthening the decayed and inactive corpuscles and increasing the number of new corpuscles. When magnetic therapy is applied to the human body a magnetic wave passes through the tissues and secondary currents are induced. When these currents clash with magnetic waves they produce influencing heats on the electrons in the body cells that reduce pain and swelling in the muscles. Functions of the autonomic nervous system (the intestines, glands and heart) are normalized and regain their proper function. As the magnetic waves penetrate the skin, fatty tissues, and bones it causes enhanced resistance to disease and invigorates organ functions. Most people report warmth and gentle tingling under the magnets while the chemical processes is taking place within and between cells.

Magnets work on metabolism mainly through the circulation of blood and on red blood cells because it contains hemoglobin and iron. Most of it is present in blood as a component of hemoglobin and a smaller amount remains in muscles, which is called myoglobin. The function of these components is to carry oxygen from the lungs to muscles and other parts. Without iron there would be no energy, and without energy, the heart beat and respiration would stop. **Iron** is very essential for our life because it 'influences' magnetism. The movement of hemoglobin in blood vessels is accelerated while calcium and cholesterol deposits in blood are decreased. The other unwanted debris adhered to the inner side of blood vessels, which provoke high blood pressure is decreased. Blood and lymph circulation are activated; therefore, nutrients and oxygen are more efficiently carried to every cell of the body. This helps in the removal of toxins and poisons for detoxification and better health. By promoting an active metabolism, it provides more energy. The secretion of hormones is promoted, which results in more luster to skin and youthfulness. Most ailments due to the lack of hormone secretion are relieved. This therapy needs a balance of nutritional supplements on a daily basis; otherwise, it may only treat your symptoms.

Magnetic therapy using negative North pole energy has helped with acidity, arthritis, asthma, back pain, bacterial infections, boils, cancer, cervical spondylitis, congestion, constipation, digestion, dizziness, eczema, epileptic seizures, fatigue, fibromyalgia, frequent headaches, injuries, insomnia, kidney stones, low immunity, lower limb pain, nervousness, rashes, respiratory conditions, stiffness of joints and shoulders, strains, swelling, toothache, urinary disorders and wounds.

OXY-MEGA COLON CLEANSER

OXY-MEGA is a colon cleanser oxygen supplement that contains oxygenated magnesium oxides, and citric acid that benefits constipation and intestinal tract health. Timed release ensures OXY-MEGA colon cleanser provides an adequate amount oxygen for better utilization.

OXY-MEGA colon cleanser an excellent alternative product compared to other types of colon cleansers. OXY-MEGA offers its users a number of benefits in an effective manner. It is easy to use and comes in vegetarian capsules and highly effective for constipation relief and non-habit forming.

Stabilized oxygen is a non-technical term referring to a compound containing oxygen atoms, which are stabilized with buffers so that the product can be bottled without the oxygen being released before it is needed. The result is a stable environment of oxygen, which can be taken as a dietary supplement.

When OXY-MEGA is in an acidic environment, it begins to slowly release nascent or mono-atomic oxygen in a singlet form. Nascent oxygen is naturally produced by mother nature in fresh fruits and vegetables, animal and human cells. The release of oxygen continues throughout the digestive system. The magnesium oxide acts as a vehicle to transport it throughout the system.

The by-products of OXY-MEGA colon cleanser dietary oxygen supplement are magnesium oxides and nascent oxygen. In its oxide type, very little magnesium oxide is assimilated. It passes through the intestinal tract, kidneys and bladder, helping to cleanse by delivering oxygen along the way. Therefore, it is the perfect vehicle for transporting.

The laxative effect of OXY-MEGA colon cleanser helps loosen intestinal tract build up which aids in the release of unwanted waste materials and toxic substances that may be present during constipation. A build up of intestinal tract waste may cause an over growth of anaerobic bacteria and parasites, which thrive in such an environment.

The slow release of mono-atomic oxygen creates an inhospitable environment for anaerobic bacteria, parasites, pathogens, yeast infection and other toxic matter sitting dormant in the intestinal tract. OXY-MEGA does not affect the friendly bacteria which are needed for proper digestive and intestinal tract health.

Other benefits include better absorption of nutrients from food and supplements, healthy environment for digestive enzymes to thrive, better results from weight loss products or other cleansing programs. Over time you can expect the same benefits from colon irrigation cleansing.

OXY-MEGA colon cleanser dietary oxygen supplement is formulated to release safe and beneficial amounts over 12 or more hours. Some of the competitors products claim to release oxygen, but fail in comparison. OXY-MEGA colon cleanser oxygen supplement comes in vegetarian capsules and highly effective.

OXY-MEGA colon cleanser was formulated with these concerns in mind. It contains a moderate level of oxygen. When taken as directed, each capsule will release about nascent oxygen over a 12 hour period. More information at <http://www.oxymega.com>

OZONATED OLIVE OIL

Olive oil has been used for centuries to restore a youthful suppleness to the skin. Its use started here in 1904, and sold in pharmacies for years. When ozone is bubbled through extra virgin olive oil, the oil thickens into a gel or paste after refrigeration. Freezing holds the ozone in suspension for longer periods. The gel has many therapeutic uses.

Ozonated olive oil is an effective treatment for inflammation of the skin, such as dermatitis and seborrhea. It's helpful for bed sores, bacterial infections of the skin including carbuncles, cellulitis, erysipelas, erythasma, folliculitis, furuncles, gingivitis, granuloma annulare, impetigo, paronychia, ringworm, skin yeast, staphylococcus, sweat gland infections and tinea versicolor. It is also used as a beauty aid for wrinkles and for treatment of sunburn.

When the gel is used for lymphatic massage, it enters the tissue and oxidizes lactic acid and toxins. This has been proven an effective treatment for multiple sclerosis and many skin problems. It has also been used as a topical application for dry skin, eczema, psoriasis, seborrhea, athlete's foot, insect bites, skin ulcers, cuts and scrapes, diaper rash and for treatment of wounds to prevent infection. The olive oil gel can also be applied to animals with the same problems we deal with. It can be applied directly to cuts or fed to them.

The Cubans use sunflower oil in place of olive oil with the same benefits. The smaller ozone generators can be used for ozonating your own olive oil. This process takes about two weeks of continually bubbling the ozone in the oil until it is fully saturated.

POLLEN FROM BEES

Pollen is the male seed of a flower blossom that is needed for its fertilization. One pollen granule contains from one hundred thousand to five million-pollen spores. Bees select and collect only those pollens that contain the greatest amounts of protein and other nutrients. The pollen is then mixed with the bees digestive enzymes, nectar, and stored on its back legs before being taken back to the hive. The bees use this pollen for their food source.

When compared to other foods, pollen contains a higher percentage of all necessary nutrients, it also contains more protein per ounce than any other natural food. Pollen contains at least 18 amino acids, more than a dozen vitamins, 28 minerals, 11 enzymes and co-enzymes, 14 fatty acids, 11 carbohydrates and some elements unknown to mankind. Many say that Bee Pollen is the world's only perfect food. The nutrients or proportions in pollen, propolis and royal jelly will vary from the different areas and sources.

Bee pollen is used to retard hardening of the arteries and strengthen the circulatory system. It is used to combat the symptoms of illness and allergies. It's believed to reduce stress. Pollen helps regulate the function of the endocrine system, and heals wounds and acne. It aids in the digestion of foods and helps women's menstrual cramps. Pollen promotes youthfulness and longevity by its ability to regenerate human cells.

Pollen is easily digested, absorbed, and known to increase stamina and energy levels. Start by taking a few tiny crumbs and work up to a teaspoon a day if taking for allergies.

PROPOLIS

Worker bees stop gathering nectar and pollen in the last part of their lives and gather tree sap from birch, horse chestnut and poplar trees. The sap is mixed with the bees' secretions and used to coat the inside of the hive. Propolis is considered a very effective antibiotic, keeps the beehive free from infections, and protects it from intruders. The antibacterial agents in propolis are caffeic acid, ferulic acid and galangin.

Propolis is also antifungal, analgesic, antiviral, and it contains antioxidizing properties. It combats disease, stimulates the human immune system, is effective against circulatory problems, high blood pressure, used to fight sinus, bronchial ailments and gastrointestinal problems.

It has also been used for abrasions, acne, arthritis, bad breath, bruises, burns, chapping, colds, congestion, corns, fever, gastritis, genital infections, gingivitis, gout, intestinal infections, oral infections, sore throat, ulcerations, urinary tract infections, warts and wounds.

Propolis is a rich source of antibiotics and contains approximately twenty flavonoids. Flavonoids will decrease inflammation, reinforces the effectiveness of vitamin C and helps capillaries.

Propolis is made up of approximately 55% resinous compounds and balsams, 30% beeswax, 10% ethereal and aromatic oils, and 5% bee pollen. Other components are cinnamic acid, cinnamyl alcohol, chrysin, isalpinin, pinocembrin, tectochrysin and vanillin.

Propolis is one of the most natural antibiotics we have available that are natural.

ROYAL JELLY

Royal Jelly is the Queen bees' food source that is secreted in the hypopharyngeal glands of nurse bees. It is a thick, nutritious, milky white liquid. Queen bees would fail to develop properly without this special food that makes their life span forty times longer than the worker bee.

Royal jelly contains a compound that is effective against most bacteria, fungal infections and reinforces the human immune system. It is reported to increase stamina and general well being, it increases sexual activity in the elderly, and it increases cellular oxygenation up to 38 percent. The anti-aging properties of royal jelly (collagen) improve skin and youthfulness.

It has also been used for anxiety, arthritis, arteriosclerosis, bad circulation, cancer tumors, depression, eczema, eyesight, gastroduodenal ulcer, hair loss, impetigo, malnutrition, memory loss, nervousness, senility, sleeplessness, shock and other disorders.

The various substances in royal jelly help regulate all functions of the body. The body can not restore its natural balance if it is not functioning properly.

Royal jelly is an excellent source of nutrients. It contains 20 amino acids, including carbohydrates, fatty acids, hormones, trace amounts of minerals, vitamins (A, B Complex, B1, B2, B6, B12, C, D and E) and protein like substances.

Other components found in royal jelly are acetylcholine, phosphorus compounds, sterols, DNA (deoxyribonucleic acid), RNA (ribonucleic acid) and gelatin.

Information sources from GloryBee and the book *How To Live The Millennium*, by Royden Brown.

TROPICAL SUNRISE SUPPLEMENT

Tropical Sunrise provides at the cellular level most all the essential vitamins, minerals, trace minerals, amino acids, and enzymes that your body needs to perform more efficiently in a natural liquid form. This exclusive product is affordable and complete in every way. It is simple and it tastes great. According to the Physicians Desk Reference, nutrients taken in a pill form are only 10% absorbed by the body, and due to their synthetic content, less than this is absorbed into the cells.

The human body understands whole food plants, computes with Mother Nature, and it needs wide ratios of all nutrients such as minerals, vitamins, amino acids, enzymes, antioxidants, and so much more that these plants extract from the earth. Tropical Sunrise makes perfect sense! Your bodies are like your computer. Tropical Sunrise feeds and computes with your cells!

Natural plant derived vitamins and minerals carry negative bio electrical charges while the inorganic minerals carry the positive charge. Normally the intestinal walls are positive charged and will attract negative charged minerals for absorption. The inorganic types with positive charges will be repelled and prevented from absorption.

Tropical Sunrise exotic liquid vitamin mineral multi dietary supplement is much different than other liquid multi supplements. Tropical Sunrise contains our Doctor formulated proprietary mixture of almost everything needed in our daily diet. The supplement facts shows those nutrients added to the other ingredients. The exotic fruits and herbal extracts will each have their own properties and various amounts of amino acids, antioxidants, enzymes, fatty acids, flavonoids, minerals, phytochemicals, vitamins, and many

compounds without names. All of which is not listed on the bottle label.

The exotic fruits and herbal extract blend in Tropical Sunrise consists of Acai Berry, Aloe Vera Gel, Astaxanthin, Astragalus Root, Bilberry, Cats Claw, Eleuthero Root, Garcinia Cambogia, Ginko Biloba, Gou Quii Zi, Green Tea, Jujube Fruit, Licorice Root, Lycium Berry, Maca Root, Mangosteen, Noni, Nopal, Panax Ginseng, Pau dArco, South African Hoodia, and Suma Root.

These special botanical plants and herbs were chosen for their wide ranges of properties and healing actions, nutritional content, and phytochemical nutrients. To retain the nutrients in these incredible plants, they extract these herbs using a new eco-friendly process that preserves the valuable plant ingredients perfectly. They do not use alcohol, solvents, or boiling in the extraction processes.

Amino acids are the building blocks of protein and are essential to life and health. A balance of amino acids will build up the immune system and regenerate the digestive system. Any imbalance can create problems. Amino acids build and maintain all body tissues; help form antibodies to fight infections, are an important part of enzymes, help produce hormones and body fluids, and they give you energy. Amino acids are the life giving components of protein.

Amino Acids are very important in the rejuvenation of every cell in humans. Tropical Sunrise derives many Amino Acids from its other ingredients, but we have also added our custom mix of other amino acids that our body needs: Alanine, Aspartic Acid, Arginine, Carnitine, Glutamine, Glutathione, Leucine, Lysine, Methionine, N-Acetyl Cysteine, Ornithine, Taurine, Phenylalanine, and Tyrosine.

The proprietary and naturally occurring plant derived trace mineral complex includes fulvic acid, Aluminum, Antimony, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Carbon, Cerium, Cesium, Chloride, Chromium, Cobalt, Copper, Dysprosium, Erbium, Europium, Gadolinium, Germanium, Gold, Gallium, Hafnium, Holmium, Indium, Iodine, Iridium, Iron, Lanthanum, Lithium, Lutetium, Magnesium, Manganese, Molybdenum, Neodymium, Nickel, Niobium, Palladium, Phosphorus, Platinum, Potassium, Praseodymium, Rhenium, Rhodium, Rubidium, Ruthenium, Samarium, Selenium, Scandium, Silicon, Silver, Sulfur, Strontium, Tantalum, Tellurium, Terbium, Thallium, Thorium, Thulium, Tin, Titanium, Tungsten, Vanadium, Yttrium, Ytterbium, Zirconium, and Zinc as well as Phyto-Ionic Silver.

The phytochemical flavonoids called hesperidin is mainly found in citrus fruits such as lemons and oranges. The highest concentration of hesperidin can be found in the white parts and pulps of the citrus peels. Hesperidin can also be found in green vegetables and has antioxidant, anti-inflammatory, hypolipidemic, vasoprotective, anticarcinogenic and cholesterol lowering actions. Hesperidin can also inhibit the following enzymes: phospholipase A2, lipoxygenase, HMG-CoA reductase and cyclo-oxygenase.

Hesperidin improves the health of capillaries by reducing the capillary permeability.

Hesperidin is used to reduce hay fever and other allergic conditions by inhibiting the release of histamine from mast cells. The possible anti-cancer activity of hesperidin could be explained by the inhibition of polyamine synthesis.

Some of the other ingredients included are Coenzyme Q10 and Stevia. Coenzyme Q10 is essential for the health of cells, tissues, and organs, and acts as the

catalyst for countless chemical reactions in the human body. It also helps weight loss, cell respiration, electron transfer, ATP production, control of oxidation reactions, plays key roles in treatment of cardiovascular illnesses, including congestive heart failure.

The ingredients in Tropical Sunrise are mixed in the exotic natural juice concentrates of pineapple, orange, tangerine, cranberry and lime juices. This mix of several natural juice concentrates was custom prepared to give Tropical Sunrise its exotic taste.

Botanical plants, herbs, fruits and vegetables are classified from their chemical and nutrient contents into the actions and uses in the human body. Some of the botanical plants used in Tropical Sunrise will have the following actions: Adaptogen, Alterative, Analgesic/Anodyne, Antibacterial, Anticarcinogenic, Anti-fungal, Anti-inflammatory, Anti-microbial, Anti-neoplastic, Antioxidant, Anti-rheumatic, Antiseptic, Antiviral Aphrodisiac, Astringent, Bitter, Cardiac Tonic, Deep Immune Activator, Demulcent, Depurative, Diuretic, Expectorant, Febrifuge, Hepatic, Hypotensive, Laxative, Nervine, Nutritive, Pectoral, Sedative, Tonic, and Vasodilator.

The extracts and concentrate blends used in Tropical Sunrise make it absolutely superior to anything available today. This is more than just an amino vitamin blend. More than anything any Multi Level Marketing is selling. The competition does not have 5 percent of what we are offering in this new exotic blend.

For additional product information and online orders, visit

www.appliedozone.com/tropical_sunrise_order.html

VITAMIN MINERAL SUPPLEMENTS

For years, many have recognized the value of vitamins and other nutrients for the prevention and treatment of disease. Vitamins are specific compounds that are essential to life, normal body chemistry and health.

Vitamins and minerals were the most important medical discovery made in history. Some disease that was originally thought to be caused by bacteria, fungi and other substances, but discovered later it was caused by a deficiency in vitamins. However, the medical establishment has not considered vitamins as a preventive or cure for disease.

Linus Pauling was awarded his first Nobel Prize for his research into the structure of molecules and how they interact with other molecules. He showed through his experiments that megadoses of Vitamin C, a thousand times higher than the RDA, played an important role in the prevention in everything from the common cold to cancer.

The American Psychiatric Association tried to suppress the publication of any information about the value of high dose vitamins for schizophrenia. The false beliefs and toxicity of natural vitamins were invented through greed and ignorance by the medical profession.

At one time in California it was considered malpractice to even advise patients to take Vitamin C for cancer or to tell patients that vitamins were therapeutic. Many will lead you to believe that natural vitamins above the RDA doses are dangerous. However, the synthetic types are dangerous and harmful to all normal body functions.

The synthetic types of vitamins have been formed in a laboratory by reconstructing the vitamin molecule with manufactured

chemicals. In other words, synthetics are counterfeit versions which man tries to duplicate or copy structural components that nature has already created. Ascorbic acid is an isolated fraction of the vitamin C complex and does not exist in nature. It lacks the other basic components that are vital in making it complete. This fake version is used extensively by most manufactures even in the so-called natural vitamins. Synthetic vitamins may be less expensive but the body does not know how to use them because they are foreign and harmful without any nutritional elements.

Most synthetic vitamins that are coated in pill form are not completely digestible and a waste of your hard earned money. The coatings used may be shellac or paint like substances from coal tar (toluene) are not biodegradable. Other vitamins may be treated with solvents like ether that is derived from alcohol and sulphuric acid. Others may be treated with benzene.

A Finnish report printed in the New England Journal of Medicine stated that smokers who ingested normal doses of synthetic vitamin E and beta-carotene had a higher incidence of lung cancer and heart attacks. Others suggest large doses of the so-called vitamin C from the synthetic version "ascorbic acid" causes collagen disease, kidney stones, impairs mineral metabolism, scurvy and causes damage to genes. In another study, ascorbic acid was said to cause harmful ferrous iron to be stored in the body, which lead to damage in the heart and other organs. Mega-doses of synthetic zinc results in further deficiencies of zinc. Test subjects who took synthetic products with calcium ended up with extra deposits here and there with diseased kidneys.

Anything, which is synthetic, will each have their own effect once introduced into the body! The difference between real natural and synthetic vitamins is like day and night. Natural is good, synthetics are bad.

There is just no comparison at all between the two. If chemists would take the real components of nature, they may be able to recreate the real thing but why bother when the real thing is already provided.

One of the major contributors to health problems is poor nutrition. Processed and highly refined foods are lacking in the essential nutrients needed for a healthy immune system. It is important to eat a varied diet of fresh foods to achieve a **balance** of vitamins and other nutrients the body needs. For optimum health, the cells need the proper nourishment to thrive. There are over 10 trillion cells in the body and each cell has a specific purpose. When they are deprived of the essentials they will starve and eventually die. The complexity of actions and interactions the body goes through to sustain life is almost beyond comprehension. To sustain life, the cells need all of which nature has to offer in nutrients.

Supplements are a necessity for maintaining optimum health. Very few people receive the nutrients needed when eating a balanced diet because most foods are lacking in certain nutrients through soil depletion. The remaining nutrients are lost due to processing and over cooking. Reports show that not a single person consumes 100% of the 10 most essential nutrients through their diet. However, we are receiving an over abundance of synthetic vitamins added to all our foods by the processors, which causes everyone to be extremely undernourished. Equally important are the enzymes contained in foods that are lost during cooking and processing. Enzymes are needed for digestion without them both vitamins and minerals cannot function properly. If your diet consist mainly of cooked and processed foods, the reserves will eventually run out and your faced with even larger threats against your health.

As time passes, more of us may become undernourished by taking natural vitamins derived from genetically altered foods. The field of biogenetics is growing rapidly. Many of the items you purchase from the supermarket like breakfast cereals, cheese, corn, crackers, sodas, soy and other products (over 50) are now derived from genetically altered grain crops. They are also used as sweeteners (corn fructose), and oils for cooking, baking and frying.

The undernourished individual is less likely to detoxify and eliminate the various toxins in the intestines and the rest of the body without the proper nutrition.

Many of the toxins the liver deals with originate in the gastrointestinal tract. The bodies' ability to rid itself of these toxins is dependent upon proper function of the liver and enzymes for excreting the toxins.

The detoxification and healing process improves by taking the right balance of nutrients.

For some, it may be necessary to take higher than the Recommended Daily Allowance. Vitamins, even in large doses are safe; especially when they derived from organic plant life in a liquid form. If you are currently and continue taking the synthetic supplements, you will not show any improvement because they are toxic and this will hinder your efforts for detoxification.

Your daily vitamin and mineral supplement should be 100% pure and natural of high quality and perfectly balanced with all of what nature provides. It should be completely digestible in order to receive all the benefits. If it's not absorbable and utilized at the cellular level, it's useless!

Some Functions of Vitamins

All of the essential vitamins must be present in your daily diet to sustain the basic life cycle. Each vitamin is activated by other vitamins or minerals and each has their own specific function in the body.

Vitamin A is a potent antioxidant, is needed for the digestive system, eyes, skin, tissue repair, maintenance and the immune system. Active with choline, C, D, E, F, Zinc and B complex. Deficiency signs include allergies, dry skin and hair, fatigue, infections and migraines.

Beta-Carotene is an important antioxidant and may help to prevent cancer.

Vitamin B1 (Thiamine) helps digestion, nerve function, fat, carbohydrate and protein metabolism and circulation. Most active with folic acid, B₅, C and B complex. Deficiency signs include depression, digestive disorders, fatigue, irritability and nervousness.

Vitamin B2 (Riboflavin) helps growth and development, cell oxygenation and formation, fat, carbohydrate and protein metabolism, and immune system functions. Most active with B₆, C, B complex and niacin. Deficiency signs include baldness, indigestion, skin disorders, and growth and vision problems.

Vitamin B3 (Niacin) aids in the function of glucose from fats and protein, circulation, digestion, and energy metabolism. Most active with B complex and C. Deficiency signs include bad breath, fatigue, headaches, high blood pressure, nervousness and poor circulation.

Vitamin B5 (Pantothenic acid) is an antioxidant; essential for cell metabolism, energy, nervous system, and for the formation of antibodies. Most active with B Complex and C. Deficiency signs include

aging, allergies, arthritis, digestive disorders, graying of hair, hypoglycemia, irritability, loss of hair, and stress.

Vitamin B6 (Pyridoxine) is important to the immune system, cells, brain, digestion and for the metabolism of amino acids. Most active with B complex, C and potassium. Deficiency signs include clogging of arteries, depression, hypoglycemia, insomnia, irritability, stress and weight problems.

Vitamin B12 (Cobalamin) helps blood cell formation, nervous system and digestion. Active with B complex, C, calcium and potassium. Deficiency signs include appetite loss, fatigue; stress.

Vitamin B15 (Pangamic Acid) promotes oxidation and cell respiration, and stimulates glucose oxidation. It promotes protein metabolism, regulates fat and sugar metabolism, and stimulates the glandular and nervous system.

Vitamin B17 (Laetrile) helps regulate blood pressure and may control or prevent cancer.

Biotin is needed for the production of prostaglandins, and the synthesis of essential fatty acids. Most active with B complex and C.

Choline (Phosphatidyl) is needed for proper function of the liver, gall bladder and kidney. Active with B complex.

Folic Acid is for the formation of blood cells, hemoglobin, hydrochloric acid and collagen. Most active with B complex and B₁₂.

Inositol is needed for proper function of the liver, kidney and energy metabolism. Most active with B complex, C and phosphorous.

PABA (Para-aminobenzoic Acid) is for blood cell formation and metabolism of protein. Most active with A, C, D, E and phosphorous.

Vitamin C is the primary antioxidant, is essential for the production of collagen/elastin, formation of red blood cells, is needed for proper immune system function, and for the metabolism of other vitamins and minerals. Most active with all nutrients. Deficiency signs include aging disorders, allergies, blood and skin disorders, bruising and infections.

Vitamin D is essential for the metabolism of calcium and phosphorus, maintaining a stable nervous system, normal heart and blood function. The ultraviolet rays of the sun changes cholesterol found in the skin into vitamin D. Most active with A, C, F, calcium, choline and phosphorous. Deficiency signs include arthritis, muscle weakness, nervousness soft bones and teeth.

Vitamin E is the body's' best antioxidant. It protects and stimulates the immune system, prevents heart disease and blood clots. It also helps in counteracting premature aging of the skin, the healing of burned tissue, prevents scar tissue, dry skin, skin ulcers and abrasions. Most active with A, C, F, B complex, manganese and selenium. Deficiency signs may include atherosclerosis, cholesterolemia, heart disease and stroke.

Vitamin F consists of unsaturated fatty acids. It is important for respiration of vital organs and for the transportation of oxygen throughout the body; helps to breakup cholesterol on arterial walls. Most active with A, C, D, E and phosphorous.

Phytochemical's total in the millions and are found in most common foods. These plant chemicals exhibit properties that differ from vitamins and minerals. Research is showing that phytochemicals

have a positive effect on health by preventing the formation of carcinogens from other precursor substances, and acting as a blocking or suppressing agent that inhibits cancer. They possess the qualities of being anti-carcinogen, anti-inflammatory, anti-tussive and with anti-allergenic activities.

The major phytochemicals in foods are phenolic acids, flavones, flavonoids, coumarins, terpenes and polyphenols.

Some of the medicinal benefits of phytochemicals are:

Flavonoids are called vitamin P because of their ability to reduce vascular permeability (scurvy). They account for more than 4,000 types of compounds and referred to as "nature's biological response modifiers". They are found in fruit, grapes, oats, soybeans, green tea and vegetables and responsible for the colors of some. They prevent the attachment of hormones to cell structures, combat oxidation of cholesterol and prevents formation of blood clots.

Isothiocyanates are found in vegetables like cabbage and broccoli that protect against cancer through effects on enzymes that suppress cellular DNA damage.

Allyl sulfides found in garlic and onions, increases enzymes that aid in the elimination of carcinogens.

Polyphenols are found in teas that act as antioxidants, which protect against cancer and found to reduce tumors.

Saponins and isoflavones found in soybeans and legumes inhibit the multiplication of cancer cells.

Sulforaphane is found in broccoli and cauliflower. It helps enzymes get rid of carcinogens in cells and detoxifies liver cells.

MINERALS

To sustain good health and a strong immune system there are over ninety nutrients the body needs daily.

60 Minerals

16 Vitamins

12 Essential Amino Acids

3 Essential Fatty Acids

Minerals are responsible for triggering or helping to activate thousands of enzyme systems in the body. Acting as a catalyst for enzymes and other substances makes them necessary for life and well being. Minerals are needed for body fluids, the formation of blood and bone, energy, growth, healing, muscle tone and nerve function. Deficiencies of minerals can effect white blood cells, which in turn effect the immune system and result in digestive problems.

There is a harmony between vitamins and minerals, one cannot do without the other. Both have to be in **balance** with each other. Minerals are important in the function and effectiveness of specific vitamins and other nutrients. When there is a deficiency of one mineral, it causes an imbalance of other minerals that leads to illness.

Today's foods are deficient in many of the essential minerals the body needs to stay healthy, especially in processed foods. The lack of minerals in the soil equals a lack in the foods you consume. Optimum health cannot be achieved unless these minerals are added as supplements to your diet. The growers because of the higher expense do not always replace minerals that plants take out of the soil.

To assure proper nutrition in your diet use plant derived minerals. This type absorbs into the body better than the metallic type. Metallic minerals are not absorbable.

Colloidal or trace minerals are ninety-eight percent absorbable. All colloidal minerals derived from plants are beneficial and non-toxic in reasonable doses.

Sodas or soft drinks deplete minerals and cause sugar cravings that interfere with amino acids. Unfermented soy foods act as mineral blockers in the body.

Some Minerals and Their Functions

Boron is needed for bones, helps build muscles and is needed for the metabolism of calcium, magnesium, and phosphorus. The maximum amount of boron on a daily basis should be between 1-6 milligrams.

Calcium helps bone and tooth formation, blood clotting, nervous system, heart rhythm, muscle function, and cellular metabolism. Some health disorders that may respond to are: bone loss, certain cancers, fatigue, menstrual cramps, osteoarthritis, osteoporosis and heart disease. Most active with A, C, D, F, iron, magnesium and phosphorous. Signs of a deficiency include bone and tooth disease, insomnia, nerve problems, sore muscles and palpitations.

Chlorine helps in the digestion of proteins, used to detox the liver and helps acid-alkaline balance. Excessive amounts destroy vitamin E and friendly flora.

Chromium helps with carbohydrate metabolism, metabolism of fatty acids and cholesterol and protein synthesis. Chromium helps diabetes, heart disease and hypoglycemia. Signs of a deficiency may include atherosclerosis, fatigue and sugar metabolism disorders.

Copper helps in the formation of bone and red blood cells, carries oxygen throughout the body, skin, the immune system, nervous system and synthesis of RNA. Copper helps anemia and rheumatoid arthritis in some people. Most active with

cobalt, iron and zinc. Signs of a deficiency may include skin, respiratory problems or pernicious anemia.

Germanium improves oxygenation of tissue cells and restores immune-boosting cells. It may help prevent cancer, relieve pain, combats Candida, viral infections, reduce circulatory and mental symptoms, and allergies.

Iodine helps the growth and repair of all tissue, oxidizes fat, protein synthesis, purifies the blood, metabolism of cholesterol, thyroid function and therefore energy metabolism. Iodine also helps fatigue, goiter and hypothyroidism. Signs of a deficiency may include goiter and thyroid problems.

Iron helps the immune system, formation of hemoglobin, carries oxygen in the blood, energy production, growth, protein metabolism, thyroid function and verbal fluency. Iron may help attention and cognitive defects, blood loss, iron deficiency anemia and recurring infections. Most active with C, B complex, calcium and copper. Signs of a deficiency may include anemia, brittle nails, fatigue and pale skin.

Magnesium helps bone formation, amino acid and carbohydrates' metabolism, calcium and vitamin metabolism, bone formation, maintains pH balance of the blood and tissue, regulates blood pressure, muscle function, and enhances essential fatty acid metabolism to prostaglandins. Some health disorders that may respond to are alcoholism, diarrhea, kidney stones, excess perspiration, fatigue, stress, preeclampsia, PMS, hypertension, hyperactivity and hypercholesterolemia. Most active with C, D, B₆, calcium, phosphorous and proteins. Signs of a deficiency may include calcium deposits, irritability, muscle weakness pain, nervous and heart disease.

Manganese helps in the metabolism of biotin, vitamin C, carbohydrates, fats, proteins and cholesterol, bone formation, blood formation, and nervous system. Some health disorders that may respond to are chronic inflammatory conditions associated with excess free radicals, fatigue, diabetes, depressed thyroid and injured muscles. Most active with B₁, E, calcium and phosphorous. Signs of a deficiency may include dizziness, glandular dysfunction and poor muscle coordination.

Molybdenum acts in the oxidation of fats, nitrogen metabolism and promotes normal cell function. A deficiency may include impotence in males. The maximum amount of molybdenum on a daily basis should be under 15 milligrams.

Phosphorus helps bone and tooth formation, energy, muscle function, metabolism of calcium, carbohydrates, fats, proteins, vitamins and nervous system. Some health disorders that may respond are arthritis, gum and tooth disorders, stress and physical endurance. Most active with A, D, F, calcium, iron and proteins. Signs of a deficiency may include fatigue, nervous system disorders and weakness.

Potassium helps regulate sodium and water balance in the body, nervous system, muscle function, amino acid metabolism, heart rhythm, and makes muscles and vital organs more alkaline. Some health disorders that may respond to are alcoholism, allergies, burns, diarrhea, fatigue, hypertension, muscle weakness and stress. Active with B and sodium. Deficiencies may include high blood pressure, heart and kidney problems, insomnia and muscle weakness.

Selenium helps protect cells from damage caused by free radicals and is essential for normal growth and fertility. Some health disorders that may respond are cancer, cataracts, heart disease, degenerative

diseases, toxicity from pollution and wound healing. Works best with vitamin E. Signs of a deficiency in vitamin E may include arteriosclerosis, male sexual dysfunction and premature aging.

Silicon helps in the formation of bones, teeth, nails, cartilage, connective tissue and helps prevent cardiovascular disease. Silicon helps neutralize over-acidity for pH balance because it helps in the absorption of calcium. Most active with boron, calcium, magnesium, manganese and potassium. Signs of a deficiency may include early aging and retarded growth.

Sodium regulates water balance in the body and the transfer of material through cell membranes, digestion, muscle function, and nerve coordination. Sodium helps neutralize over-acidity in the body for pH balance. Most active with cobalt, iron and zinc. Deficiencies may include respiratory or skin problems, retarded growth and pernicious anemia.

Sulfur is present in every cell of the body and part of some amino acids. It is essential for health and maintenance of the hair, nails and skin, and essential for oxidation reactions. Sulfur helps regulate carbohydrate metabolism, used to build cells in tissue respiration, helps to maintain body balance, stimulates bile flow and slows the aging process.

Zinc helps in the production of digestive enzymes, production of insulin, regulates blood pressure, immune function, cavity prevention; the metabolism of B vitamins, EFAs and prostaglandins. Zinc may help alcoholism, the common cold, diabetes, hyperactivity, hypertension, inflammatory bowel disease, infertility, premenstrual syndrome, prostate problems and wound healing. Used with vitamin B-6 and magnesium it produces gamma linoleic acid. Most active with A, calcium, copper and phosphorus. Other signs of a deficiency may include fatigue and senility.

The maximum amount of zinc on a daily basis should be less than 100 milligrams.

Vanadium inhibits cholesterol formation in blood vessels, bones, teeth and cell metabolism. Signs of a deficiency may include cardiovascular and kidney disease.

Mineral Salts For Cells

The human body also depends on the necessary balance of organic cell salts (minerals) for the structure and function of the whole body.

Calcium Fluoride is a component of the connective tissues that run through all muscles, supports the blood vessels' walls, and form parts of the skin. It is also found in bones and tooth enamel. A deficiency may result in flabby skin, bone weakness, varicose veins and loss of tooth enamel.

Calcium Phosphate is part of the body fluids, bones, blood corpuscles, connective tissues, the production of new blood cells, gastric juices, and teeth. Bones consist of 57% of calcium phosphate and act as cement in bone structure.

Calcium Sulphate is found in the cells of the liver, skin, blood, and all connective tissue.

Iron Phosphate plays an important role in every cell of the body. It is an essential part of hemoglobin and carries oxygen to all cells. Being a component in tissue, it helps release energy from digested food.

Magnesium Phosphate is a component in blood, bone, brain, muscle, nerve, and tooth cells. It works primarily with nerve fibers of nerves and muscles. A deficiency or imbalance results in cramps and spasms.

Potassium Chloride and hydrogen form hydrochloric acid in the body. Potassium

chloride is found in every tissue except bones.

Potassium Sulphate is a component of skin cells and the cells that form the mucosa lining of all other organs. It helps carry oxygen to tissue and helps activate the destruction of old cells.

Silica is found in bile, blood, hair, nails and skin. It is also a component of connective tissue, bone, nerve sheaths, mucous membranes, and found in brain and spinal cord tissue.

Sodium Chloride is a component in every liquid and solid part of the body. All the other mineral components are dependent on sodium chloride for the process of distribution and absorption. An imbalance causes an imbalance of water that is needed for normal cellular function.

Sodium Phosphate helps keep uric acid soluble in the blood for elimination instead of being deposited in body tissue. When there is an excess of acid in the system, it helps to separate lactic acid into carbonic acid and water. Sodium phosphate is found in the blood, brain, muscles and nerve cells.

Sodium Sulphate and sodium chloride promote the balance in absorption and elimination of water that is necessary for the continuation of life. Sodium sulphates main function is to regulate the quantity of water and eliminate any excess in the tissues, blood and body fluids.

Some feel that ordinary inorganic table salt (sodium chloride) is detrimental and should not be consumed. The regular table salt you buy today is iodized and lacks the iodine that is present in natural mined salt. Iodine is the most essential element for the thyroid gland.

A product called Pure Inland Sea Water, by Trace Minerals is naturally concentrated from seawater and it contains more minerals than you can imagine.

Why use regular table salt when "balance" is so essential.

Electrolytes

Electrolytes play an important role in body processes. They are required by cells to regulate the electric charge and flow of water across the cell membranes.

Some of these compounds when dissolved in water are ionized and carry an electric charge. When the molecules dissociate or split into there constitute ions (electrically charged particles) they are called electrolytes.

The compounds that are negative charged like bicarbonate, chloride and phosphate are present with positive particles like calcium, magnesium, potassium, or sodium completes the circuit. When cells are bathed in alcohol, synthetic chemicals, or sugar (a nonelectrolyte substance) this process will not take place. The compounds in amino acids also serve as electrolytes. The consumption of water is essential so the flow of electrons can continue and keep your battery charged.

Rock salt contains the basic elements (electrolytes) that the body uses more efficiently.

Ozone is produced from lightning during storms through positive and negative ions. Is it not possible through this process that ozone is produced in our cells as well?

WATER AND YOUR HEALTH

Pure unchlorinated water helps nearly every part of the body to function properly. Water is one of the most important nutrients for your diet and detoxification. It is a vital part of your bodies' chemistry. Water is one of our main substances or elements used for sustaining life and most of us take it for granted. Understanding the importance of body water can lead you to a fountain of health.

The Role of Water in the Body

The human brain is 75% water, moderate dehydration can cause headaches and dizziness.

- Blood is 92% water.
- Bones are 22% water.
- Muscles are 75% water.
- Water is required for expiration.
- Regulate body temperature.
- Carries nutrients and oxygen to all cells.
- Helps your body to absorb nutrients.
- Helps in the digestive process.
- Moistens oxygen for breathing.
- Helps convert food into energy.
- Protect and cushions vital organs.
- Helps to cushion joints.
- Helps remove waste products.
- Helps flush away excess fat during weight loss.

"Pure Water" is important in flushing toxins and waste products from the body during the detoxification process. In the cleansing or healing crisis, water will help

flush out the toxins faster to avoid being absorbed again through the intestines.

Water dehydration in the human body can lead to a host of ailments like allergies, asthma, migraine headaches and hypertension. The most common cause of constipation is not enough water.

The blood sends nutrients to the muscles and carries away waste products, such as carbon dioxide and lactic acid. When the body has insufficient water reserves, the blood is hindered from its function. Blood is thicker when it's lacking in water and the heart has to work harder. Water will increase the efficiency of the cardiovascular system.

A lack of water in the kidneys will overload the liver. The ability of the liver to metabolize stored fat into energy is reduced when there is a decrease in body water. A decrease in water intake will cause fat deposits to increase, an increase will reduce fat deposits.

The body will retain water when its supply is low and most people think if they cut down on the water, they will be less apt to retain it. The body will naturally retain water in spaces outside the cells during a shortage of it. Actually, the more water you consume, the more of the water will be released. Water also helps dilute excess sodium in the body during water retention.

Those with a low or diminished immunity, infants, and pregnant women should only consume bottled or ozonated water or boil all tap water before drinking to avoid further risks of contamination.

Drinking good pure water also contributes to good muscle tone, improves the appearance and texture of your skin, and curbs your appetite during weight loss programs. Drinking 8 to 12 cups of pure water daily is suggested to maintain good health.

Water Purification with Ozone

The Natural Resources Defense council says that more than 53,600 water systems violated EPA rules in 1991 and 1992. Together they broke the rules for contamination 25,000 times and for reporting and monitoring 217,500 times. EPA issued fewer than 4,000 fines. This kind of neglect can be deadly to everyone.

In April of 1993, *cryptosporidium* caused approximately 400,000 cases of illness in Milwaukee and killed 100 people. In May of 1994, 100 people were sickened and 19 died from the same parasite. A survey of water utilities found *cryptosporidium* in more than 80% of the rivers and lakes that supply 66 major water systems. Though data proves ozone kills this same parasite, the Center of Disease Control is still looking for a cure. CDC states there is no safe and effective cure that is available for *cryptosporidiosis*, a disease caused by *cryptosporidium*.

These types of neglect and occurrences of contaminated foods and water are getting worse every day.

According to the World Health Organization statistics, more than 1.5 billion people are without safe drinking water. Consequently, more than 35,000 people a day die of water borne disease. Between 1978 and 1984 there was 72,000 reported cases of disease associated with drinking water in the United States. According to EPA, ozone is effective 99.999% in purifying water.

Using ozone to purify and clarify water is not new. It has been in practical use since 1893. The first application of ozone in a water treatment plant was in Nice, France, in 1906. Currently, ozone is being used in more than 2,000 water treatment plants worldwide. More than 300 municipal water treatment plants are using ozone in the U.S. Ozone treatment is now easier, more

efficient, and much less costly. The revolution in OZONE treatment is that it works, and works well, at an affordable price.

Ozone was approved by FDA in 1982 for purifying bottled water and is approved as the only agent to purify bottled water in California. In 1991, USDA approved ozone for the recycling of Poultry Chill Water. Because of possible regulatory action on chlorine, the Produce Industry is showing much interest in ozone as an alternative to chlorine for sanitizing water used in the processing of fresh produce.

Ozone is used chiefly in the disinfecting of water systems. It will attach and destroy, by oxidation, any offending molecule that gets in its path. It rapidly decomposes leaving no traces, and does not produce any toxic halogenated compounds.

It is unsurpassed for control of common bacteria such as *E. coli* and *Fecal Coliform* as well as deactivation of virus and cysts. Chlorine can take hours to penetrate the cell wall of bacteria or virus, while ozone oxidation occurs within seconds. Unlike chlorine, ozone does not produce trihalomethanes and is non-carcinogenic. Chlorine can be blamed for hundreds of thousands of deaths worldwide yet there is no evidence of any deaths to humans of over exposure to ozone.

Most all processors use chlorine to wash off fruits and vegetables. There will always be chlorine residues left on the product. The full use of ozone in dip, dump, and flume systems for washing would eliminate chlorine on the foods you consume. Used in recycling systems it would cut down on the water used with higher savings to processors.

Ozone oxidizes many inorganic and organic impurities as well as inactivates bacteria, virus and cysts. Ozone oxidizes iron, manganese, heavy metals, sulfide

and nitrite forms into insoluble forms, which can then be removed by filtration. Filtration is important in removal of high levels of oxidized minerals. Ozone functions as a flocculating or clarifying agent to polish the water.

Ozone will oxidize organic chemicals into safer elements. During the ozonation process, some compounds like ammonia and cyanide is broken down into nitrogen and water or other safe compounds. In all reactions, the main by-product after oxidation is oxygen.

When growers or processors wash fruits and vegetables, the used water goes into waste holding ponds. The ponds are polluted with organic material and the chemicals used in the process. All of which can leach into the ground water or overflow into creeks and rivers. Many have had to pay high fines as a consequence. Ozone, if injected into the ponds will break down contaminants while oxygenating the water at the same time. The waste material is more biodegradable after ozone oxidation and safer for the environment.

Ozone in water only, does not change the pH, nor does it react with the remaining organics in water to form carcinogenic trihomethanes.

Chemically, water is considered as one atom of oxygen bonded to two atoms of hydrogen. The bond angle between the two hydrogen atoms is known to be variable, depending on the amount of energy in the molecule.

Research shows that water with a bond angle of 101° is dead water and lacks in life-giving energy. The bond angle is distilled water expands to 120° upon evaporation and collapses to 101° upon condensation, which also becomes dead water. Average water has a bond angle of 103° . A bond angle of 106° produces

activated, energized water, and is attainable by placing a magnet, North Pole inward, against the water container. The heights energy obtainable in water is when it has a bond angle of 109.5° , which is only attainable by ozonation at 4°C or about 40°F . For a real high, try drinking an oxygen cocktail, water that is energized and activated with oxygen.

Ozone generators must be sized for each application. The first factor that must be known is the gallons per minute of water used. The source of water, city, well or other must also be known. If there are already known contaminants in the water there must be equal amounts of ozone to completely oxidize the contaminate (for example: 100 ppm of contaminate = 100 ppm of ozone). As a rule of thumb that some use for calculating the amount of ozone for say 80-gal/min. usage with a concentration of 1 ppm. would require an amount of 18.9 gr/hr. of ozone. 40-gal/min. = 9.45 gr/hr. and 20-gal./min. = 4.7 gr/hr. with 1 ppm. concentration. Surface waters usually require from 2 to 3 ppm. for treatment. Having the water tested by a reliable lab will show if contaminants are a problem.

The Benefits of Ozonated Water

BACTERIA FREE • VIRUS FREE • STAIN FREE • IMPROVES TASTE • LESS SCALE BUILDUP IN APPLIANCES AND WATER LINES • NO CHEMICALS • NO STAINED FIXTURES • CYST FREE • PREVENTS ALGAE GROWTH • OXIDIZES ORGANICS, IRON, HEAVY METALS AND MANY OTHER CONTAMINATES • MOLD FREE • YEAST FREE • SOFTER WATER • NO OFFENSIVE CHLORINE AND SULFUR ODORS • LESS TUB RINGS.

REDUCING THE RISK FACTORS

Being exposed on a daily basis to environmental pollutants in the air, water and on the foods we consume pose-varying degrees of risk. These risks are hazardous to your health. Knowledge of these risk factors will speed up the detoxification process and benefit your health.

Anyone suffering from cancer or disease needs to avoid substances that will further weaken the immune system. The body expends vital energy and nutrients in protecting itself from foreign substances. Reducing your exposure to certain substances will help your immune system fight off cancer and other disorders that cause degeneration.

Natural and synthetic chemicals are everywhere in our environment. Synthetic (plastic) chemicals promote the formation of harmful free radicals in the body. The long-term health effect of the thousands of chemicals in the water supplies, in the food chain, and environmental pollutants are affecting the health of everyone.

Chemicals that have been **"banned"** for decades are still showing up in the food chain and will continue for years to come. When chemicals are proven to be cancer causing and banned, another new chemical takes its place. Years later, after more damage has occurred, it is banned.

The labels on the products you buy daily show only a partial amount of the actual ingredients used in the processing of foods. Some ingredients may use dozens of other additives and shown only as one on the label. We are not informed of the chemicals used in agriculture as fumigants, herbicides, insecticides, and pesticides for fruits and vegetables.

Agriculture uses over 800 million

pounds of pesticides annually on foods. Most all of the chemicals used from farm-to-table contaminates the soil for years, and drains into rivers, lakes and ground aquifers when it rains. Fish and other marine life die as a result. Pesticides and herbicides can cause irreversible damage to the entire ecosystem. When the ecosystem is out of balance, it gets sick the same way humans do. All chemicals are harmful to the earth's stratospheric ozone layer.

The World Health Organization (WHO) considers pesticide poisoning of farm workers a major health problem in under-developed countries. It estimates that pesticides cause some 500,000 human poisonings each year, 5,000 of which are fatal. Cancer is the second biggest killer of all Americans. EPA estimates that there are 300,000 affected in the US.

Most pesticides are poisons -- toxic chemicals that are designed to kill or control insects, weeds, or other pests. Common pesticides can affect the nervous system, respiratory system, kidneys, liver and heart. They can cause eye damage, skin rashes, cancer, sterility, deformed children and "death."

Carcinogens on Foods

The EPA classification system for carcinogens is adapted from a similar system developed by the International Agency for Research on Cancer. It is used by EPA to classify all potential human carcinogens, not just pesticides.

Classifications of chemicals are based on the evaluation of types and diversity of tumors induced, structural similarity of the compound to other carcinogens, and whether positive results have been replicated.

All chemical compounds are classified in groups. **Group A** = Human carcinogen. **Group B, B¹, B²** = Probable human carcinogen. **Group C** = Possible human carcinogen. **Group D** = Not classifiable. **Group E** = No evidence of carcinogenicity. All chemicals listed here are in Groups A, B, C, which are used in **Agriculture** as fumigants, herbicides, insecticides and pesticides. This is only a partial list from the EPA, newer chemicals have not been fully tested and results are pending. The * symbol denotes Use Canceled.

147 Known Carcinogens

Acephate	Benzene
Acetamide	Bifenthrin
Acetochlor	Bromacil
Acifluorfen	Bromodichloromethane
Acrylonitrile	Bromoform
Alachlor	Butylate
Alar (Daminozide)	Cacodylic acid
Aldicarb	Cadmium
Aldicarb Sulfone	Captafol *
Aldicarb Sulfoxide	Captan
Aliette	Carbaryl
Amdro	Carbofuran
Amitraz (Baam)	Chloramben
Amitrole	Chlordane
Apollo/Clofentezine	Chlordimeform *
Asulam	p-Chloroaniline
Atrazine	Chlorobenzilate
Baygon / Propoxur	Chloroform >
Bayleton	Chlorothalonil
Baytan	Cyanazine
Benomyl	Cyhalothrin/Karate
Cypermethrin	Methodathion
Cyproconazole	Metolachlor
Cyromazine/Larvadex	MKG Repellent 326
2,4-D	Mirex
2,4,5-TP (Silvex)	Molinate
Dacthal	Monochlorobenzene
DBCP	Nitrofen/TOK *
DDT *, DDE	Norflurazon
DDVP	Oryzalin
Diallate *	Oxadiazon
Dibromochloromethane>	Oxadixyl
Dibromochloropropane *	Oxyfluorfen
Dichlorvos	Parathion
Diclobenil	PCNB (Pentachl. Nitr.
1,4 Dichlorobenzene	Benz.)
p-Dichlorobenzene	Pendimethalin
Dicofol/Kelthane	Pentachlorophenol
Dieldrin	Permethrin
Difenoconazole	o-Phenylphenol
Dimethoate	Phosmet
Dinoseb	Phosphamidon
Dioxin (75 types)	Prochloraz
EDB	Procymidone
Ethalfuralin	Prodiamine

Ethofenprox	Pronamide (Kerb)
ETU	Propargite
Ethylbenzene	Propazine
Express	Proiconazole
Fenbuconazole	b-Propiolactone
Folpet	Quinclorac
Fomesafen	SAN 582 H
Furmecycloz	Savey
Gardona	Simazine
Haloxypop-Mehyl	Sulfallate
Harvade/Dimethiopin	Tebuconazole
Hexachlorobenzene	Telone II
Hexachlorocyclopentadi-ene	Terbutryn
Heptachlor	Terrazole
Heptachlor Epoxide	Tetrachlorovinphos
Hexaconazole	Tetramethrin
Hexazinone	Thiazopyr
Hydrogen Cyanamide	Toxaphene
Imazalil	TPTH
Imazapyr	Treflan/trifluralin
Imidan/Phosmet	Triallate
Iprodione	Tribufos (DEF)
Isoxaben	1,1,1-Trichloroethane
Lactofen	Tridiphane
Lindane	Trihalomethanes >
Linuron	Troysan Polyphase
Mancozeb; Maneb	Tycor (Ethiozin)
MBC (Benomyl)	UDMH
Mercaptobenzothiazole	Uniconazole
	>from chlorine

The cumulative effect of thousands of new chemicals in the food chain and in the environment may not become fully apparent for another decade or so. Chemicals that have been "banned" for decades are still showing up in the food chain and will continue to show up for years to come. Chemicals that have been banned in the U.S. on foods are still being used in other countries and shipped back to us. One might ask himself why this is allowed to continue???

In the Food & Water Journal, Summer 1996, an article titled "When Two Wrongs Make It Worse." The author refers to *Science*, June 7, 1996, which states: **a new study showing that some combinations of hormone-disrupting chemicals are much more powerful than any of the individual chemicals by themselves. The new study shows that combinations of two or three common pesticides, at low levels that might be**

found in the environment, are up to 1,600 times as powerful as any of the individual pesticides by themselves. Hormones are natural chemicals that act as messengers, traveling through the blood stream, regulating various bodily processes, coordinating the body's activities to maintain health. Many of these hormone-disrupting chemicals are found in detergents, plastics, and pesticides.

Chemicals are a danger to the immune system and a threat to all life on earth. There are at least 200 carcinogenic chemicals used from farm-to-table. Drugs used in the production of meats as antibiotics, hormones, tranquilizers, and pesticides amount to over 2,700 different kinds.

The use of ozone will definitely help in this dilemma. The reduction of chemicals will keep our environment cleaner and make our foods safer.

Some Common Compounds and Pesticides Oxidized by Ozone

Ozone can break down the complex molecular structures of chemicals back to their safe original elements. Hydrogen, oxygen, carbon, sulphur and chlorine are a few common basic elements. Ozone is capable of oxidizing many organic compounds to CO₂ and water. A by-product of all organic oxidation is hydrogen peroxide. These safer compounds are more biodegradable. The final oxidation product from aliphatic, aromatic and heterocyclic organic's is oxalic acid. Any oxidizable inorganic material can be oxidized with ozone.

Some Compounds That Ozone Oxidizes to Safer Elements Are:

Ammonia to Nitrogen and Water vapor
 Ammonia Hydroxide to CO₂ and Water
 Aromatic Compounds to CO₂ - Water vapor - O₂
 Aliphatic Compounds to CO₂ - Water vapor - O₂
 Cyanide to Cyanate - to Nitrogen and CO₂
 Ferrous Iron to Ferric Hydroxide
 Formaldehyde to Carbonic Acid - CO₂ and Water
 Formic Acid to Carbon Dioxide (CO₂) and Water
 Carbonic Acid to CO₂
 Ethylene to Carbon Dioxide and H₂O
 Manganese to Manganese Dioxide to Permanganate
 Methane to Carbon Dioxide and H₂O
 Nitrite to Nitrate
 Organic Acids to CO₂ - Water vapor - Oxygen
 Smoke to CO₂ and H₂O
 Sulphur Compounds to CO₂ - H₂O, Sulphur tioxide-O₂
 Trichloroethylene to CO₂- H₂O - Hydrogen Chloride

Some Pesticides That React To Ozone:

FAST REACTING

2,4-D	MCPA
Atrazine	MCPB
Acrylamide	Methoxychlor
Bentazon	Metribuzin
Blackleaf 40	O-dichlorobenzene
Chlorobenzene	Pentachlorophenol
Enstar	Resmethrin
Ethylbenzene	Toluene
Heptachlor	Trans-1, 2-dichloroethylene
Lindane	Styrene
Mavrick	Xylene

SLOW REACTING

Chlordane	Heptachlorepoide
Chloropropane	Malathion
Dibromochloropropane	Parathion
1, 2 dichloropropane	PCBs
Epichlorohydrin	Oryzalin
Ethylene Dibromide	

Some Compounds That Are Unreactive To Ozone Are:

Acetic Acid	Saturated Aliphatic
Alicyclic Hydrocarbons	Silica
Bicarbonate	Sulfate
Calcium oxides	Octanoic Acid
Carbonate	Oxalic Acid
Cyclonite (RDX)	Pelargonic Acid
Glycerol	Silica titanium oxides
Hexanoic Acid	Urea
Magnesium	

Another problem to soon arise through biotechnology will be foods that have been genetically changed and altered. Genetically engineered foods will contain genes from bacteria, fish, insects, pigs and viruses. This bioengineering changes the genes of the seeds so they can resist higher doses of herbicides and ripen more slowly. Altered seeds can only grow once. Plants will not have the self-regeneration abilities they once had, the life cycle ends.

The nutritional values of foods are continually decreasing with the depletion of minerals in the soil. Some feel that altering the genes of the plants will affect the environment, alter, or reduce vitamin-mineral content and the enzymes needed for proper digestion.

In a newspaper article titled ***Watch Out for Food Dangers***, the author James P. Tucker, Jr. states, *Some scientists want you to know exactly what's in the food you eat, and whether that food was grown according to the laws of nature or instead produced by gene-splicing scientists in a laboratory.*

The industries producing these foods defend their products as safe and will influence the younger generation on what they consider being beneficial. Some government officials have decided that we don't need to know if foods are natural or genetically changed. Labeling the foods as such has not been a requirement and calls for labeling such foods are worrying the food industry. Some scientists are warning us of the potential health threats, but it will not become a serious problem for some time. We will see the long-term effects, but by then the cause will be forgotten and the blame can be put on something else. Once again society will have served as guinea pigs in yet another global nutritional experiment on humanity. Will this someday end the cycle of life in us as well?

A scenario that does happen! Dairies mix the livestock's fecal waste into slurry for the pasture's sprinkler system. The cows eat the grass and wind up with *E. coli*. Then the cows are given antibiotics to stimulate their growth and prevent disease. Chemicals and drugs are also added to the livestock feed. Cows are also fed with ground up sheep or other diseased animals and may contract "**Mad Cow's Disease**." This happens to other animals as well. Some cows are injected with the bovine growth hormone (rBGH) to produce more milk. Scientific evidence is showing a link between the consumption of BGH treated dairy products and cancer. Then the milk is homogenized and pasteurized, which leads to the destruction of natural enzymes, vitamins and phosphates. Milk fat globules are effected, which effects fat absorption and metabolism. In the processing of dairy and other foods; they may add synthetic and artificial colors, flavors, sweeteners, stabilizers and thickeners, emulsifiers, pH control agents, leavening agents, bleaching agents, anti-caking agents, humectants to retain moisture, clarifying agents that remove minerals, firming agents for coagulation, foam inhibitors, and sequestrants that hold minerals in drinks. Then we consume these supposedly safe foods on a daily basis.

The human body can never build immunity to these risks. It may eliminate some of the toxins, but the majority is stored as toxic waste dumps (tumors) in the body causing further degeneration. Bad health or death is the end result.

All things in nature have a reason or a cause. The "**CREATOR**" made it this way for a purpose. When a person disrupts the "**natural life cycle**", there will always be an effect from his actions. Chemicals and genetics can effect the balance of nature and be disastrous for everyone worldwide.

Indoor Air Quality

All of us face a variety of risks to our health as we go about our day-to-day lives. Some risks are simply unavoidable. Others, we choose to accept because to do otherwise would restrict our ability to lead our lives the way we want. Being exposed to environmental pollutants pose varying degrees of risk.

In the last several years, scientific evidence has indicated that the air within homes and other buildings can be more polluted than the outside air in the largest and most industrialized cities. Some say up to 500 times worse. About 30% of new and remodeled buildings worldwide may be subject to excessive indoor air problems. This costs American business and you over \$100 billion annually. The majority of information is from EPA facts on Indoor Air Quality.

Research indicates that people spend approximately 90% of their time indoors. The risk for most people may be greater due to exposure to air pollution indoors than outdoors. People who are exposed to indoor air pollutants for the longest periods of time are often those most susceptible to the adverse health effects of indoor air pollution. Sometimes indoor air problems are a result of poor building design or occupant activities.

Good indoor air quality enhances occupant's health, comfort, and worker productivity. Many can gain a great advantage over others if they are known to offer a healthy and pleasant indoor environment for both employees and customers.

Failure to respond to indoor air problems in your home or working environment can have many consequences to you and others; for example, increasing health problems, some rare life-threatening conditions such as Legionnaire's disease

and carbon monoxide poisoning. Other consequences are reduced productivity due to discomfort and increased absenteeism; deterioration of furnishings and equipment; strained relations with family, tenants and employees; negative publicity; opening potential liability problems and higher insurance cost. This is commonly known as "**SICK BUILDING SYNDROME.**"

Indoor pollution sources release gases and particles into the air and are the primary cause of indoor air problems. Inadequate ventilation increases the level of pollutants and emissions that you breathe. This puts you at a higher health risk.

Pollutant sources are: oil, gas, kerosene, coal, wood combustion, building materials, pressed wood products, furniture, cabinets, damp or new carpeting, household cleaners, maintenance and personal care supplies, hobby and craft supplies, central heating and cooling ducts, humidification devices, tobacco smoke, pesticides and outside air pollution.

Health effects may show immediately or years after exposure to bad indoor air. Immediate effects include irritation of the eyes, nose and throat. Other effects include sinus problems, headaches, fever, shortness of breath, dizziness, nausea, anxiety, allergic reactions, sneezing, dry cough and fatigue. Effects from long term exposure may account for 50% of illness ranging from allergic rhinitis, asthma, cancer, carbon monoxide poisoning, emphysema, hypersensitivity, influenza, pneumonia, humidifier fever, heart, and respiratory diseases. Life threatening conditions may appear in some rare cases.

Some people have experienced a slight difficulty in breathing when first exposed to very high concentrations of ozone. It is not the ozone that is toxic, but the environment in which the person is located. When ozone is inhaled by a person living in an

environment of contaminants, some expectorations takes places, as does drainage of mucous matter from the lungs. Tests have determined that this mucous is actually the broken down by-products of the toxins. The ozone when inhaled merges with and oxidizes the other substances. The ozone breaks down the pollutants into water, liquid, or gas. In order for the lungs or body to rid itself of these by-products, it produces mucous and then the phlegm is discharged through expectoration.

Most of us open our windows to let in the fresh air. In the winter, this is a luxury we cannot afford because of high heating costs. In the summer months, we generally keep the windows closed to keep in the cool air. In a closed building without ozone, bacteria runs rampant, mold spores and mildew grows in all those nooks and crannies, pet odors permeate the drapes and furniture, the toxins in cigarette smoke invade our lungs, and the formaldehydes hinders us from getting a good nights sleep.

Bad indoor air quality (dead air) increases the cause of most adverse health problems.

Source control, ventilation improvements and air cleaners are effective ways of improving indoor air quality. Air cleaners with carbon filters are a breeding ground for bacteria. If these types are not changed or cleaned periodically, the situation will worsen. Ventilation improvements can get very involved and more costly than most alternatives.

Most indoor odors originate from airborne contaminants like bacteria, mold and mildew growth, spores, and fumes from chemicals. Ozone will quickly destroy these airborne contaminants that are responsible for unpleasant odors. When used in your home, it immediately attacks

odors. Ozone will oxidize a given substance quicker than oxygen. Ozone reduces them to innocuous compounds like oxides, which are odorless.

Each substance or compound, if it has an odor, has its own identifying odor. When the chemical nature of a substance is changed, its odor is also changed. When introducing ozone with a substance it will react and change the odor of that parent substance. Ozone will keep breaking down these substances to the point of its original compound or elements. In more simple terms, the ozone molecule quickly absorbs the odor molecule, neutralizing it.

Statements have been made that ozone merely masks odors, but does not destroy them. Misconceptions regarding ozone arise when it is introduced into a building or home in the wrong way. It takes one ozone molecule to destroy one odor molecule. After time, the same condition can return if not used in the right way. Concentration levels, exposure time, or temporary uses are determining factors for curing the problem. Time is needed to destroy all odor-causing molecules. Length of time is determined by the degree of odor. Sometimes, it might take a few days before you notice the difference.

For major odors, ozone is not a "weekend warrior." Some odors may return after a short period when turning off the ozone. Ozone is best-used full time at constant and natural ambient levels. Smoke odors from fire damage will require higher concentrations of ozone.

Ozone is used to counteract any objectionable odors that might arise. Ozone maintains the air in a fresh, odorless condition. The air in the room contains a fresh pleasant odor and musty odors are controlled when using ozone at relative low natural concentrations. When used the proper way, ozone has been very successful in permanent deodorizing.

Ozone is an efficient, cost-effective method of removing and actually destroying odors.

Ozone is the most effective "natural sanitizer and deodorizer" for purifying the air in any environment.

The best solution to Indoor Pollution and Sick Building Syndrome is a simple one. "The Solution to Pollution" is to create indoors what nature provides outdoors. Ozone generators will clean the air in any environment and produce the same amount of ozone in your home that occurs naturally outdoors. Ozone will control bacteria, mold spores, mildew, viruses and fungus, break down toxic or noxious chemical gases, formaldehydes, radon, cleaning agents, paint fumes and other bad odors. Ozone produces a cleaner and healthier living environment.

Bring "After The Storm Freshness" into your business or home and breathe easy. Relieve yourself of the "Stale Air Syndrome" that ruins your health.

Many of the everyday health risks come in many forms and disguises. Some may be in contact with these risks 24 hours a day. Many of risks for children originate in the home. It is estimated that 135,000 children (one in a hundred) under the age of five will become victims of accidental poisoning. About 90% of these occur in the home.

Other Daily Risks

Aflatoxin is a toxin produced by mold in corn, peanuts, and found in contaminated livestock feed and grains.

Antibiotics will reduce the friendly bacteria in the digestive tract when taken. Research shows the bad bacteria (superbacteria) have built up a resistance to antibiotics. When out of balance, the unfriendly bacteria take over and thrive

even more. Dr. Fred Tenover of the CDC states, *"Seventy percent of the organisms that spread in hospitals are resistant to at least one antibiotic, and often a large number of antibiotics."*

The foods we eat today (meats and poultry) are fed antibiotics to keep them healthy. Like us, their health seems to keep getting worse. This is minimized by taking friendly flora afterwards.

Antacid products are purchased in local drug stores to relieve the signs of acid during indigestion. Indigestion is usually one of the first signs of health problems. The immune system's first line of defense is the acids produced in the stomach. Acids help digest the food and kill germs before they multiply and absorb into the bloodstream. A weak defense makes you more vulnerable to attack. There are natural remedies for indigestion like natural enzymes, Natren Digesta Lac, or Tri-Salts that contain calcium, magnesium and potassium.

Ammonia is found in bathrooms, cleaning supplies, diapers and tobacco smoke.

Arsenic is a naturally occurring carcinogen found in drinking water. It is also found in defoliants, wood treatment compounds, textile mills, paint and inks, enamels on porcelain and used in pharmaceutical manufacturing. It effects the nervous system and causes tumors. Arsenic puts us at a higher risk to bladder and lung cancer.

Artificial Sweeteners: 1. Aspartame is found in sugar substitutes. It has been implicated in causing blindness, headaches, brain or nerve damage, nausea and rashes.

The effects of aspartame have been given during lectures at the World Environmental Conference and the Multiple Sclerosis Foundation. When the temperature of

aspartame exceeds 86° F, the wood alcoholic aspartame converts to formaldehyde and then to formic acid. The results of methanol toxicity have been found to mimic multiple sclerosis, triggers systemic lupus and it has been found to escalate Alzheimer's disease. In diabetics it keeps the blood sugar level out of control and causes some to go into a coma with death resulting. You can; also, suffer from symptoms of fibromyalgia, anxiety attacks, blurred vision, confusion, cramps, depression, dizziness, headaches, joint pain, numbness in legs, slurred speech, tinnitus and vertigo. It is also said to deplete serotonin, causing manic depression, panic attacks, rage and violence.

Book references on aspartame are ***Excitotoxins: The Taste that Kills***, by Dr. Russell Blaylock and ***Defense Against Alzheimer's Disease***, by Dr. H. J. Roberts.

2. Phenylalanine is a chemical that may affect part of the brain making you feel full. Studies show this chemical causes tremendous weight gain (hypothyroidism) and other health problems because it gives you intense cravings for sugar. The American Cancer Society has found that replacing sugar with diet sugars will actually make you gain weight. Phenylalanine is found in two major sugar substitutes.

3. Saccharine is a noncaloric petroleum derivative used as an artificial sweetener. Saccharin is found in sugar substitutes and found to cause cancer in animals but not in humans according to recent FDA reports.

Bacteria are found in air conditioning systems, bathrooms, countertops, cracks in cups and dishes, cutting boards, foods, kitchens, sponges and evaporative water coolers. Bacterium thrives on warm and unclean surfaces.

Benzene is found in new carpets, drapes, upholstery, irradiated food products, as a solvent in pharmaceuticals, pesticides, paints and tobacco smoke. It's a known carcinogen.

Cadmium is found in batteries, cookware, fungicides, pharmaceuticals, pottery, paints and water.

Candy has long been suspected of using carcinogens in their production. Dextrins are used in soft centered candy. Carrageenan is found in chocolate and other food products. Xylitol is used in sugarless gum. Hydrogenated oils are used in candy bars, malt balls and fruit chews. Dyes are used as artificial colors and some over the years have become known carcinogens.

Carbon Tetrachloride is found in cleaning supplies, fumigants, inks and paints, new carpets and drapes. Effects the nervous system, liver, digestive system and is a known carcinogen.

Chemotherapy agents suppress both (all-chemotherapeutic agents) cellular and humoral immunity. Severity depends on the dosage given. It lowers white blood counts to where the patient is at risk to infections. Some of the chemotherapeutic agents used are known carcinogens.

Chlorine is used in water treatment to purify water. Chlorine does not kill all the microorganisms or oxidize other chemicals. They still continue using it, knowing that all reactions with organic material forms carcinogenic compounds of chloroforms, dibromochloromethane and trihalomethanes.

"Chlorine gas can be inhaled and absorbed into the skin by taking a shower. Some say from 6 to 100 times more than by drinking." NEW SCIENTIST 18 September 1996, Ian Anderson.

"A long, hot shower can be dangerous. The toxic chemicals are inhaled in high concentrations." Bottom Line / August 87, Dr. John Andelman, Ph.D..

"Drinking tap water that is chlorinated is hazardous, if not deadly to your health." Healthy Water For Longer Life, Dr. Martin Fox.

It's been known since the 1960s, that chlorine used to disinfect water is detrimental to one's health. Carbon filters can remove chlorine, but again they are a breeding ground for bacteria and have to be changed often. Activated carbon filters impregnated with silver will prevent the bacterial buildup. When changing filters, clean the filter housing and wash the hands for protection against organisms.

Chlorine dioxide just recently approved by FDA is a good biocide, but is unstable, volatile and poses some of the same hazards as chlorine. Chemicals used in our day-to-day lives for water treatment and food processing, end up in streams, lakes, and in our water supplies. In time this contributes to the destruction of our ecosystem and the ozone layer. Many of the thousands of chemicals used have carcinogenic properties that end up in the food chain. The end result is passed along to us and consumed in the foods we eat. There are better and safer alternatives like ozone. The advantage of ozone over chlorine is that ozone kills a broader spectrum of microorganisms.

Chloroform is found in carpeting, drapes, paints, refrigerants, resins, solvents and upholstery. This is a known carcinogen.

Cleaning Supplies are found in every household, their use is unavoidable because things have to be kept clean. However, we can take precautions to keep from inhaling toxins from aerosols or from absorbing the chemical agents through the skin. Some glass cleaners may contain

butyl cellosolve and not listed as an ingredient on the label. This is toxic to blood cells, kidneys and liver.

Deodorants & Deodorizers contain many chemicals (and bar soaps). Baking soda is a good anti-perspirant. Almost all chemicals used in room deodorizers will leave some residual chemicals in the air or on surfaces. These chemicals can produce severe reactions to those people who are highly sensitive to chemicals. Cedar chips can be used in place of mothballs in closets. Mothballs are toxic to the blood, brain and liver.

Ethylene Oxide is a carcinogenic chemical used in the manufacture of other chemicals as ethylene glycol that is widely used in the health industry as a sterilant.

Fluoride (calcium fluoride) was the original fluoride used in toothpaste. Sodium fluoride is used in the treatment of water and is a toxic by-product of the aluminum industry. It causes mottling or a browning of the teeth, lowers function of the thyroid gland and enzyme system, and it damages the immune system. Ailments linked to fluoridated water are various forms of Arthritis, Cancer, Down's syndrome, Lupus and Sclera derma. The natural levels of fluoride found in foods are necessary for the body. Use baking soda and H_2O_2 for brushing teeth.

Food Contamination, it's estimated that 30 million people a year get sick on the foods they consume and some even die as a result. The little single-cell creatures that cause people to get sick have been around for a long time. What is new is a growing awareness about contaminated food and the growing demand that something be done about it.

Food contamination spans the entire system from farm-to-table. In food preparation, it ends with sloppy food handling practiced by food handlers.

Restaurants are the last pit stop for many people and they expect to eat safe foods. How many times have you gotten sick from restaurant food?

There are many potential sources that can harbor bacteria, and areas for them to hide and multiply. In a warm and humid environment, harmful bacteria can multiply to dangerous levels very quickly. All foods have a certain number and type of bacterial contamination.

Cooking foods thoroughly does not always help if the food becomes contaminated afterwards. Mistakes can happen when the one preparing the foods gets too busy. When busy you may not have time to wash the table or cutting board used for preparing the different meats, seafood, fruits, vegetables or salads. Cross contamination between different foods can take place in preparation or in storage by touching each other or by not cleaning the work site after the preparation of each food. For prevention, maintain separate work areas for raw and cooked foods.

Other sources of cross contamination occurs in kitchen sponges, faucet handles, cooking utensils, bathrooms, cutting boards, cracks in cups and dishes, not washing your hands between food types, and people with colds.

Formaldehydes' research studies show it to be a health risk to those that reside or work in structures with measurable levels. It has also been found to be a significant indoor air contaminant.

Formaldehydes' are found in new home synthetic construction materials; new carpeting, drapes, wood cabinets, furniture, insulation and glues used in particleboard or plywood. Higher levels of formaldehyde are found in mobile homes. Formaldehydes' are used in thousands of products bought on a daily basis.

Some common symptoms that relate to formaldehyde poisoning are: burning and watery eyes, dry throat, cough, runny nose, sneezing, respiratory conditions, phlegm, wheezing, loss of breath, headache, tiredness, sore muscles, difficulty in sleeping and weakness. Symptoms can be increased with age and by smoking. Some people are mistakenly diagnosed as having polymyalgia rheumatica or rheumatoid arthritis.

An average level of formaldehyde measured in mobile homes is approximately .39 ppm. The concentration levels can range from 0.01 ppm to 2.84 ppm in newer homes. OSHA sets a threshold limit value for formaldehyde at 1 ppm for a one-hour exposure. A sixteen-hour exposure at 0.39 ppm would equal to a total exposure of 6.24 ppm.

Ozone can reduce formaldehyde to harmless substances over time. Ozone will first oxidize formaldehyde (HCHO) into formic acid (HCO_2H). Then it reduces the formic acid into water (H_2O) and carbon dioxide (CO_2). Water, carbon dioxide and ozone are all safe at low levels. During this process of destroying the formaldehyde, ozone is giving up its life. Anything in excess, even ozone in high concentrations can be harmful. Formaldehyde is a known carcinogen.

Hair-Dyes and hair permanents should be avoided because of the chemicals. The National Cancer Institute estimates that hair dyes may be responsible for as much as 20 percent of non-Hodgkins lymphoma of women in America. One common cancer-causing ingredient found in hair-dyes is phenylenediamine. The chemicals can absorb directly through the skin tissue.

Irradiation of Foods and the effects from it are creating new chemicals in fresh foods called radiolytic products. In irradiated beef, the main by-product is benzene. The Sixth Annual Report on

Carcinogens, 1991, by U.S. Department of Health & Human Services, shows radiation and benzene to be a known carcinogen. FDA has given the green light for the irradiation of fresh fruits, vegetables and meats. Irradiation destroys most of the essential vitamins, nutrients, and may alter the taste and appearance of some food products. No studies have been done to show what the long term effect will be, which makes one wonder how this was approved without this data.

Ozone is safer to consumers and workers and it's more effective in the control of pathogens. It does not effect food cells or alter the foods chemistry because it always reverts back to its original form of oxygen.

Laxatives contain phenolphthalein in some brands, an ingredient not always shown on the label. This is a known carcinogen and linked to cancer. The FDA has proposed a ban on over-the-counter products with phenolphthalein. In the U.S. there is about 700 different laxative products sold. There are only about two dozen that do not have phenolphthalein as an ingredient. People with constipation problems in the United States spend about 4 million dollars yearly on laxatives.

Another ingredient in some laxatives is hydrogenated vegetable oil. Why they use hydrogenated oil or any known carcinogen in any product is beyond my common sense and thinking. Subjecting yourself to any unnatural product can lead to other health related problems. Drugs and bad eating habits are why so many have to rely on laxatives today.

A Clinical Professor of Medicine at the University of Pennsylvania has warned, *"The frequent or habitual use of laxatives to promote evacuation can lead to addiction and the ultimate destruction of the neurological and muscular control of the large intestine."*

Methylene Chloride is used in paint removers and as a propellant in spray cans. It's also used to extract caffeine for decaffeinated coffee. There are many chemicals used in the processing of coffee. Buy the whole dark beans grown in higher altitudes and grind yourself. These types are less acidic.

Molds are found mostly in damp areas like bathrooms and around windows, HVAC ducts, damp ceilings and walls, and wet carpets. Poor ventilation is the biggest cause in bathrooms. Exhaust fans can be installed improperly and should be checked if mold is a problem. The most common molds are Alternaria, Aspergillus, Cladosporium and Penicilium. Some molds produce toxins to protect their environment. The toxins or fungus, when inhaled are a significant cause of common allergies, asthmatic reactions, diarrhea, headaches, irritability, fatigue, depression, sinusitis or sore throat. One of the worst molds is called Stachybotrys chartarum, which causes cold or flu-like symptoms.

MSG (Monosodium glutamate) is not just used on Chinese food but used by most food processors to enhance the foods they produce. MSG can be concealed in foods as natural flavors or as spices on the label. Food companies like it because it suppresses off-flavors, bitterness, sourness, and the tinny taste of canned foods. According to the Pacific Research Laboratories, medical research links MSG to many adverse effects (symptoms) and disease like Alzheimer's, Lou Gehrig's Disease and Parkinson's. Another substance found in MSG is glutamic acid. It effects the nervous system and causes depression.

Nitrogen Trichloride is known as Agene and used to bleach flour. May cause failure of muscle coordination and epileptic-like fits.

Perfumes and colognes can contain some 600 petroleum-based chemicals. These can cause allergies and irritation to many people that use and do not use them by polluting the environment. Essential oils smell better, are healthier for you, and are probably less expensive.

Pesticides contain more than 70 active ingredients that are cancer causing. The organophosphate and carbamate classes of insecticides are toxic to almost all forms of life. Just because they are sold in almost all grocery and drug stores does not mean they are safe. Most of us will consume trace amounts of three to five pesticides on our foods daily. The allowable levels in drinking water exceed the standards applicable to foods by a factor of 10 or more. (Information is from Pest Management at the Crossroads, Consumers Union, by Charles Benbrook, Ph.D., 1996).

"The Real Culprits Are Never The Cause"



"Something else is always at blame"

Pharmaceutical Drugs are toxic and foreign to the body that only trade immediate or temporary relief for more suffering. They interfere with the biochemical pathways and metabolism of the body. Some drugs used can cover-up and temporarily alleviate the symptoms, but the cause of the problem is merely

masked as further degeneration is taking place in the body. Some drugs can bind minerals, destroy vitamin C and cause bowel problems. Drugs to lower blood pressure (calcium channel blockers) increase your risk to heart disease. Other drugs can cause confusion, disorientation, inflame the pancreas, liver failure and memory loss. The bad effect of drugs is never ending as new ones are developed.

There are other dangers when you take drugs by mixing them with certain beverages, foods or vitamins. Reactions can range from minor to lethal. Options include abstaining from drugs, do not eat, or find out more information. Your doctor or pharmacist should be able to warn you of any possible reaction and what to avoid. The right information can either save your life or take it for the lack of it. You cannot become a victim from the choices of others if you have the right information.

The nonsteroidal antiinflammatory drugs (aspirins) used as painkillers work by attacking selected organs that divert your brains attention and the immune system from the source of pain. Some possible side effects from aspirins may include allergic reactions, arteriosclerosis, brain hemorrhage, bleeding and irritation of the stomach, nausea, and ringing in the ears. The more powerful painkillers attack the brain and spinal column that shuts down life support functions of the body. The brain loses contact with the body. The pain and source of the problem still exist but are only being ignored. Drugs for pain cause constipation. Wild lettuce (herb) works well for chronic pain. Other natural alternatives are fennel, feverfew, lady's slipper, lobelia, mullein, pokeweed, taheebo, valerian, willow bark and winter green.

The older we are, the more side effects we will experience from drugs. Drugs will build to higher levels in the elderly because the liver and kidneys are less efficient in

eliminating them from the blood. Those over 65 are three times more likely to adverse effects than those younger.

All synthetic drugs have bad side effects that can lead to one problem after another. Other drugs are then prescribed to counteract the problem caused by the previous drug used. **"The Downhill Roller Coaster Effect Into The Pit Of Dependency."** Meanwhile, the medical and pharmaceutical professions get richer while the sick get sicker.

When these synthetic or plastic drugs are taken in combination, they are more lethal. There are at least 140,000 Americans killed annually from prescription drugs. This estimate is felt to be very underestimated by many. There are two million people a year hospitalized (25%) from side effects or reactions to the drugs they use. Iatrogenic disease is the name given for any condition produced by your physician that results from medical treatment. We are always being told by the drug manufactures that the benefits outweigh the risks. We are always reading in the news that FDA is targeting another drug linked to deaths. If the FDA were to be the test subjects for all new drugs, maybe they would be safer for public consumption.

A recent newspaper article says a conflict of interest probe is expanding over the drug Rezulin because the one testing it for the NIH "Diabetes Prevention Program" study is listed on three separate patents of Rezulin's potential use in diabetes which causes liver damage. Another article on a new heart drug study was to last two years, but only lasted for six months. There were nearly twice as many deaths among patients taking the drug as among those taking a dummy drug. A painkiller drug by the name Celebrex was linked to ten deaths and eleven cases of gastrointestinal hemorrhages in its first three months on the market. After every death, the drug companies spokespeople

say there is no evidence that their drugs actually caused the deaths in question.

In the late 1800's, most doctors were taught many different techniques of healing and holistic medicine in its original form. The use of drugs began with the discovery of insulin and penicillin in the 1930's. In 1933, the American Medical Association, headed by Dr. Simmons, set out to destroy all medical treatments that were competitive to drug therapy. The suppression of ozone therapy began then and continues in the U.S. today.

The Greek word for pharmaceuticals is '**pharmakon**', which means **poison**. In Greek, "**antibiotic**" means **against life**.

Preservatives are added to prolong shelf life and improve the taste of processed foods. The additives can be simple substances as natural salt or sugar to synthetic chemicals used as antioxidants, antimicrobials, or artificial colors for better eye appeal. Currently there are over 3000 additives used in processed foods, and one may have a variety of functions.

The majority of additives and preservatives appear to be safe. Our government says they are safe because they approve them. They have been tested by many laboratories but many individuals are "**sensitive**" to the various additives and preservatives. These substances will affect individuals with some form of allergy, asthma, hayfever, urticaria, etc. A few additives and preservatives can affect non-allergic people as well. Some substances can cause more reactions than others can. For example, a reaction to sulfur dioxide and sodium benzoate occurs more commonly in asthmatics than reactions to the colorant tartrazine.

Some feel these reactions are not "true" allergies as one sees but more as a chemical reaction. Reactions depend on the type of preservative or additive

ingested. These may include vomiting, rashes, hives, a tight chest, headaches, worsening of eczema, and many other symptoms. Similar reactions may occur with an allergy to a food such as egg, nuts, etc. Some foods have natural chemicals that may affect you too. For example, fish that is not fresh may have a high level of histamine, cheese may have tyramine, and you may react to the histamine in wine and not the sulfur dioxide!

Antioxidants stop fats and oils from going rancid; for instance, ascorbic acid in butter. BHA and the related compound butylated hydroxytoluene (BHT) have been used for years, mostly in foods that are high in fats and oils and as a preservative for dry foods, such as cereals. They slow the development of off-flavors, odors, and color changes caused by oxidation. Some individuals complain of reactions to BHA or BHT with rashes, hives, and occasionally "tight" chests. Studies show this to cause tumors in fish, hamsters, mice, and rats.

Artificial colors make food more colorful; two examples are tartrazine and sunset yellow. Tartrazine is an azo dye, so if you react to this colorant, you should avoid all of the azo dyes. Foods that may contain colorants are fruit juices, soft drinks, sweets, desserts, toppings, syrups, cooking oils, sauces, and pickles.

Emulsifiers and stabilizers are mixed in foods, particularly oils and water to prevent them from separating; an example is calcium alginate in ice cream.

Flavor enhancers bring out flavors in food; a well-known one is monosodium glutamate (MSG). Symptoms include headache, a burning sensation along the back of the neck, chest tightness or pain, nausea, sweating, and a sensation of facial pressure. Tingling may be experienced in the limbs or face and head. Foods that may contain MSG are oriental food, packet soups, sauces, soy sauce,

seasonings, and spices. Some people think MSG occurs naturally in mushrooms and tomatoes.

Anti-caking agents like aluminum stops powdery foods from forming lumps (as in salt). Nitrates act as a preservative in many foods, but may be added to foods, such as in pork to give it a pink color.

Sulfur dioxide and sodium benzoate (in fruit juices) often cause "tight chests" in individuals who have asthma. Many will complain of a scratchy feeling at the back of their throats. Although these are the common reactions, others such as rashes may also occur. Sulfur dioxide may be labeled as sodium metabisulphite, potassium metabisulphite, sodium or potassium bisulphite, or sulphite. Foods that may contain sulfur dioxide are some fruit juices, concentrated soft drinks, dried fruit, dried, wine, beer, some sauces, pickles, and hamburger patties. Foods that may contain sodium benzoate are fruit juices, soft drinks, and foods with fruit.

Acetyl salicylic acid found in aspirin may result in a "tight" chest or hives in some asthmatics. A different form of salicylic acid can be found in a variety of spices and foods. Some health professionals believe that this form can result in many side effects, including hyperactivity in children. However, this is still controversial. Foods that may contain salicylic acid are ice cream, curry powder, paprika, dried thyme, berries, ginger, almonds, apricot, oranges, tea, and honey.

Nitrites are used as preservatives and in combination with salt serve as antimicrobials in meat and for flavoring and fixing color in a number of red meat, poultry, and fish products. Nitrite salts can react with certain amines (derivatives of ammonia) in food to produce nitrosamines, many of which are known to cause cancer.

Sulfites are used primarily as antioxidants to prevent or reduce discoloration of light-colored fruits and vegetables, such as dried apples and dehydrated potatoes. They are also used in winemaking, for bleaching food starches, and used in the production of cellophane for food packaging. The names by which sulfites are listed on food labels are sulfur dioxide, sodium sulfite, sodium, and potassium bisulfite, sodium and potassium metabisulfite. Sulfites used in foods with thiamin (vitamin B1) are destroyed. Sulfites are added to most food categories and concentration levels may range from 20 ppm in sugar to 2000 ppm in dried fruits. FDA estimated that more than 1 million asthmatics are sensitive or allergic to sulfites.

Reactions from additives or preservatives may show immediately after ingestion to sensitive individuals or it may be delayed for 6 to 24 hours in others. The body reacts much quicker when the intestinal tract is clean. Anyone with cancer or other health problems should totally avoid all synthetic additives or preservatives in foods. When anything is suspected of causing a reaction keep a record and read those labels carefully when shopping.

The body can tolerate small amounts of these preservatives safely when healthy. One individual food with other additives may be deemed safe if consumed in small amounts but when you eat 20 different individual processed foods daily with several additives they can definitely have an increasing impact on one's life.

Radiation Therapy used in medical therapy for cancer is called ionizing radiation. The three different types are X rays, gamma rays, particle radiation. When X rays are generated at only a few tens of thousands of volts they will only penetrate a few millimeters of tissue. At 100,000 volts it can pass completely through the body. X rays used in radiation

therapy is generated at several million volts. When healthy cells are exposed to radiation, the structure of the cell can be altered, damaged, and even destroyed if it is not protected by the right nutrients. When healthy cells are altered, it can lead to cancer. We are told that only the cancer is targeted by the radiation and the healthy tissue is only affected minimally. If the radiation can go completely through the body won't the tissue in front and back of the tumor also be affected? Most of the information on radiation therapy shows it only works for a few people that are young and in good health, and that it is considered by most as true quackery. If you have been led to believe that this is the only cure, at least take all the natural antioxidants possible for a few months before to protect any healthy cells you have left. Vitamin E has been shown to enhance protection during radiation.

Shampoos or the ingredients in some shampoos can absorb into the skin, and may cause blindness in some. Soaps and shampoos with natural ingredients can be purchased at most health food stores.

Sodium Nitrite is another preservative used in processed meats. It can react with amines to form nitrosamines, a known carcinogen.

Soft Drinks contain large amounts of phosphorus that throws off the ratio of calcium. The body is less able to eliminate the excess phosphorus through the kidneys as we get older. The caffeine acts as a diuretic that puts extra stress on the kidneys and has a dehydrating effect that robs the body of nutrients.

Other effects may cause constipation, headaches, hypertension, nausea and vomiting. Some of the non-listed ingredients like ethyl alcohol, brominated vegetable oil, sodium alginate, and caffeine makes cola drinks a health risk.

Styrene is used in the manufacturing of plastics, foam and resins. Effects the nervous system and a known carcinogen.

Sugar (white refined) may not cause cancer but it can lead to other disorders.

Sugar stimulates the pancreas to produce insulin, which is needed to metabolize simple carbohydrates. When the pancreas is overworked and can not handle the extra amounts, it leads to hypoglycemia. In this condition, the body is unable to metabolize it properly. Sugar turns to alcohol, dehydrates the cells, and leeches calcium from bones, muscles, nerves, teeth and other tissues. Its' use can lead to deficiencies in calcium, chromium, copper and magnesium; interferes with the absorption of proteins; can cause an acidic stomach, food allergies, migraine headaches, free radicals in the blood, and can raise adrenaline levels in children.

Parasites and candida thrive on sugar. The end results are having a suppressed and weak immune system. Source from Health Freedom News, June 1994.

The only good sugar is natural sugar from fruits and vegetables. Another alternative to refined sugar is an herb called Stevia. It is 150-400 times sweeter than sugar and has beneficial effects on health. Recent studies show that Stevia retards the growth of plaque and the occurrence of dental cavities, and it is used as a treatment for candidiasis, diabetes and related immune disorders.

Some food processors would like to use Stevia as an alternative to sugar, but FDA considers it a food additive that they have to approve. Think of the loss of money and income to some because Stevia is natural and non-patentable.

Synthetic Vitamins are one of the biggest deceptions of all. Synthetic plastic chemical vitamins are not food for the

body; they may be killing you instead of helping you. These vitamins are a mirror image and the opposite of the real thing.

A Finland study published in the *New England Journal of Medicine*, (Spring 1994) and a study by Agnes Faye Morgan (University of California in Berkeley in the 1940s) proved that taking synthetic vitamins is worse than starvation. Hoffman LaRouch Company for these studies supplied the vitamins. The pharmaceutical companies produce most of the vitamins on the today's market.

In a desperate act by the pharmaceutical companies to protect their worldwide drug market against the natural, more effective and affordable vitamins have proposed a bill through CODEX. Formed by the World Health Organization (WHO) and the Food and Agriculture Organization, the Codex Alimentarius Commission has adopted principles that supposedly ensure that food products traded internationally are safe and wholesome.

One of the principles they support is the use of several growth promotants in cattle (hormones). CODEX sets the world standards for foods and dictates to the FDA and USDA what they want. The new bill by CODEX is called the "Proposed Draft Guidelines for Dietary Supplements" and will supersede the laws of any member nations government. It states:

1. No vitamin, mineral, herb, etc. can be sold for preventive or therapeutic use.
2. None sold as food can exceed dosage levels set by the commission.
3. The CODEX regulations for dietary supplements would become binding for all nations, eliminating the clause within the General Agreement on Tariffs and Trade (GATT) that allows a nation to set its own standards. Any GATT member country,

including Canada and the U.S. that does not comply can be heavily fined.

4. All new dietary supplements would automatically be banned unless they go through the CODEX approval process.

Some day your supplements may be illegal because some will let it happen. A crisis will have to occur first in some company that is manufacturing natural vitamins. Public opinion will have to be swayed into believing that natural supplements are bad for your health or they have something better. This will probably be based on some ridiculous lie or desperate act.

Tamoxifen is used as an anti-estrogen drug in the treatment of breast cancer. They report there is conclusive evidence it reduces the risk of contralateral breast cancer. Tamoxifen is a known carcinogen. What good does it do to take a drug to kill cancer in one place if it increases the risk of cancer in other parts of the body?

Trichlorethylene is used in adhesives, paints, plastics, pesticides, and as a solvent for cleaning metal parts. Also used in the manufacturing of rubber and a degreasing agent in dry cleaning. The medical and dental professions use it as an anesthetic and it is used for the removal of caffeine from coffee. Effects the nervous system and causes cancer.

Urethane is found in most alcoholic beverages, except for beer.

Vaccines are supposed to be a substance of dead or live bacteria or viruses that is injected to further fight off disease. According to the Encyclopedia of Medicine by the AMA states, "a vaccination is a procedure to stimulate or bolster the body's immune system. Vaccination is a term used for active immunization, which killed or active microorganisms are introduced into the body by injection." Supposedly, these vaccines are to help

protect us from disease that has not been a threat to civilization for years, until someone is immunized. Then it returns on a continual basis to cause harm and grief. If the medical profession feels they must eradicate disease off the face of the earth, why do they keep recycling the organisms?

Vaccines are required by law for newborns before releasing them from the hospital and for children before admittance to school. The required vaccines at 2 months of age are Polio, DTaP (diphtheria, tetanus and acellular pertussis), Hib (haemophilus influenza type b) and HepB (hepatitis B). At four months, Polio, DTaP, Hib and HepB. At six months, Polio, DTaP and Hib. At twelve or fifteen months, MMR (measles, mumps and rubella), Hib, HepB and DTaP. At four to six years, Polio, DTaP and MMR are required. Parents are not told that every state has an exemption that does not want to have their children vaccinated.

The immune and nervous system in infant children are not fully developed. In Part three (Weakened Immunity) it describes the immune system and how antigens can suppress or weaken our natural immunity. After learning about the immune system you can understand why infants or anyone reacts the way they do to these vaccines.

Vaccines are considered by many professionals and parents as one of the main causes of early infant death and other immune system disorders that relate to future health problems. Vaccines are produced by chemical and pharmaceutical companies that add other ingredients (antigens) along with the dead or live microorganisms. The dead vaccines contain the poisonous toxins (toxoids) produced by the living bacteria or viruses and from the agents or methods used to inactivate the microorganisms. Some of the other ingredients mixed into the vaccines are carcinogenic compounds found to cause cancer. All of which can

cause allergic reactions. Some of the ingredients in vaccines are aluminum as (hydroxide or phosphate) formalin (formaldehyde), glycerine, methanol alcohol, 2-phenoxyethanol added as a preservative (ethylene glycol), and thimerosal a mercury-based chemical. As some of these compounds sit dormant in the body for years, they can be influenced to reactivate from bacteria and viruses, stress or other environmental chemicals. In other words, what the vaccine was to prevent could appear a few years later. The more vulnerable you are, the lower your immune system is the higher the reaction, especially in infants.

Live vaccines use living organisms that are passed through animals hundreds of times to weaken their strength. The animals used include chickens, ducks, horses, monkeys, rabbits or rodents depending on the vaccine. The advocates feel as the virus travels through the animal cells that the RNA and DNA can be transferred from one to another. In other words, a virus from the animal can be in the vaccine and slip past quality control. It seems logical that parasites from these animals could also be present in vaccines.

In a book called *Modern Day Plagues*, by Louise Tenney, she quotes Dr. Robert Mendelsohn. *"There is a growing suspicion that immunization against relatively harmless childhood diseases may be responsible for the dramatic increase in autoimmune diseases since mass inoculations were introduced."*

A recent article in the December 1996 issue of Money magazine, titled *"The Lethal Dangers of the Billion-Dollar Vaccine Business"* states: *"With government approval, drug companies sell vaccines that can leave your child brain damaged, can spread polio from your baby to you-and can even kill."*

This article further states that health officials were aware that, the oral vaccine DPT they recommended would cause about 10 polio cases each year, but they considered those human sacrifices to be acceptable. Worst of all, this article describes how these vaccines are grown on the kidneys of monkeys. A Harvard Medical professor describes this as *"a ticking time bomb"* because *"the viruses carried by the monkeys may be transferred to humans in the vaccine, with very bad health consequences."* A recent article suggests the oral vaccine is no longer preferable in the U.S., and that they will start using the original vaccine.

Statistics show over ten thousand infants die yearly from sudden infant death syndrome (SIDS). Symptoms from the DPT vaccine seem very similar to that of SIDS. One state department health official concluded in 1979 the *"DPT vaccination may be generally unrecognized major cause of sudden infant and early childhood death, and that the risk of immunization may outweigh its potential benefits"*. Many doctors prefer giving the DPT instead of the DPaT (live milder version) to infants because it is cheaper. Some say infants are not supposed to be given the DPT vaccine but one manufacture of DPaT says it is not to be used below 15 months.

If all the problems caused by vaccines were purely accidental they would fix the problems but these same problems have continued for over fifty years. They tell you without immunizations; (a) your child is at greater risk of catching one of the vaccine-preventable diseases; (b) your child can be a disease threat to other children; (c) your child may be excluded from school or child care during disease outbreaks. There are many laws on child abuse and of course, everyone wants to protect the children from harm to promote their products. Any parent who willingly subjects their child to vaccines after learning the facts and

effects should be prosecuted to the highest degree. This is the worst form of child abuse from not only parents but also all those responsible that manufacture, distribute and administer them. When you evaluate the mounds of evidence over the last fifty years you will ask yourself over-and-over as the tears are running down your face, GOD why has this type of genocide been allowed to continue for so long. We can not undo what we as parents or what our parents have done in the past but we can control our future decisions and avoid these deadly risks.

Vinyl Chloride is used as a plastic adhesive and the main component of PVC pipe. Effects the nervous system and is a known carcinogen.

VOC (Volatile organic compounds) are organic chemicals that when drying they evaporate into the air. They are found in adhesives, cleaners, clothes, cosmetics, furnishings, gasoline, paints, plastics, smoke and water. VOC's are thought to be bigger risks in sick building syndrome. Ozone will reduce VOC's within minutes.

Water consumes millions of people yearly due to infectious and parasitic diseases transmitted through it. In 1992, it was reported that contaminated water caused 900 million episodes of diarrheal disease worldwide and the deaths of two million children yearly. In 1993, the World Health Organization reported that 16.4 million deaths worldwide were due to infections and parasitic diseases. Eighty percent of this is estimated to be linked to contaminated water. These totals equal out to about 35,000 deaths a day due too contaminated drinking water.

Contamination from a pollutant can be the result from a substance that is natural or synthetic. To pollute means to make something unclean or impure. Substances that upset the balance of aquatic systems are animal and human waste, hospitals,

industrial and home pesticides, industrial chemicals, chemical fertilizers, fuel additives, silt and the salt used on roads.

Other substances that have been appearing in our drinking water in large quantities are pharmaceutical drugs, which are given to animals and humans. A report from German scientists says anywhere from 30 to 60 drugs can be measured in a typical water sample. These drugs are from antibiotics, chemotherapy chemicals given to cancer patients, hormones, painkillers and vaccines. When toilets are flushed, the drugs go to the waste treatment plant. Then the waste is spread onto the land or into the soil. When the plants have excessive amounts, it is usually flushed accidentally into the river.

Mercury is another problem that is spreading throughout our rivers and lakes. Any form of mercury in our surface waters is highly hazardous to our environment. In Kyushu, Japan, methylmercury was responsible for 1,800 cases of mercury poisoning. The results of discharging mercury into Minamata Bay from factories poisoned the fish, which were then eaten.

In 1992, forty percent of all lakes and rivers in the U.S. were unfit for swimming or drinking due to chemicals, pathogens, and other organisms present in the water. Most of the viruses and bacteria that contaminate our drinking are resistant to the chlorine and used for purification.

The major pathogens related to contaminated water are:

1. **Viruses** • Enterovirus, Hepatitis A and E, Norwalk virus, rotavirus, astrovirus, calicivirus, coxsackie, adenovirus and reovirus. Hepatitis A is the second most reported infection in the United States. Rotavirus is believed to be responsible for the deaths of 4 to 5 million annually worldwide.

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2. Bacteria • *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia enterocolitica*, and *Vibrio cholerae*. *Helicobacter pylori* have been implicated in the pathogenesis of peptic and duodenal ulcer disease, and the development of gastric carcinoma.

3. Protozoa • *Naegleria*, *Entamoeba histolytica*, *Cryptosporidium* and *Giardia*.

4. Helminths • *Ascaris lumbricoides*, *Trichuris trichiura*, *Necator americanus*, *Taenia saginata* and *Schistosoma mansoni*. (Information from Water Conditioning & Purification Magazine, April, August, 1998).

The bacterial kill rate of ozone is 3,125 times faster than chlorine and it is a 50 percent stronger oxidizer than chlorine. Ozone is 25 times more efficient than hypochlorous acid (HOCl), 2,500 times more effective than Hypochlorite (OCl), 5,000 times more effective than Chloramine (NH₂Cl).

One may wonder why there is so much sickness and disease in the world today and they blame it on GOD for allowing it to happen. We should be putting the blame on ourselves for not speaking out and demanding safe drinking water.

Many of these risk factors are quite common in the home or at work and only a small percentage of these are in actual use. Some of the chemicals listed are carcinogenic, others can cause damage to the immune system and result in short or long term health effects.

Currently, there are 70,000 chemicals in commercial use, and 1,000 new ones are added every year. The long term accumulative effects from these drugs and chemicals are starting to take their toll upon all living life on the planet Earth. The effects of chemicals will not slow down or stop, the damage is already done. Given time, they will destroy the immune system and life, as we knew it.

If more of our food supply were grown organically, our nation would be much healthier and stronger. We would be able to enjoy the full flavor of the foods we eat and they would be higher in vital nutrients. After time, the environment would be cleaner with less chemical pollution in the air, soil, rivers and oceans that would create a better habitat for wildlife. There would be a better variety or diverse type of crops because it would encourage more small and local farms again.

When people are healthy they are capable of working which means more income to the government. If the government could quit subsidizing the larger farmers and not promote their ideologies it would create more competition and may even lower the price of most foods.

The strict standards for organic foods were set by the Organic Food Production Act passed by our government in 1990. This law mandated the creation of a consistent national standard for the term "organic." USDA was bound to appoint a board of experts in all related fields to comprise the National Organic Standards Board (NOSB). The NOSB was to create a workable standard that would reflect the ideals, spirit and integrity of natural and organic foods. Their recommendations were sent to the federal agencies with the final proposed rules that differed from the original proposal. Their newer proposed rules would have allowed:

- Foods that have undergone irradiation to be labeled as organic.
- Food grown or made with genetically engineered organisms to be labeled organic.
- The use of sewage sludge in organic farming.
- Antibiotics to be used in organic livestock and dairy farming.

Little by little, if you fail once, try-try again until you succeed. Well, what do you expect? They keep trying to take our vitamins away, so why not nutritious foods as well? Administrators in the USDA, FSIS, and FDA are U.S. coordinators and delegates to the Codex Alimentarius Commission. This is fact. CODEX rules the roost in doing what is right for us or rather what they think is right. When people are weak, they can be controlled.

As a result of the proposal there were about two hundred thousand comments from irate citizens. USDA announced that they would make fundamental revisions to the proposal. The later proposal seemed acceptable to most but to interpose those changes should have never taken place.

Some of the major food companies are starting to produce healthier foods and many others are considering doing so because of the demand for healthier foods. The food processors with an interest in the drug business fear a government backlash that would hurt their drug business.

In 1994 the FDA gave their expert opinion and defined the word "healthy." Their initial definition was food that is low in fat, very low in saturated fat, without much cholesterol or sodium and having at least ten percent per serving of the daily value of one or more of vitamin A or C, calcium, fiber, iron and protein. What happened to the other nutrients that the body needs?

Hydrogenated oils may be the largest health threat of all time. More and more people are becoming aware of these highly risky oils every day.

Dr. Walter Willett, a Harvard researcher, estimates that *"partially hydrogenated vegetable oils used to make margarine are responsible for more than 30,000 of the country's annual deaths from heart disease."*

Hydrogenated oils not only contribute to heart disease but also to a higher risk of cancer, diabetes, decrease our immune system and they accelerate tissue decay.

Dr. Andrew Weils states that; *"Heat and chemicals used to harden vegetable oils into margarine change fatty acids into unnatural shapes, called trans-fatty acids (TFAs). Bent into the trans-shape, the acids will not fit neatly into cell membranes or other cellular structures. If the body tries to incorporate them anyway, the cell may become deformed. As a result, trans-fatty acids not only contribute to heart disease, but may also increase cancer risks, promote inflammation and accelerate tissue degeneration."*

In Weil's book called *Spontaneous Healing*, he states, *hydrogenation creates unstable molecules, compounds that damage DNA and cell membranes.*

In another book called *Fats That Heal, Fats That Kill*, the author states, *"in this (hydrogenation) process, oils are reacted under pressure with hydrogen gas at high temperatures in the presence of a metal catalyst, usually Raney's Nickel, which is actually 50% nickel and 50% aluminum. Aluminum is particularly worrisome, because its presence in the human body is associated with Alzheimer's disease and osteoporosis."*

These highly unnatural **"BAD OILS"** (saturated or hydrogenated oils) are used by the commercial food industry as a common ingredient in almost all foods and cooking oils. They are used to fry foods in because they can be used repeatedly for a longer period with savings to the processor or owner. These oils not only affect the flavor of foods making them less desirable but plug up our plumbing as well.

The result of hydrogenation is a poisonous molecular distortion of the fatty acids that turn them into harmful TFAs. Research

shows that the warped fatty acids raise bad cholesterol and lower good cholesterol levels. The long-term health risk on using these bad oils far outweighs the processors short-term savings.

The author of ***Facts About Fats***, John Finnegan states in his book; *"The fats and oils story may well be the greatest scandal of ignorance, disinformation, and greed in the entire history of food production."*

Many have been led to believe that these are the good oils, and the natural fats like real butter cause the high cholesterol problems. I suggest you obtain one of the plastic containers that your favorite restaurant uses and try washing out the oil residue. Do not wash it out on your lawn because it will kill the grass.

Dr. Dale Jacobson says, ***"Give all your junk margarine, Crisco and fake shortenings to neighbors with barking dogs."*** I would not suggest doing this, but I would go through the refrigerator and kitchen and throw out anything that had hydrogenated oil on the label. I personally feel that any item with hydrogenated oil should have the skull and crossbones symbol on the label in red print. Trash belongs in the trash, not in your body. Use olive oil or real butter in your cooking or in your cookies. They may cost a little more but they will taste a whole lot better.

After learning the unhealthy facts about hydrogenated oils, you may be saying to yourself I only use Canola oil because its safe but lets look at the facts a little closer. Canola oil, or otherwise known as Canadian, Rapeseed or Lear oil (low erucic acid rape) is used in fuel, soap, a base in synthetic rubber, as an illuminant for slick color pages in magazines, and as a lubricant or penetrating oil. However, its main use is in thousands of processed foods and salad dressings because of its low cost. The erucic acid contained in Canola oil is toxic to humans and animals

in large amounts. The body may be able to metabolize it in small amounts but is it worth the risk of creating future health problems?

Rapeseed is a member of the mustard family, one of the most toxic of all plants. During World War 1 they used it to make Mustard gas, and banned later because it blisters lungs and skin.

Rats that were fed Canola oil during research developed fatty degeneration of heart, kidney, adrenals and thyroid gland. When the Canola oil was withdrawn from their diet, the deposits dissolved, but scar tissue remained on the organs. It also forms latex-like substances that cause red blood corpuscles to clump together. Rapeseed oil was used in animal feeds between 1986-1991 in Europe and banned because of related health problems in most animals.

Some of the side effects associated with Canola oil may include: allergies or sensitivities, anemia, blurred vision, constipation, depresses the immune system, excessive saliva or mucus, difficulty urinating/incontinence, dizziness, heart problems/arrhythmia's, irritability, joint pain, low birth weights, lung cancer, memory and thinking problems, nervousness, numbness and tingling in extremities, shortness of breath, slurred speech, and tremors (shaking) due to nerve impulse transmissions that effects the central nervous system in walking or other physical movements.

Canola oil is also high in glycosides, which inhibits the function of enzymes. Most people may not feel the effects for many years but when the digestive tract is clean, you will experience some side effects shortly after.

In the past when rapeseed was used it was unrefined and the bad side effects were not experienced. Some researchers feel

the long chain of fatty acids in Canola oil (c22) causes high cholesterol levels and destroys the myelin sheath of nerves that causes a rare fatal degenerative disease called Adrenoleukodystrophy (ADL).

In an article in *Bottom Line Health*, Aug., 98, called "Snack-Food Heaven," by Daniel Freeman, describes another fat substitute called olestra. The body does not digest Olestra. It depletes fat soluble vitamins, carotenoids, and causes cramps and diarrhea in some. A science researcher at Harvard estimates that in the next ten years olestra may cause an additional 9,800 cases of prostate cancer, 32,000 cases of heart disease, 7,400 additional cases of lung cancer, and 390 cases of muscular degeneration. This marvelous fat free substance was introduced by a leading chip manufacture.

Other alternatives to the bad oils are organic Hi-Oleic Sunflower or Coconut Butter from Omega Nutrition. Coconut oil is one of the most stable oils known to man. It contains almost 50% lauric acid that is found naturally in human milk, and it is a source of Medium Chain Triglycerides. MCTs helps metabolize fat more efficiently by converting it into energy instead of storing it. Coconut oil can be used for cooking, frying and baking up to a maximum of 375°F or 190°C. The sunflower oil is ideal for sauté cooking up to 375°F. Processors were using coconut oil until the untruthful negative publicity was created for the use of hydrogenated oils, according to Surgeon General Dr. C. Everett Koop.

The maximum temperature use of hazelnut, olive, pistachio, and sesame oil should not exceed 325°F. Pumpkin and safflower oil should not exceed 212°F. Flaxseed oils should not exceed 120°F. The essential fatty acids in oils are destroyed along with the natural flavor when the recommended temperatures are

exceeded. All oils used for cooking should be expeller or cold pressed unrefined oils.

In the past, government has promoted the use of chemicals in our water and on our foods. In agriculture, farmers were urged to use them on their crops. Scientists have discovered over 60 chemicals known as endocrine disrupters that mimic natural hormones that alter the body's natural growth and development. EPA has been trying to eliminate many uses of chemicals, but we can not rely on them for fully cleaning up our environment. We have to do this ourselves. If we would quit buying the junk maybe, they would quit producing it. Chlorine and all other chemicals used in food and water treatment have a negative impact on health and the environment.

The Delaney Clause of the Federal Food, Drug, and Cosmetic Act prohibits the use of any food additive that is carcinogenic, regardless of the level. There are many laws to protect us from harmful additives used on or in foods, but they do not seem to be enforced. There are 32 terms that describe the physical or technical functional effects for which direct human food ingredients may be added to foods. About half of these have already been mentioned. (21 CFR 170.3 (o))

As stated in the Federal Register Vol. 55 No. 85 Wed. May 2, 1990, "Safety requires proof of a reasonable certainty that no harm will result from the proposed use of an additive. It does not and cannot require proof beyond any possible doubt that no harm will result under any conceivable circumstances."

In 21 CFR 170.3 (i) under Subchapter B-Food for Human Consumption it states: "Safe or safety means that there is a reasonable certainty in the minds of competent scientists that the substance is not harmful under the intended conditions of use. It is impossible in the present state of scientific knowledge to establish with

complete certainty the absolute harmlessness of the use of any substance. Safety may be determined by scientific procedures or by general recognition of safety." Factors to consider the safety are the probable consumption of the substance, the cumulative effect in the diet, and to evaluate the safety of the food or ingredient. When these people consider the safety, it must only be on a short-term effect. (Or those approving these additives are our greatest enemy)?

When the safety of a drug is under consideration by the FDA, an advisory panel is appointed to oversee the testing and safety of the drug in question. Some of those chosen to the advisory panel have financial ties to the manufacturer of the drugs that vote for or against the drug in question. This is definitely a conflict of interest in the highest degree. When it comes to our "safety" there should not be any **"conflicts of interest"** allowed. A recent article in the New England Journal of Medicine called ***"Uneasy Alliance—Clinical Investigators and the Pharmaceutical Industry"*** by Thomas Bodenheimer in the May 18, 2000 explains these conflicts of interest. Currently chairman Dan Burton from the Committee on Government Reform is investigating these conflicts of interest and vaccine development and state the following: How confident in the safety and need for specific vaccines would doctors and parents be if they learned the following:

1. That members, including the Chair, of the FDA and CDC advisory committees who make these decisions own stock in drug companies that make vaccines.
2. That individuals on both advisory committees own patents for vaccines under consideration or affected by the decisions of the committee.
3. That three out of five of the members of the FDA's advisory committee who voted for the rotavirus vaccine had conflicts of interest that were waived.
4. That seven individuals of the 15 member FDA advisory committee were not present at the meeting, two others were excluded from the vote,

and the remaining five were joined by five temporary voting members who all voted to license the product.

5. That the CDC grants conflict-of-interest waivers to every member of their advisory committee a year at a time, and allows full participation in the discussions leading up to a vote by every member, whether they have a financial stake in the decision or not.

6. That the CDC's advisory committee has no public members. The FDA's committee only has one public member.

One might ask himself why these poisons have and are continually being used in our present day-to-day lives. Some strongly feel it's a plan for reducing the world's population, or so the medical profession and others can get richer. Upon reading some of these facts for the first time you may think it is fantasy or the writer is in some other time zone, but facts are facts. Many people live in a cloud of deception and can not see the truth if it was in staring them in the face. They pretend these escalating problems do not exist or that they will work themselves out, while all along they are the ones living in a world of fantasy. Hardened hearts ignore the facts!

Whatever the reason it makes no sense. What does make sense is you do not have to be a statistic or a victim if you choose otherwise. Already too many people die needlessly. This ongoing dilemma does not have to continue as is.

The fact of so many contaminants being added to the food supply makes it difficult to avoid all the risks and probably near impossible for some. You can only do your best to avoid these hidden dangers. One of the best ways to avoid many of the risks in foods is by not eating fast foods or any junk foods. **"Dead foods"** contain the least amount of nutritional value. **HUMANS OR ANIMALS SHOULD NOT CONSUME DEAD FOODS.**

When excessive amounts of junk food are introduced into the body, the unnatural substances that are added in processing

will eventually clog and buildup in the colon. This condition interferes with the body's natural process of elimination, and results in undigested foods that putrefy and turn the environment into a toxic and acidic condition. This cycle produces an anaerobic (lack of oxygen) conditions for bacteria and parasites to thrive, which produce more toxins and poisons. The toxins and poisons are then absorbed into the blood through the colon. The circulation of toxins in the blood lowers its pH and its ability to oxidize carbohydrates, and cells are poisoned. When the kidneys can not filter out these contaminants they are sent via the bloodstream to the lungs. When the lungs are filled and overloaded, it is then sent to the skin as the last resort. This then results in multiple skin disorders, a lowered immune system and ill health. After years of abusing your body, you are probably settled down in the hospital by now. Eating foods like Jell-O and ice cream to regain that lost weight, and having your symptoms treated with more drugs. However, it is in the interest of organized medicine, drug companies, food processors as well as your doctor to endorse their drugs and fake foods. They will all profit from your mistakes.

Junk foods are easily available because they know people are lazy and do not want to take the time in preparing good wholesome meals. Our fast paced job may hinder us from a good lunch or shopping at the supermarket. Fast foods are made to sell and turn high profits. They do not produce them because they are good for us. What sells a product is when it appeals to the eyes and you buy it again when it satisfies your tastebuds. A majority of the population eats because of their wants and desires, not from what the body needs. When healthier eating habits are not adopted, it increases the risk of cancer, diabetes, heart disease, obesity, strokes and other diseases. Not having the time to eat healthy or finding a

restaurant that serves healthy food is a poor excuse. Better decisions far outweigh the new hazards of life that we all have to face in the future. Nutritious foods are a foundation that will enhance any future decision-making at home or work.

Not only are we at risk when admitted to a hospital, the workers are subjected to many of the same risks if not more. The full implementation of ozone in hospitals would save many from needless infections. Applications of ozone to air conditioning systems, used for sterilizing equipment, laundry facilities, and in operating rooms could greatly increase the protection of everyone. The high insurance rates' doctors and hospitals pay could soar to all time lows. The world might just come to an end if the medical establishment was to ever encourage the use of ozone.

The biggest risk we face after learning the **"hazards of life"** is when we voluntarily subject ourselves to them and then having to face the consequences of our actions. Paying the price and having to rely on others for everything would be extremely difficult, and a very hard thing to do. For most people it is probably near impossible to ignore or completely eliminate all things that cause harm. Changes must take place in your lifestyle if you want to clean out the substances that irritate and are harmful to any body function. All toxins and waste must be removed to restore balance to the whole body, not just certain parts.

Those that make claims their products will help you without lifestyle changes are only treating the symptoms. Lifestyle changes take time and a firm commitment. When you pass up the opportunity of improving your health, you are willingly subjecting yourself to a life of future health problems. Suffering in anguish with excruciating pain everyday is something no one wants to experience in his or her lifetime.

As a rule of thumb most experts agree that under optimum conditions, healing will take a month for each year you have a disease. Herrings' Law states; "You heal from the inside out, head first then downward, and in the reverse order of how your sickness progressed."

By taking in good nutritious food, the body undergoes bio-chemical conversions that cause positive cellular changes that promote healing. Toxins are produced from eating bad foods that cause negative changes to cells that promote degeneration and disease. Immune cells and nerves in the colon will turn off their response receptors when they are overwhelmed with the toxic substances, which in turn effects the whole body. The small and large intestines play a major role in response of the immune system and keeping it strong. Keeping the digestive and elimination tract clean assures that the immune system receives the vital nutrients to fight against the invaders and prevail.

The ultimate and most optimum conditions are using ozone in conjunction with colon cleansing. Balanced portions of good wholesome foods and nutritional supplements are essential in keeping you on the correct pathway to maximum immunity. Your knowledge of the health risks will guide and keep you on the right path. Everything in combination will accelerate the healing process and shorten the rule of thumb used by most.

Your main goal for detoxification should be to achieve the highest level of health possible and to prevent any future problems. Getting rid of all the symptoms and disease will be an additional benefit for your efforts. Slowing the aging process is conceivable with benefits galore.

The results of complete detoxification are astonishing. Your skin begins to clear and its color becomes more vibrant. Those flabby muscles begin to tone and become

more flexible making you feel as strong as an ox. Those excess pounds you have been hauling around for years are decreasing. Your thoughts are clear and more creative. You are more productive in your work, and the stress will bother you less because you feel better and feel better about yourself. Your senses of hearing, sight, and even the way you smell will improve. Body hygiene improves with cleaner and whiter teeth; cleaner tongue, better breath and the ears are even cleaner. You feel cleaner on the inside. Marriage or relationships will improve because of your better moods. You may not even notice going through a mid-life crisis that causes many to divorce. Depression and irritability will be a thing of the past. Having more energy (feeling more alive), you will want to get out and enjoy more of what life has to offer.

Ozone generators will purify the air in your work or living environment naturally. They can safely control and reduce most of the risk factors at an affordable cost. If one is willing to gain knowledge by devoting a little time and energy in learning about ozone, they can apply it effectively and enjoy its numerous benefits. Ozone eliminates bacteria and virus in your drinking water. Ozone purifies the water and blood in our body the same way. Oxygenation will restore the proper pH in the blood, which allows for the proper functioning of the body's electrolytes that control the flows in and out of the body. Oxygen strengthens the immune system for better health.

Any one of the everyday health risks can jeopardize your health and suppress the immune system. No one in his or her right mind will willingly drink poison or eat when they know it is deadly. Unknowing to the majority is the effects and results from what they are told are safe before they are truly tested. A strong immune system is your best defense.

OZONE APPLICATIONS

Ozone generators are available that can be applied safely to any application. Some of the many applications are:

Air Conditioning	Kennels
Apartments	Locker Rooms
Aquariums	Lumber Mills
Aquatic Plants	Meat Markets
Automobiles	Medical Labs
Bars	Meeting Rooms
Banks	Morgues
Barber Shops	Mortuaries
Barns	Nursing Homes
Basements	Nurseries
Beauty Salons	Office
Bingo Halls	Paint Stores
Bottled Water	Pharmaceuticals
Bowling Centers	Photo Labs
Carpet Cleaners	Poultry Farms
Casinos	Printing Companies
Catering Halls	Produce Markets
Chemical Distrib.	Paper Mills
Compactors	Pulp Mills
Cooling Towers	Realtors
Country Clubs	Rendering Plants
Day Care Centers	Restaurants
Dental Labs	Rest Rooms
Dry Cleaners	Retail Sales
Electronic Industry	Retirement Homes
Fabric Stores	Salad Bars
Factories	Schools
Farms and Dairy	Senior Centers
Fire Restoration	Smoking Areas
Fish Markets	Spas / Pools
Florists Shops	Taverns
Food Processors	Taxidermy Shops
Furniture Stores	Textile Industry
Greenhouses	Trash Bins
Grocery Stores	Storage Facilities
Gyms	Warehouses
Homes	Water Mistlers
Hospitals/Clinics	Water Treatment
Hotels and Motels	Waste Water
Indoor Air Pollution	Veterinary Hospitals

Ozone Reduces and Controls

Algae	Indoor Air Pollution
Ammonia	Obnoxious Odors
Bacteria	Paint Fumes
Car Exhaust	Pathogens
Chemical Gases	Sewage Gases
Chemicals in Pools and Spas	Skunk Odors
Chlorine	Smoke
Cleaning Agents	Stale Tobacco
Cooking Odors	Styrene
Ethylene	Pet Odors
Formaldehyde	Mildew
Fungus	Mold
	Virus

There are ozone generators that run on 120 volts AC or 12 volt DC for your car, boat, truck, or motor home. When driving in city traffic there is no need to suffer from the carcinogens in others exhaust.

Ozone air purifiers help in the disinfection and oxidation of undesirables in your living environment. The filters; also, help in the removal of air particulates that cause allergies. Breathing pure air improves your health and well being. In the home it allows for better sleeping conditions, reduces headaches, allergic reactions, sinus conditions and depression.

OSHA, ASTM, ANSI, AGGIH, and AIHI have proposed recommended ambient ozone levels. For worker safety, the limits of exposure to ozone has been set at 0.2 milligrams per cubic meter (0.1 part per million) for eight hours. Workers should not be exposed in excess of 0.6 milligrams per cubic meter (0.3 ppm) for more than 10 minutes.

**"OZONE IS IDEAL FOR
DISINFECTION, DETOXIFICATION,
AND DEODORIZATION IN ALL
APPLICATIONS."**

Household Ozone

Ozone is effective in purifying the air you breathe and the water you drink with multiple applications in the home. Ozone generators can be used as: portable units in temporary conditions of use from room to room; in closets to freshen clothes; or it may be used in permanent installations. Ozone is a natural solution to bad indoor air quality or better known as "**Sick Building Syndrome.**" Use or application will determine the type of ozone generator needed.

The following are a few suggestions for ozone applications in the home.

Air Conditioning Systems • Air conditioning and ventilation systems that are clogged with dust can provide an ideal breeding ground for microbes, parasites and pathogens. The bacteria known as *Legionella pneumophila*, or as Legionnaire's Disease is common in air conditioning ductwork. This bacterium afflicts up to 50,000 Americans and kills 10% of them. New strains of bacteria are emerging everyday.

Good indoor air quality enhances the occupants' health and comfort. Ozone will reduce airborne bacteria, fungus, mildew, mold, and virus that multiply in ductwork and filters. The elimination of smoke from tobacco and wood stoves, formaldehyde, chemical-cleaning agents, bad odors and fumes, will contribute to good clean air. Clean air will help to eliminate most allergies in the home.

Bathrooms and Bathtub • The use of Ozone in the bathrooms will eliminate bad odors. Chemicals only cover up odors, while ozone destroys odors and keeps the air smelling naturally fresh. Ozone is the most effective deodorizer and the most environmentally friendly solution to your odor problems. Expense costs for

chemical wicks; liquids, sprays, batteries and other items of waste can easily be determined and compared to the cost of ozone. "**Ozone is by far more cost effective.**"

Bubbling ozone into your tub will help to relieve those aches and pains after a hard day's work. Ozone helps to relieve the pain from arthritis, bruises, skin fungus and poison oak. Ozone will help control mold and mildew growth in poorly ventilated bathrooms.

Evaporative Coolers • Ozone helps eliminate bacteria and virus that thrive and multiply in sump water and pads stay cleaner. It helps in the reduction of outside pollutants and contaminates in the air. The air will be fresher and your family will be healthier with fewer germs floating around in the air.

House Plants • Watering house plants with ozonated water keeps them healthier, promotes growth and raises the pH of the soil. Ozonated water increases oxygen and nitrogen content making the flowers fresher and longer lasting. Ozone applied in the air increases shelf life to cut flowers. Ozone destroys the ethylene gases produced by aging and decay. Ozone reduces algae, bacteria, fungus, mildew, mold, virus and reduces root rot.

Kitchen • Small generators can be installed under the top cabinet near the sink for purifying a glass or a gallon of water for drinking and for sanitizing kitchen utensils. Ozone also helps to eliminate bad cooking odors and bacteria on countertops. In pantries, ozone helps in preserving food. Washing your fruits and vegetables in ozonated water helps to reduce the pesticides and herbicides used by growers. Ozone extends their shelf life and they will taste fresher. Some users state it helps in keeping the grease ants away. Others have said drinking a glass of

ozonated water helps bad breath and relieves acid indigestion.

Pets • Ozone reduces and deodorizes pet odors that permeate in the home. Bathing your pet in ozonated water helps oxidize the oil from poison oak. Should your pet decide to confront a skunk, a bath in ozonated water should eliminate the odor. Pets can also show a high sensitivity to chemicals and contaminants from their living environment. Household pets are at ground zero level in homes. Pets are breathing and absorbing more formaldehyde than humans, due to their proximity to the source. Whatever the source, most contaminants are heavier than air and will fall to ground level. If humans suffer health-related illness from these problems, pets will usually suffer much more.

Ozone is heavier than air and with pets being substantially smaller than people makes their tolerance level lower. However, ozone at natural levels is safe.

Ozone helps reduce bad odors in cat litter boxes that usually travel and stink up the entire house. Ozone oxidizes the odor causing substances, allowing the cat and you to breathe better.

Spas or Pools • Ozone gives pools and spas what chemicals cannot, crystal clean water! Ozone quickly and thoroughly rids pools and spas of contaminants, reduces the need for chemicals, stops skin/eye irritation, eliminates pool rings and protects equipment. Some of the ozone generators manufactured for home pools are not that expensive, and can be adapted for other uses around the home. Installing ozone equipment in public pools is more expensive because of state laws that discourage most from using it but the benefits of healthier water; maintenance, time and money far exceed its original cost.

Farm and Ranch Applications

Barns • During the winter months, odors and stale air problems exist in barns mainly due to livestock waste products, moisture and lack of air circulation. Personnel and livestock inhale ammonia and other gas fumes. In time, these fumes can be detrimental to one's health. Higher concentrations of ozone are needed to oxidize ammonia gases. The reduction and control of bacteria, fungus, mildew, mold, virus, and bad odors will produce fresh clean air in any environment.

Livestock Water • Ozone can be bubbled into watering troughs for drinking or used in the main water supply to wash, clean and sanitize the livestock's environment. Ozone will kill bacteria, fungus, virus, algae, mold and oxidizes other impurities in the water. Cleaner water means healthier livestock, lower veterinarian bills, reduced labor, higher profits and non-contaminated foods for the consumer. Sick livestock can be treated with medical ozone treatments at a much lower cost. There are no laws or restrictions against this that the writer is aware of at this time.

Bulb and Seed Storage • Lower product loss can be achieved by applying ozone in the storage environment of bulbs and seeds. Ozone will help in preventing the growth and reduction of fungus, mildew and mold. Pathogens are reduced on potatoes, onions and other soil vegetables in storage, which extends their shelf life.

Compost Bins • Odor problems can be reduced dramatically by watering frequently with ozonated water. This makes the compost elements more biodegradable and odorless.

Dairy Farms • Applications of ozone in the air and water supply are essential for the reduction of pathogens and sanitizing of equipment used in the production of dairy

products. Injecting ozone into the livestock's liquid waste slurry, before and during watering of pastures will help in the decomposing process and the reduction of pathogens. Ozone is a better alternative than chemicals and products will be safer for public consumption. Ozone reduces bacteria, organic contaminants, chemical gases, mold, mildew, virus, and rotten odors that contribute to unhealthy air.

Feed and Hay Storage • Ozone retards the growth of fungus, mildew and mold in the storage of livestock feed, and hay in barns. Livestock will also have the opportunity of consuming safe foods.

Greenhouse • Ozone, applied in green houses reduces and controls bacteria, fungus, mildew, mold, and virus that thrive in humid environments. Ozone destroys ethylene gas, which is produced in living plants as well as harvested plants. Ozone provides a natural environment, which promotes growth, vigor and added shelf life to plants.

Plant Soil • When ozone is generated from air, the first reaction in the process changes the nitrogen molecule into a three form reactive nitrogen atom. This is done the same way that it changes the oxygen molecule from a two form into a three-form molecule, which then becomes ozone. The nitrogen triple bond is the most chemically stable bond known and the reaction takes place to a minor amount. The nitrogen atom can react with the oxygen molecule to form more oxygen atoms.

During the ozonation process, some compounds like ammonia and cyanide is broken down into nitrogen and water. Compounds that are more complex can be converted into the safer basic elements. In most reactions, the main by-product after oxidation is oxygen. Watering plants with ozonated water adds oxygen, nitrogen and

raises the pH of the soil. This promotes plant growth and healthier plants.

Poultry • Utilizing ozone in the poultry environment during the growth cycle reduces the pathogens before processing. Poultry, when raised in this environment will provide safer foods and reduce many other related safety risks. The growers' profits will rise. Chickens will gain more weight for market and the mortality rate will be reduced. Growers will save on chemicals, medications and vaccines that are normally given to the chickens.

An ozone application in the air or water is a better alternative for poultry hatcheries as a disinfectant than formaldehyde. If kept in an ozonated environment, hatched chicks are less likely to be infected from microorganisms on eggshells and from their environment. Using ozone in the air and water supply can eliminate bacteria, fungus, virus and odors. Cleaner air breeds healthier and safer poultry.

Retail Market Applications

Compactors and Trash Bins • When your back warehouse doors are open and the wind is blowing just right, obnoxious odors can spread throughout your business. Ozone controls these bad odors and complaints from customers or neighbors, and cleans the environment.

Delicatessen and Salad Bars • Ozone enhances the taste and eye appeal in some foods. Bad odors from some foods can effect the taste of others. Bacterial cross contamination between different foods is reduced and controlled. Ozone extends the shelf life in the case and makes foods safer for public consumption.

Dry Foods in Storage • Foods that are not normally refrigerated will last longer in warehouses. Ethylene and ammonia off

gases and bad odors are oxidized to safer elements. The elimination of forklift fumes and off gases extends the shelf life and provides a cleaner working environment. The control of insects, fungus, molds and mildew increases the storage life to cereals, grains, seeds and other dry food items.

Employee Lunch Rooms • Smokers and non-smokers can sit together during breaks with fewer complaints. Exhaust fans should be on during heavy smoking. Ozone is nature's tool for cleaning the environment.

Fish Cases • The reduction of pathogens adds shelf-life and the fish will be safer for public consumption. Bad fish odors will not linger in the fish department or permeate throughout the store. Ozone enhances some seafood by bringing out its color for better eye appeal. Turning off exhaust fans will add to your profit, and the ozone will do a better job of odor control.

Floral Coolers • By applying ozone in storage or the sales case you will add shelf-life to flowers. The ethylene gases that are produced by aging are destroyed. Bubbling ozone into a five gallon flower container keeps the water cleaner longer, adds oxygen and nitrogen to the water, and makes them fresher. Ozone controls the growth of fungus, mold and mildew on the cooler walls, and other equipment.

Food Prep Areas • When ozone is applied as an antimicrobial agent in the air it will act as a processing aid for microbial reduction. Equipment will be free of bacterial slime with less cross contamination caused by airborne pathogens.

In food preparation areas or in the working environment, the ozone concentration level should never exceed the safe limits set by OSHA and other agencies. Ozone at these levels would only be comparable to

that which is already present and found naturally in the environment or used in concentrations that are tolerated by the workers.

Main Water Supply • All supermarkets can let Mother Nature use her most powerful tool (ozone) to purify all water supplies with one complete packaged system. No matter what department, you will know is safe, clean and free of disease causing material. Ozonated water would insure the safety and quality of all foods. The main water can be connected to smaller water vending machines and bottled with higher profit margins, and would allow extra space for other products. The same water supply could also be used as the feed water to the refrigeration evaporator condensers or water towers with added savings on other treatments.

Perishable Foods • Ozone reduces food borne pathogens and extends shelf life to meats, fish, fruits and vegetables while in storage or in the sales case. Bacterial slime is controlled on fresh meats; the refrigerated produce coils, and drain pans that cause cross contamination.

Restrooms and Washrooms • There are many potential sources that can harbor bacteria and many areas where they can hide. In warm and humid environments, pathogens can multiply to dangerous levels very quickly and easily hitch a ride back to the work environment. The use of ozone in public or employee restrooms or washrooms will control bad odors and cross contamination of pathogens from workers to foods.

Water Mistors • Utilizing ozone in the water supply of misters used in meat and produce coolers or cases will keep the spray nozzles cleaner. Cooler walls, cases, and other equipment will stay cleaner with the reduction of algae, fungus, mildew or mold growth.

Processing and Storage of Foods

When ozone is used in the processing or storage of foods as an antimicrobial agent or as a processing aid it will benefit all perishable foods in storage, all phases of processing, preparation, and enhance the quality of the working environment at the same time. A cleaner breathing environment raises worker productivity with fewer accidents.

Ozone is the safest and most natural purification and disinfection agent in use today. It is the strongest and most ideal antimicrobial, bactericide, fungicide, and deodorizer, detoxifying agent, germicide, sanitizer, sterilizer and vermicide agent in use today.

All perishable foods in their growth stage are subjected to oxygen and ozone. The lack of it causes spoilage organisms and pathogens to multiply which causes decay and sickness. The chemical reaction and process of plant cells in the presence of light, change formaldehyde into plant sugar. The granules produced, starches (sugar) are called plant "**quantasomes**" which are present within the chromosome, and are postulated to be the units of "**photosynthesis.**" Photosynthesis begins with plant quantasomes and quanta light (sunbeams). The waste by-product of photosynthesis is called oxygen-ozone (free oxygen). This has been a natural process since the beginning of time. Ozone is nature's tool for cleaning our environment that we keep insisting on polluting.

The reduction and control of pathogens are essential on fresh food products like fish, fruits, meats, and vegetables from farm-to-table. Spoilage-organisms like bacteria, fungus, mold spores, and virus reduce the product shelf life. These organisms thrive and multiply faster at higher temperatures and high humidity.

Many of these organisms will multiply even at lower temperatures during refrigeration. Most of the cross-contamination of foods occurs during storage.

Organic or bacterial "**slime**" grows on refrigerated evaporator coils, drain pans and at times it plugs up the condensate drain lines. As the air travels through the coil to be cooled it picks up the bacteria and blows it across the room contaminating the foods. When the coils are neglected and not cleaned on a regular basis, the slime can restrict the flow of air to almost nothing. Those working in these areas are breathing the stale contaminated air and suffer the consequences. Ozone has the capability of destroying bacterial slime in a matter of a few days and can turn the old stale air into cleaner air.

In low concentrations, ozone is generally a stronger fungicide than a bactericide. Ozone in low concentrations can prevent the growth of mold on the surfaces of cooler walls and fruits in storage when the temperature is below 50 degrees. At lower temperatures, the microbe's metabolism is reduced and the effect of ozone is more beneficial. The microbial effect of existing mold spores is increased with higher concentrations of ozone and higher humidity. Good air circulation also raises the microbial effect and sterilization of the air.

When fruits and vegetables are stored they absorb off gases that are produced from their ripening and decay. The odors from packing materials, mold spores, and other contaminants contribute to rapid ripening that effects the taste. The process of respiration is speeded up along with faster ripening when more off gases are being produced. Ozone will oxidize the metabolic products and neutralize the odors produced during the ripening stage in storage. This helps preserve and almost doubles the shelf life, and enhances the taste of each by retaining their own original

flavor. The extension of shelf life and less shrinkage adds tremendous savings with higher profits.

The shelf life will vary on perishable foods when they are subjected to ozone with various benefits between them. Factors like age, freshness, quality, humidity, temperature, the condition on receiving, and the reduction of pathogens during ozonation will all determine the extended shelf-life of each different food type. To much ozone can damage perishables and have the opposite effect that was intended for its use. Positive effects will show at low and constant levels of .05 ppm of ozone and it allows workers to enter the storage area.

Ozone will be constantly consumed and absorbed during the oxidation process. To achieve the full effectiveness of ozone during storage of fruits and vegetable the humidity levels should be kept between 90 to 95 percent. The effectiveness is influenced (lowered) due to the presents of steam or 100 percent humidity levels. The microorganisms have to be in a certain condition of swelling in order to be attacked by ozone. When the humidity level is below 50 percent, the efficiency of ozone slows as a bacterial medium.

All growers and processors should be using ozone to wash fruits and vegetables instead of chlorine. Ozone can be used in bin, dump, and dip tanks, flumes, or spray wash systems at an affordable cost.

Ozone is efficient on meats as low as .04 ppm to retard and control the growth of bacteria. Higher levels of .1 ppm have been used for curing or aging beef. The higher level tends to oxidize fats, and actions of the digestive enzymes soften and slacken muscles and connective tissue that makes it tenderer. This process takes about 44 hours with ozone and about 20 days without it.

Billon conducted research with a detailed report on beef, lamb, pork, chicken, and rabbit stored in a normal atmosphere and found that significant levels of microbial contamination sets in after 7 days. The same levels were reached on meats when exposed in an ozonated atmosphere only after 14 days under identical conditions. Shelf life can be increased by 30 to 40% in and ozonated atmosphere if the meat has low bacterial counts to start with.

Water can be ozonated and frozen for storage in fishing boats while at sea. Ozonated water can be used for washing during processing and air applications when in storage. Fishing boats in Canada are able to stay out for about 14 days before returning to port by using ozone in the storage water. Ozone can extend the shelf life in a retail case from 1 to 3 extra days.

The full use of ozone from farm-to-table could drastically cut down infections caused by bacteria, parasites, and viruses. According to the latest reports from Center for Disease Control and Prevention there is an estimated 14 million food-borne illnesses each year in the United States. Of these, 30 percent are caused by bacteria, 3 percent by parasites, and 67 percent by viruses. Viruses enter the body through the mouth via food, water, or other people. Once established they can cause two types of infections. They can adhere to the intestinal track and cause viral gastroenteritis (stomach flu) or to the liver causing viral hepatitis. The main viruses associated with gastroenteritis are adenovirus, astrovirus, calicivirus, Norwalk virus, and rotavirus. Rotavirus kills an estimated 600,000 children globally each year and 55,000 children are hospitalized in the United States annually. The viruses associated with hepatitis that are food-borne are hepatitis A and hepatitis E viruses.

Any food-borne illness can be life threatening especially to the young and elderly. These numbers from CDC are only reported cases and under-estimated. Another article estimates that 76 million food-borne illnesses are reported annually in the U.S., which resulted in 325,000 hospitalizations and about 5,000 deaths. The numbers differ but it proves that many foods are unfit for human consumption. Anyone should be able to see from the previous statistics that the methods currently being used are not working. If processors continue using only chlorine, these statistics will keep rising every year.

Ozone has the ability of saving hundreds of thousands of lives annually and millions from food-borne illness relating to food contamination. Mistakes do happen in the handling and processing of foods, and will always continue to happen. When mistakes are made, you are placing your business, your customers, and your reputation in great jeopardy.

The main goal for food processors should be to have the safest possible food delivered in the freshest condition to the buyer. That means that the water supply is the key in every step of the food chain from farm-to-table. Safe water is the key to life. Without it, human life would cease to exist. With the world's increasing industrialization, water pollution is multiplying at an alarming rate. Safe water means what it says! Water that is free of algae, bacteria, cysts, fluoride, herbicides, mold, pathogens, parasites, pesticides, yeast and viruses.

SAFE food and water are needed for the health and future of any nation. A healthy nation is a strong nation. OZONE is what makes this happen. Compared to other alternatives, it is the only SOLUTION!

If everyone wants to continue having an abundant supply of safe food at an affordable price and to export it all over the

world, someone needs to start making some important decisions. We need to start conserving the food resources instead of letting most of it go to waste. Taking advantage and using ozone to its fullest potential will add to our nations' food supply and the supply of other nations'. The threat of overpopulation makes this a necessity. If contaminated foods are a conspiracy for depopulation, it is not only unnecessary but also extremely selfish in the eyes of many individuals.

The dollars saved and the benefits received from everyone in the food chain, far exceed the low initial investment. The operational cost for the production of ozone is minimal compared to your other expenses. Ozone can insure the safety and quality of all food products.

Cross contamination happens very easily in the processing and retail sales of foods, even when strict Health Code Laws are enforced. Ozone enhances the quality of the worker environment while reducing pathogens and contaminants in the air and water. Workers would enjoy a cleaner and fresher environment as well as providing safer foods to all their customers. Environmental benefits and applications of ozone are almost endless.

Ozone is environmentally safe. There are no unfavorable consequences with the use of ozone to the environment except to the pollutants that dirty and contaminate the air we breathe, and the foods we eat. The use of ozone will save on chemicals normally used to control pathogens that wind up contaminating our air and water resources. The reduction of the chemicals used will not only enhance the environment but our health as well. The biggest consequence to our environment is by not using ozone.

We are already seeing the bad effects on the environment and the ecosystem with the use of chemicals. When we keep

feeding the environment with toxins, it will produce toxins. Most all of the chemicals used in growing crops, in the processing of foods, the drugs we use, the excess from waste treatment plants eventually winds up in the ocean. From the streams to the lakes, from rivers to the ocean, marine life, animals, and birds are dying. If we want to get ourselves back in balance, we have to get nature back in balance. We feed on nature and depend on it for our survival.

People as well as the animal kingdom were not made to ingest chemicals in their diet. Science should be working to re-engineer our bodies first instead of concentrating on genetically engineering our diet. Creating a new synthetic body could be their biggest challenge and biggest moneymaker ever. The chemical companies would have to develop a new synthetic blood made up of chemicals. They could call this new blood type CWC (compatible with chemicals). We could slowly evolve into cyborgs or robots to live and survive the new millennium. There would not be the worry of overpopulation or having plans for depopulation because of not having enough food to go around. There would be enough room for everybody; the only thing we would have to worry about is getting our daily ration of chemicals. Some of us may be able to survive without a new body but what about everything else in nature. On the other hand, maybe nature will survive our acts of incompetence and we will not.

The phrase **"good up high - bad nearby"** used by our fabulous EPA to describe **"good ozone"** and **"bad ozone"** refers to atmospheric ozone and smog. You have already read about how they come to these conclusions with the use of ozone monitors in most all the major cities.

Moreover, how the chlorine compounds in the air give false readings on the monitors used. Their phrase should read, **"The**

chemicals produced nearby is bad everywhere."

Being raised and working in S. California, I can remember on smoggy days the tears would run and my eyes would burn. I do not remember smelling ozone but did smell gas fumes. My nose has become very sensitive to ozone because I really love the smell. In Oregon and now in N. California the smell of ozone is evident during storms or down drafts from the upper atmosphere. The fresh smell of ozone does not smell like the smell when they are burning the rice fields or burning trash. On hazy days, you can not smell ozone, you only smell chemicals and other contaminants that cause the pollution. Ozone in high concentrations has similar effects on the lungs like smog but you can most definitely tell the difference in smell.

Our tax dollars could be spent far more wiser if government promoted the use of ozone instead of wasting it on misinformation and the promotion of things that are really causing harm to our health like chemicals and drugs. It seems the real culprit never gets the blame and something else is always used as their scapegoat.

It is understandable why some government agencies are so against ozone. The full use of ozone could alter the economy of our nation. The chemical, pharmaceutical, medical field, and others would not make as much money. Some government agencies would not have anything to do and may be out of a job. One would normally think, the health of the nation is much more important than its economy. In other words, would not a nation prosper more economically if it were a healthier nation!

OZONE & SMOG CONTROVERSY

Applied Ozone Systems received a letter from the California Air Resource Board dated Nov. 17, 2006 informing us about Assembly Bill 2276, which the governor had already signed. The bill directs the Air Resource Board (ARB) to develop and adopt a regulation to limit the ozone emitted from indoor air cleaning devices in order to protect public health. The regulations would include emissions standards for ozone from air cleaning devices; a ban on the sale of higher emitting devices and requirements for public disclosure of information on ozone levels emitted from air cleaning devices.

The letter came as a surprise and after checking the web page links to find out more information we found we were on a list for selling dangerous ozone generators. We took this a little personal with a necessity to investigate it further.

They say no government agency has clear authority to control ozone emissions from devices but this law gives the CA Air Resources Board to regulate the amount of ozone the air purifier's produce. They claim the amount of ozone the air purifiers produce is 3 times higher than the state outdoor air quality standard that results in levels that are equal to a stage 1 smog alert. This information was stated in the Consumer Reports negative article on ozone air purifiers where they had the monitor reading the concentrations directly where the air comes out with the highest reading possible instead of the room concentration levels. The current standard is 90 parts per billion or 0.09 ppm, which is equal to 90 drops in 12,000 gallons of water.

Lets look at some other possibilities and who started this misinformation that may explain why this has happened.

In 1975 when the CA Air Resources Board set the new standard as ozone being the main oxidant in smog and prior to this there was a lot of negative information on ozone from the government trying to suppress the truth about ozone. This action was mainly done in the 1960's to push chlorine for purifying water instead of using ozone. Medical ozone applications were a great threat to the medical and pharmaceutical companies. So now again they come up with their scientific evidence to promote ozone as smog. Anyone can do testing or research and make the results come out as good or bad, just like the pharmaceutical companies do to make promote their drugs.

By measuring pollutants in air, scientists were uncertain about which of the photochemical oxidants, such as ozone or nitrogen dioxide, hydrocarbons, photochemical aerosols and possible other unknown oxidants, were associated with certain health effects caused by smog. Back then the term Oxidant referred to a group of chemicals that result from chemical reactions occurring in the presence of ultraviolet light. For the purpose of setting air quality standards in CA, oxidant was defined as an oxidizing chemical that reacts with a reagent that cannot be oxidized by the oxygen (O₂) molecule contained in air. But when you add the third molecule (O₃) ozone is one of the most powerful natural oxidants known to man.

Pollution is defined as noxious chemicals or refuse that impairs purity. The two main sources of pollution are from automobiles and industry. The offensive compounds with bad odors cause respiratory problems and runny eyes. The most damaging radicals are nitrogen dioxide, nitric acid, nitrous oxide, sulfur dioxide, sulfuric acid, carbonic acid and carbon monoxide. The largest source of contamination that no one seems to mention is chlorine.

Chlorinated compounds are among the largest polluter in the outside air and where ever the chlorinated compounds are used in they will evaporate into the atmosphere.

Scientists found that health effects such as eye irritation, visibility effects and crop damage correlated well with photochemical oxidants measured as a group by ARB's potassium iodide method. The EPA and Air Resources Board has been using ozone monitors in major cities to measure smog and pollutant levels for some time now. Most ozone monitor manufactures will tell you not to operate the sensor or monitor and rely on the readings where there is high levels of chlorine or other halogen compounds, sulfur compounds, strong volatile organic compounds from cleaning solvent vapors, paint thinners, dry cleaning fluids, gasoline vapors, or hydrocarbons, urine or ammonia compounds, acid gases like sulfuric and nitric acid fumes. If the EPA and the Air Resources Board truly wanted accurate pollutant levels they should use a VOC sensor instead of using ozone sensors where there is no ozone that give false readings. Most ozone sensors will give a higher reading with most all strong oxidants. The UV absorption method at 254 nm is more specific to ozone.

Some of the health effects of ozone in higher concentrations like burning your eyes and coughing are similar to those of other oxidants that make up smog. But to make others believe their lies they had to come up with some new scientific research to prove their point using tax payer dollars. There was testing done on rats and crops at high concentrations to show the damage. If they had used low natural concentrations they would have seen how the crops flourished. All plants create ozone thru photosynthesis and it is naturally produced in humans as well.

The Air Resources Board (ARB) and previous health agencies have been

involved in setting ambient air quality standards since the 1950's. In the early years, Calif. agencies set standards for oxidant, a term describing a mixture of known and unknown oxidizing air pollutants. As there newly created scientific information emerged over the years, it became clear (in there eyes only) that ozone was the primary cause of respiratory health effects within the oxidant class.

The first ambient outdoor air quality standard in CA was set in the Los Angeles area because of the severity of smog there. The Los Angeles Air Pollution Control District adopted a three-stage alert system for oxidants and three other pollutants in June of 1955. This system was designed to prevent the possibility of an air pollution catastrophe. In 1959, the CA Legislature authorized the Dept of Public Health (DPH) to set statewide ambient air standards for Calif. During the same year they adopted standards for six air pollutants, including a one hour oxidant standard of 0.15 parts per million.

The Air Resources Board (ARB) was formed in 1967 and assumed the responsibility of setting ambient air quality standards for oxidant and other air pollutants. Over successive years, the ARB adopted increasingly health protective standards for oxidant, and then ozone. In 1969, the ARB adopted a one-hour oxidant standard of 0.1ppm, but revised it to 0.10ppm the following year, adding a decimal place. This change allowed for a more health protective standard. Also in 1970, the ARB analyzed available data and determined that the then existing oxidant standard was below the threshold associated with aggravation of respiratory disease, establishing the standard at a level below which the principal health effects would occur. In 1975, ARB set a standard specifically for ozone (instead of total oxidant), using the ultraviolet photometry chemical analysis method

which is specific for ozone. Prior to 1975 they used the neutral buffered potassium iodide method that had a few faults. In 1988, ARB reduced the level of the standard to 0.09 ppm.

In the years before the ARB was formed, an ambient air quality standard was set without a margin of safety. In other words, an air quality standard was set at the lowest concentration of a pollutant at which harmful health effects had been observed and reported (DPH, 19591). In the present day, air quality standards define clean air, and represent the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. Air quality standards are designed to provide a margin of safety for the most sensitive members of the public.

In June of 1955, the Los Angeles Air Pollution Control District established a three-stage smog alert system for four air pollutants, including ozone. This system was designed to prevent a possible air pollution disaster in Los Angeles County. First Alert 0.5 ppm over 2 hours (Relatively Safe) / Second Alert 1.0 ppm (Harmful) / Third Alert 1.5 ppm (Dangerous).

The owner of Applied Ozone Systems can relate to the high smog in the mid and late 1950s in Los Angeles and your eyes burned continually throughout the day. Back then the smog was so thick it was like a fog and does not remember the smog smelling like ozone.

Back when they had these high pollution levels of smog the Dept of Health and the Air Resources Board were probably under pressure to fix the air pollution problem as well as possible law suits from the health problems created. Car and diesel fuel had lead and may not have been as refined as it is today with the additives, catalytic converters, and running the engines hotter to burn cleaner with less emissions. The technology was just not available then. If

ozone was the cause why was there so much done to blend new fuels and other changes by the auto manufactures to help reduce the smog levels in later years? Because making changes slowly would not hurt the economy.

In 1970, the EPA was established in response to the growing public demand for cleaner water, air and land. Prior to the establishment of the EPA, the federal government was not structured to make a coordinated attack on the pollutants that harm human health and degrade the environment. The EPA was assigned the daunting task of repairing the damage already done to the natural environment and to establish new criteria to guide Americans in making a cleaner environment a reality.

On October 22, 1991, the American Lung Association and other plaintiffs or record filed suit to compel the EPA to complete its review of the criteria and standards for ozone. This action is to update the 1986 Criteria Document and its Supplement (57 FR38832). With the latest and more negative information produced the ALA succeeded in lowering the ozone standards. The American Lung Association is one of the main sponsors to AB 2276. One might ask how much money assembly woman Fran Pavley and others received for their efforts.

EPA statements: What Causes Bad Ozone? Ground-level or bad ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC. NOx, is the generic term for all that contain nitrogen and oxygen in varying amounts.

Applied Ozone comments: The percentage of gases included in the natural dry air we breath are Nitrogen, (N₂) is 78.08 percent. Oxygen (O₂) is 20.95 percent. Argon (Ar) is 0.93 percent. Carbon dioxide (CO₂) is 0.033 percent. Neon, (Ne) is 0.0018 percent. Helium, (He) is 0.00052 percent. Methane, (CH₄) is 0.0002 percent. Krypton, (Kr) is 0.00011 percent. Nitrogen oxide or nitrous oxide, (N₂O) is 0.00005 percent. Hydrogen, (H₂) is 0.00005 percent. Since nitrogen and oxygen are the most common here they will show up in a lot of other chemical formulas including O₃.

Nitrogen dioxide (NO₂) is the main ingredient in the formation of ground-level smog. Nitrogen dioxide is a reddish-brown gas with a pungent and irritating smell that is produced by combustion or heat in buses, cars, truck engines from the gasoline and diesel fuel. Any type of fossil fuel burned from kerosene heaters, un-vented gas stoves and heaters, power generation, primary metal production, trash incineration, welding, tobacco smoke and other sources. The nitrogen dioxide emissions don't just flow out of the exhaust tailpipes during the day they flow during the night, all 24 hours of the day.

Health effects associated with nitrogen dioxide and other nitrogen compounds may include eye, nose, respiratory and throat irritation. May also result in abdominal pain, coughing, difficulty in breathing, fatigue, headache, and nausea. Nitrogen dioxide acts mainly as an irritant affecting the mucosa of the eyes, nose, throat, and respiratory tract. Extremely high-dose exposure may result in pulmonary edema and diffuse lung injury. Continued exposure after several weeks; can contribute to the development of acute or chronic bronchitis, scarring of the lungs, rapid shallow breathing, rapid heartbeat and inadequate oxygen flow. Low-level exposure may cause increased bronchial

reactivity in some asthmatics, decreased lung function in patients with chronic obstructive pulmonary disease and increased risk of respiratory infections, especially in young children.

Nitric acid is highly corrosive and toxic and produced by mixing nitrogen dioxide with water in the presence of oxygen or air to oxidize the nitrous acid also produced by the reaction. It transforms in the air to form gaseous nitric acid and toxic organic nitrates. It is produced for commercial use in the manufacture of explosives, metal refining and fertilizers.

Nitric Oxide (NO) only lasts for 6 to 10 seconds and then converted by oxygen and water into nitrates and nitrites. Nitric oxide occurs naturally in the outer environment, from lightening, temperatures at 1000 degrees C during the combustion of fuels from engines and in the human body for the synthesis of other body functions because it is an oxidizer and a good free radical. Nitric Oxide like ozone occurs in animals, plant life and in humans as part of the natural immune system for killing bacteria and other forms of pathogens along with many other biochemical effects. Nitric oxide is relatively non-toxic, but at high concentrations the health effects include changes to lung function.

Nitrous oxide (N₂O) is a colorless non-inflammable gas, with a pleasant, slightly-sweet odor. It is used in surgery and dentistry where it is commonly known as laughing gas due to the euphoric effects of inhaling it. Nitrous oxide is also used as an oxidizer in racing engines. Nitrous oxide is present in the atmosphere where it acts as a powerful greenhouse gas. It is also used in aerosol cans as a propellant for whipped cream and used in potato chips.

The corona discharge air purifiers will produce some of these nitrogen compounds the same way it does naturally

in the environment. Using them properly will not create any bad effects. Using one improperly in a small bedroom while sleeping with the door shut and no ventilation the amount of oxygen decreases. Since there are higher nitrogen levels in the air there will be higher nitrogen compound levels produced and you may experience some of the bad health effects. Normally the lungs can absorb oxygen at higher rates from air containing ozone which may explain why it helps with allergies, bronchial, or asthma conditions. The health effects of higher gaseous oxides in the home are due to low oxygen levels and the effects will diminish in a day or two after turning down the ozone or shutting the air purifier off. Ozone produced from air with nitrogen oxides has greater bactericidal properties so some may say the benefits received outweigh the risks.

What's the difference between the nitrogen compounds found in the home compared to that in smog? Gasoline manufactured from petroleum contains more than 150 other chemical additives to improve performance. The Material Safety Data Sheet for unleaded gasoline shows at least fifteen hazardous carcinogenic chemicals occurring in various amounts from 5 to 35 percent by volume of gasoline.

Ozone can only be created from oxygen and there is no such thing as bad ozone. It is impossible to produce ozone through chemical actions of other compounds. In the past they said the ozone was formed by the ultra violet rays from the sun. There are basically four main wavelengths in the ultraviolet radiation spectrum ranging from 1000 to 3900 Angstrom units. UV-A light is in the longer wavelength from 3250 to 3900 that occurs in sunlight at ground level. UV-B light is in the middle wavelength from 2950 to 3250 and provides some germicidal action. UV-C light is in the shorter wavelength from 2000

to 2900 and used mainly for the destruction of bacteria. UV-D light is the shortest wavelength from 1000 to 2000 Angstrom units that produces ozone and you need the shorter wavelength to split any of the several types of molecules.

The short-wave ultraviolet does not occur naturally at the earth's surface, because the atmosphere screens out sunlight radiation below 2950 Angstrom units. If any photochemical reactions occur and some of the short wave ultraviolet rays happen to seek through the thick brown smog haze and produced a few of the ozone molecules, the ozone would quickly oxidize the chemical pollutants and revert right back to oxygen. If this would happen on a large scale there would not be any smog.

EPA statement: Hydrocarbons are a precursor to ground-level ozone, a serious air pollutant in cities across the United States. A key component of smog, ground-level ozone is formed by reactions involving hydrocarbons and nitrogen oxides in the presence of sunlight. Hydrocarbon emissions result from incomplete fuel combustion and from fuel evaporation.

Applied Ozone comments: Hydrocarbons are chemical compounds that consists only of the elements carbon (C) and hydrogen (H). Hydrocarbons are combustible, the main components are from fossil fuels like coal, petroleum, and natural gas. The most abundant hydrocarbon is methane. Some saturated hydrocarbons include methane, ethane, propane, butane, and pentane. It is impossible to create ozone from carbon and hydrogen.

Polycyclic aromatic hydrocarbons are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances. They are found in agricultural burn smoke, asphalt production

plants, burning coal and coal tar, cigarette smoke, coking, coal-tar, creosote, crude oil, dyes, forest fires, industrial, medicines, municipal trash incineration facilities, oils, paraffin, plastics, pesticides, roofing tar, smokehouses, solvents, soot, vehicle and truck exhausts, volcanoes, waxes, wastewater treatment plants, and wood smoke. Little more ozone here could be very beneficial.

EPA statements: At ground level, ozone is a harmful pollutant. Ozone pollution is a concern during the summer months because strong sunlight and hot weather result in harmful ozone concentrations in the air we breathe. Many urban and suburban areas throughout the USA have high levels of bad ozone. But many rural areas of the country are also subject to high ozone levels as winds carry emissions hundreds of miles away from their original sources. Healthy people also experience difficulty breathing when exposed to ozone pollution. Because ozone forms in hot weather, anyone who spends time outdoors in the summer may be affected, particularly children, outdoor workers and people exercising. Millions of Americans live in areas where the national ozone health standards are exceeded.

Applied Ozone comment: Ozone is not a pollutant it destroys the bad chemical pollutants. In hot smoggy weather the air is much heavier making it harder for anyone to breath. The lack of winds stagnant the chemical pollution over the cities and the smog pollution just sits there building up creating lower levels of oxygen. Ozone dissipates much faster at higher temperatures with a shorter life span. Ozone is nature's defense to the pollutants we create from technology.

EPA statements: How Does Bad Ozone Affect Human Health and the Environment? Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and

congestion. It can worsen bronchitis, emphysema, and asthma. Bad ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. Ground-level or ozone also damages vegetation and ecosystems. It leads to reduced agricultural crop and commercial forest yields, reduced growth and survivability of tree seedlings, and increased susceptibility to diseases, pests and other stresses such as harsh weather. In the USA alone, ground-level ozone is responsible for an estimated \$500 million in reduced crop production each year. Ground-level ozone also damages the foliage of trees and other plants, affecting the landscape of cities, national parks and forests, and recreation areas.

Applied Ozone comment: This statement would be true if they would remove ozone and replace it with the smog cancer causing chemical pollutants. The health effect symptoms from MSDS state: high concentrations of ozone may cause severe irritation of the eyes and respiratory tract. Exposures above 0.1 ppm causes mucus membranes of the mouth, nose and throat to dry but the symptoms can subside when exposure ends. Ozone always reverts back to oxygen and you can not live without it.

EPA statements: What is Happening to the Good Ozone Layer? Ozone is produced naturally in the stratosphere. But this good ozone is gradually being destroyed by man-made chemicals referred to as ozone-depleting substances (ODS), including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, methyl bromide, carbon tetrachloride, and methyl chloroform. These substances were formerly used and sometimes still are used in coolants, foaming agents, fire extinguishers, solvents, pesticides, and aerosol propellants. Once released into the air these ozone-depleting substances degrade very slowly. In fact, they can

remain intact for years as they move through the troposphere until they reach the stratosphere. There they are broken down by the intensity of the sun's UV rays and release chlorine and bromine molecules, which destroy the good ozone. Scientists estimate that one chlorine atom can destroy 100,000 good ozone molecules. Research indicates that depletion of the good ozone layer is being reduced worldwide. Thinning of the protective ozone layer can be observed using satellite measurements, particularly over the Polar Regions.

Applied Ozone comment: Ozone can destroy these pollutants, they do not deplete the ozone layer. Ozone is heavier than air and if the other chemicals are heavier than air it would be hard for them to reach the outer layer. Ozone is continually being produced by the ultraviolet rays from the sun when it shines in the outer atmosphere. There is a few months out of the year that do not have sunlight over the polar regions, they are in the dark because of the angle of the sun. So naturally if there are no ultraviolet rays there will be a hole. Ozone acts 3,125 times faster than chlorine and is a 30 percent plus stronger oxidizer. It should only take 1 ppm of ozone to destroy 1ppm of chlorine based compounds or other chemical pollutants. Three oxygen molecules make ozone.

Lets look at the natural cycle mother nature has provided for the production of ozone in the outer environment that continues over and over. Oxygen floats upward into the atmosphere and in turn converted into ozone by ultraviolet radiation. Since ozone is heavier than air, it is carried in natural downdrafts into the lower atmosphere. As the ozone falls from the upper atmosphere it cleans the air by oxidizing any pollutant or contaminates which it comes into contact. Being an unstable gas, ozone's life span is between

20-50 minutes so it may never reach the surface. After completing its job, it simply reverts back to oxygen. The oxygen molecule is never lost, it continues to stay the same and rise again for another cycle.

Every chemical or element has an atomic weight mass in g/mol. The weight of oxygen is 15.9 and the weight of ozone is 48. There are 7 elements lighter than oxygen: Hydrogen (1.0079), Helium (4.0026), Lithium (6.941), Beryllium (9.0122), Boron (10.811), Carbon (12.0107) and Nitrogen (14.0067). Somewhere between 15 and 48 the molecules will be too heavy and cease to rise. Chlorine weight is about 35.4 so its lighter than ozone, nitrous oxide (44), and nitric acid (63). The longer the chemical formula the more atomic weight is added. EPA states the ozone-depleting substances destroy the ozone but they also have an atomic weight like the others. The chlorofluorocarbons, hydrochlorofluorocarbons from Freon are heavy along with methyl bromide (94.95), carbon tetrachloride (153.82), and methyl chloroform (133.4). They all seem to be heavier than ozone, so the question is how do they rise to the upper atmosphere to deplete the ozone layer? EPA must have some newly created scientific information other than real common sense scientific information.

Why is there more smog in the summer? There is always the same amount during the winter as there is in the summer. Lets look at the Barometric Pressure or the atmospheric pressure. The higher the pressure helps drive or force more oxygen into the lungs making it easier it is to breathe. The lower the pressure is like going to higher elevations making it harder to breath. On hot days the pressure will be higher and colder days it may be lower. In the hotter days when the smog and pressure are high and there is no wind, the heat can separate the oxygen molecules

into singlet making them lighter to rise higher. The pollutants from industry and exhaust fumes are forced down because they are heavier and because of the higher pressure. The oxygen levels at the surface may be between 10 and 15 instead of 21 percent. When the gas is burned in the engine with less oxygen there will be more soot with higher smog and exhaust particle levels. When the flame burns yellow there is more soot, when it burns blue it is cleaner. So with the higher pressure your body is forced to breathe in more of these bad chemical pollutants into the lungs that create the bad health effects.

Temperature also effects the dissolved oxygen concentration in pond or lake water. The hotter the water the less oxygen and the colder it is the higher the dissolved oxygen concentration. So you might be asking yourself if there is less oxygen in the air on these hot smoggy days where is the ozone. Or how does the sunlight or ultraviolet rays penetrate through the thick brown cloud of soot and particulates to make the ozone?

Three government agencies regulate ozone in air, the EPA (regulates ambient air outdoors that we humans breathe). Occupational Safety and Health Administration of the Dept. of Labor regulates the workplace environments for people who work 8 hrs/day, 5-days per week). FDA regulates indoor air quality for (medical device only) persons who may be confined indoors 24 hrs/day, 7 days/week, 365 days/yr. None have the power to regulate the air within your home.

There is a newly released documentary movie titled WHO KILLED THE ELECTRIC CAR? The Air Resources Board was instrumental in killing the General Motors electric car with zero emissions, yet profess to be an organization that seeks better air quality for the safety and welfare of all the people? So its like Ed McCabe says, by calling natures oxygen smog, and

diverting your attention away from the real polluters, no one has to clean up the environment! By blaming nature, the huge polluters are never forced to take responsibility for the current dirty engine designs and factories, and never have to incorporate any of the already invented clean energy sources. I am sure Ed would agree that the medical establishment may also have something to do with all the false statements.

Knowing the real causes, the Air Resources Board and EPA could not outlaw gas or diesel fuel to reduce the real cause of the pollution or the other strong oxidants from other sources because this would have brought the economy to a screeching halt. So in their minds knowing ozone is one of the strongest oxidizers known to man and to help the anti-ozone industry in their quest decided to blame it on ozone because its produced naturally in the environment in the upper atmosphere. We do not need any regulations that restrict the amount or use of it. We need more laws promoting the use of it in industry. Using more oxygen and ozone in the applications of burning the fuels would create a cleaner and higher burn temperature, reduce the amount of bad omissions from the incomplete burning and raise oxygen levels. Common sense says you use the good up high to fight the bad nearby.

EPA and their environmental groups argue that tighter ozone standards are needed because the asthma rate has gone up as a result of declining air quality. They also profess the ozone is detrimental to public health especially in the children by putting them at risk for lung illness and respiratory problems while ignoring the thousands of ozone testimonials from those it has helped. They also ignore the facts that these problems may be caused by pharmaceutical drugs and processed foods. Mycoplasma pneumoniae along

with other mycoplasmas are common causes of upper respiratory infections, lung disease and severe asthma. Adults and children receive these free of charge in their vaccines, flu shots and dental pain killer shots. These created health problems are extremely beneficial to the medical and drug companies so again they blame ozone to help the economy.

Honeywell, Inc. and the American Lung Association have been involved in an educational partnership to promote clean indoor air since 1993. Honeywell sponsors the ALA and the ALA sponsors the new AB 2276 regulations on ozone. Letter from Randall Dodd (1-10-07) to EPA and CARB applauds their effort to restrict the sales of ozone air purifiers in the residential market. Randall is president of Clean Air Systems Inc in Bellevue, WA and a Honeywell distributor for the five western states. He wants a complete ban on portable ozone generators in occupied spaces. This would clearly increase sales for Honeywell if they get their way. Sharper Image also shows great support. Looks like some special interests going on here trying to get rid of the competition.

The American Lung Association states there are 630 premature deaths, over 4,900 hospitalizations and emergency room visits and over 4 million school absences attributed to ozone exposure each year. If this is true show us the proof and the death certificates that prove ozone is the cause. EPA and the CARB uses their scientific based information produced by scientists employed by them. So they can have any outcome they want. The latest scientific research on the air purifiers in question by CARB were tested with an ozone monitor on the highest setting from 2 inches to 2 feet from where the air and ozone is discharged. Now most reliable scientists doing research would consider if the air purifier was sized for 2,500 square feet they would place it in an area that size

and test the air going into the air purifier for more accurate room concentration levels. EPA says: If used at concentrations that do not exceed public health standards, ozone applied to indoor air does not effectively remove viruses, bacteria, mold, or other biological pollutants. Well over 50 years of reliable scientific research seems to say the opposite, not that it removes them but will kill or oxidize them instead.

Usually when scientist are doing research in their conclusions they say more research is needed. Recently I heard someone talking on the radio and he said he had a friend that was part of the team that studied the ozone hole in the polar regions and stated the hole in the ozone layer was not caused by man and that it was natural. The person asked then why do they say it is man made and his friend replied so we could get more funding from the government.

Whether this misinformation was done intentional or not it is your hard earned tax dollars they are spending for these inhumane actions.

Its time to stop the big cover-up and 30 years of misinformation. Putting the blame for pollution on ozone is an insult on the intelligence of all the people. Everyone should demand that all negative information on ozone be removed from all government web sites and printed material. These laws are highly discreditable and discriminating not only against ozone and our creator but the people that have or that can still benefit from it. Not only has EPA created a great dishonor to themselves with their false statements but to all federal and state agencies as well.

If the EPA and ALA truly cares about the children they should stop their anti-ozone efforts and go after the true causes of pollution.

WHY OXYGEN IS CRITICAL FOR LIFE

When most hear about oxygen they would normally think it is just in the air that we breathe and would die in a few minutes without it. Oxygen is not only needed for human life, it is also required for animals, bacteria, fish, insects, plants, and worms. Almost all living organisms require oxygen. For every action and every process, the human body requires energy which itself requires a sufficient supply of oxygen.

Oxygen is an oxidizer that produces free radicals which most feel are bad for you and promote antioxidants in supplements to prevent damage from free radicals. The truth is the antioxidants do not stop the oxidation process they help promote it. The oxidative process is not possible without oxygen and the free radicals produced.

The oxidative process in the human body is used for the production of energy and body heat. This is done through the oxidation-reduction reactions of foods and nutrients you feed your body by molecular oxygen. When electrons are removed from an atom or molecule it is called oxidation. When the reverse happens and electrons are added it is called reduction.

Your heart beats to circulate blood throughout the whole body to every organ, cell, bones, muscle, tissue and everything else. Blood contains about 20ml of oxygen that is transported in every 100ml of blood. The oxygen carrying capacity of the hemoglobin decreases as the blood becomes more acidic which slows down normal functions and the oxidative process.

The biochemical process and the role of oxygen in the human body are so large and complex it boggles the mind. The following is just a few examples of the process the body uses to utilize the nutrients we feed it for synthesis or the

conversion of producing other essential chemical substances through the oxidation process of free radicals.

Some of the elements the body requires for the biochemical process include amino acids, carbohydrates, carbon, coenzymes and enzymes, fatty acids and unsaturated fatty acids, hydrogen, iron, lipids, nucleic acids, peptides, and proteins. Some use the oxygen while others can continue the reaction process by combining to each other. So you can see why it is important to get a balance of all the nutritional elements in your daily diet.

The brain needs about 20 percent to function. The corneal and retina of the eyes has a high oxygen consumption as well as the skin.

For adrenal function the body uses carbohydrates, and cholesterol for lipid production and adrenal cortical steroid synthesis in the oxidation of cholesterol and fatty acids.

In the thyroid gland there are several functions like hormones being produced from amino acids. Oxygen is also used for the conversions of estrogens and for vitamin D metabolism in the liver. Oxygen assists in the formation of cystine, and the conversion of fatty acids.

The lymphatic system and the lymph capillaries play a large role in getting oxygen to the cells by removing dead cells, poisons, toxins, and excess water from the tissue spaces around the cells.

Dr. Arthur C. Guyton, M.D. quoted in The Textbook of Medical Physiology that all chronic pain, suffering and diseases are caused from a lack of oxygen at the cell level.

In order for our cells to get their oxygen from the blood stream, the cells must be in what he described as a dry state. In this

condition there is no excess fluid around the cells. There is only enough fluid to fill the crevices around the cells. He believed that as long as the fluid around the cells was at the proper water level, contained the right mineral balance, and was free of toxic wastes, the cells would continue to live, function and grow in a healthy manner.

The blood proteins in our blood stream make sure that the current amount of water is kept in our blood stream so that no excess fluids can seep around the cellular walls. If our blood proteins escape out of our blood stream, and find their way into the spaces between the cells, then our lymphatic system must immediately remove these proteins from these spaces. The proteins present in this altered condition will pull both sodium and water out of the blood stream. This reverse transfer causes a water and sodium-potassium imbalance, alters the cells dry state, inflames the cells and reduces the cells ability to produce energy. When this situation occurs, the presence of excess water between the cells pulls oxygen as well from the bloodstream. This reduces the amount of oxygen that can get to the cells through the blood stream.

A prolonged blood protein imbalance will cause pain, sickness, and disease and, if serious enough, can induce death in just a few short hours. Blood proteins are not the same as the proteins we eat. We eat protein to obtain the amino acids from these proteins. From the amino acids, the body manufactures its own proteins, especially those for the blood stream called albumins, globulins, and fibrinogens. Dr. Guyton wrote: "The importance of this function of the lymphatics cannot be stressed too strongly, for there is no other route besides the lymphatics through which excess proteins can return to the circulatory system."

Fluids in the lymphatic system move up the legs, into the large thoracic duct in the chest where the fluids eventually empty into the subclavian vein at the base of the neck. At this point the fluids return to the blood stream with the captured blood proteins to re-balance the system. Dr. Guyton explained that the lymphatic vessels have one-way check valves in them. These valves keep the fluids in the system flowing in only one direction.

Approximately three quarts of blood pulses through the capillaries every minute of every day we are alive. During those same sixty seconds, the heart will beat eighty times and pump water through the tiny capillary pores to supply the cells with minerals, nutrients and oxygen. Fluid engineers calculate that the pressure is so great, and the pumping action so rapid, that the distance the water actually travels is microscopically small. In less than one second, the water flow must rapidly exchange its nutrients, minerals and oxygen for toxins and waste products before the blood proteins pull the water back into the blood stream.

This is why it is so important for the cells to be in their dry state. For every cell to take part in this healthy exchange, the cells must be packed as closely as possible together. The cells must be as little distance as possible from the capillaries.

Dr. C. Samuel West, a specialist in the science of lymphology and distinguished member of the International Society of Lymphology, has proven that food present in cells without enough oxygen will turn into toxic waste and fat. The less oxygen present in the cells, the more pain we experience. Dr. West is a strong advocate of exercise since a lack of exercise reduces circulation and thus the transfer of oxygen to the cells. This leads to high blood pressure and fluid retention.

The lack of A.T.P. (Addenison Tri-

Phosphate) causes the glucose in the cells to ferment creating an anaerobic (without oxygen) condition. This upsets the metabolic processes of the cell. These cells, lacking sufficient oxygen, start manufacturing improper chemicals and soon these cells and their surrounding cells become weak and unhealthy. If prolonged, the entire immune system may start breaking down.

A lack of cellular A.T.P. drastically alters the body's sodium-potassium balance in the individual cells, in the bloodstream, and in the fluid that surrounds the cells. The chemical change also alters and reduces the electrical fields in the cells and the bloodstream. Once this electrical change occurs, minerals begin to fall out of the fluids surrounding the cells and the bloodstream and start sticking together in what is called mineral deposits. If these minerals settle in the joints, arthritis occurs; in the eyes, cataracts occur. When they settle in the arteries, we describe the process as hardening of the arteries.

Our muscles also respond to electrical charges sent by the brain. These messages tell the muscles to contract and release. Anything that upsets this delicate and intricate electrical transfer of energy, as does a lack of adequate A.T.P., will cause the muscles spasm and work or respond poorly. Dr. West created his dry state formula that anyone can understand: Oxygen = Pumps = Electricity = Power (Copyright by Dr. C. Samuel West, December 1998)

The ATP is created from the chemical reactions between glucose and oxygen, which is required for all the energy requiring reactions of cellular metabolism. The glucose or sugars are the fuel for the cells and the ATP is the energy. Foods that contain high amounts of oxygen are the complex carbohydrates like fresh vegetables, whole grains, seeds and nuts.

Dr. Stephen Levine, Ph.D., Molecular Biologist and Geneticist, and Dr. Parris M. Kidd confirmed "oxygen is the source of life to all cells." According to Dr. Levine, "oxygen nutrition" optimizes the concentration of oxygen in relation to a natural food diet. Dr. Kidd wrote: "Oxygen plays a pivotal role in the proper functioning of the immune system..." especially as it relates to the system's resistance to disease, bacteria, and viruses. Dr. Levine added: "We can look at oxygen deficiency as the single greatest cause of all diseases."

Dr. Warburg's research adds further emphasis to these findings. He stated that sub-optimal oxygenation of tissues and cells seen in cellular hypoxia is not only the underlying cause of diseases, like cancer, but also results in a predisposition towards degenerative diseases. The lack of oxygen is the outstanding factor in immuno-depressive illnesses. Most researchers conclude, an increased oxygenation of the bloodstream and cells may enhance or restore overall health.

The nutrients we feed our body from fresh foods are the potential energy, and then when changed into chemical energy with oxygen through the oxidative process there is life in the cells.

Factors that may affect our oxygen supply:

1. Diminishing amounts of atmospheric oxygen. Today, cutting edge researchers believe that even relatively healthy people may have trouble extracting all of the oxygen that they need from the air. In fact, the air itself is becoming more and more polluted, making oxygen extraction more difficult. Physiologists understand that breathing polluted air, or breathing air that contains less oxygen, puts tremendous stress on the humans. Surprisingly, paleontologists have analyzed the oxygen in air bubbles trapped in fossilized amber from the Jurassic Era. Their research

revealed that the oxygen levels were significantly higher than they are today. In fact, many scientists now believe that the dinosaurs became extinct because of a rapid drop in oxygen and the inability of their respiratory systems to adapt to this oxygen reduction. If the dinosaurs became extinct because they could not obtain enough oxygen, is it any wonder that our bodies can suffer as well as our oxygen supplies become more polluted?

2. Eating junk food on a regular basis forces us to use up more of its oxygen reserves than usual in order to metabolize the preservatives and what few nutrients may actually be in the food. Complex carbohydrates and raw fruits and vegetables are high in oxygen with as much as 50 percent of the weight of these foods made up of oxygen. The percentage of oxygen in fats is less than 15 percent while the percentage of oxygen in protein is between 20 and 40 percent, depending on the proteins amino acid profile. Dense food compounds, such as fats and proteins, are not only low in oxygen content, but also require extra oxygen from our bodies to convert them into energy which further depletes our oxygen reserves. Other oxygen-robbing foods include processed sugar, white flour, alcohol and caffeinated drinks. Our bodies have to divert needed oxygen from primary metabolic functions, such as heartbeat, blood flow, brain function and immune response, just to oxidize and metabolize these foods.

3. Excessive stress, depression, and anxiety can rob our bodies of huge amounts of oxygen. Emotional stress produces adrenaline and adrenaline-related hormones, requiring our bodies to draw on its oxygen reserves for their production and eventual oxidation. Infection also depletes our bodies oxygen, which is used to combat bacteria.

4. Individuals with chronically acidic

systems also use up oxygen reserves. This can lead to a cycle of toxin accumulation and oxygen depletion. One way in which our bodies combat excess acidity is by trying to neutralize it with oxygen. To do so, it must continually divert oxygen away from its primary metabolic functions and direct it toward the acidic cells and tissues.

5. When body oxygen falls to extremely low levels for prolonged periods of time, our bodies may become a breeding ground for harmful bacteria, viruses, fungi, parasites and other infectious agents. Most of these are anaerobic, meaning they cannot live in an oxygen-rich environment. Some research indicates that when the oxygen content of our bodies is within a normal level, infectious microorganisms have a more difficult time breeding and multiplying. The partial pressure of oxygen in normal blood should be approximately 97 percent. Within each red blood cell are iron-rich hemoglobin molecules. Approximately 97 percent of the oxygen carried to the cells is attached to these hemoglobin molecules with 3 percent of the oxygen supply dissolved in the blood plasma. When your blood oxygen levels remain low for extended periods of time, the cells cannot get an adequate and consistent supply of oxygen and they may have difficulty resisting the invasion of microorganisms.

6. Lack of exercise. We respond to exercise by increasing oxygen intake by breathing hard and deeper. This increase in blood oxygen levels helps us perform two very important functions. First, the additional oxygen permits the creation and release of more energy for the exercise. Second, the increased supply of oxygen is utilized to remove by-product wastes that are the result of a higher metabolic rate. A sedentary lifestyle can inhibit the removal of toxic wastes from our bodies.

Some sources of information from Stephen R. Krauss, Ph.D and Principles of Biochemistry Sixth Edition.

CLOSING STATEMENT

Because of my personal experiences and my knowledge of ozone I decided to share my "secret," in hopes that others can receive the full benefits that ozone has to offer.

I was fortunate that others shared their secrets with me for better health. I have shared them with you in this book. Everyone should learn this information in their early childhood, but I did not hear about it until the age of fifty. I listened, and I gained knowledge from books, then I made the right choice.

Many make claims that their health products can clean or detoxify the body in 7 to 14 days, and in my opinion, this is ridiculous. Sometimes it takes years to plug up the plumbing (intestines). So do not expect miracles to happen overnight. It will take time for complete body detoxification. Ones' condition will determine the time it takes for total body detoxification, so you need to allow a minimum of at least six months. Staying healthy is a daily job.

Changing your lifestyle for the better is a lifetime of good health. Who wants to spend all their time and money on doctors, hospitals and prescriptions? A simple change in your lifestyle is much less expensive and more rewarding. A persons' life style, what you eat or drink, will contribute to either good or bad health.

Complete detoxification and a healthy environment in the colon are necessary to help rid the body of disease and prevent any future threats. Any self-treatment program requires maintenance on a regular basis as a preventive. The continuing threat of contamination in the air, water, and on the foods we consume, makes daily detoxification a necessity.

It is estimated that 80% of the population suffers from parasites and they do not even realize it. There are 240 diseases, which can be transmitted from animals to humans. There are 65 transmitted by dogs and 39 by cats. In large numbers, parasites can coat the lining of the small intestine, prevent the absorption of nutrients and cause severe constipation.

Some people will ask their doctor about parasites. They are usually told that parasites are not a problem in this country and they only exist in other countries. Most physicians do not want to admit or think parasites are the cause of some health problems. Out of pride or embarrassment, most individuals infected with worms have a hard time admitting it. They continue treating their symptoms; meanwhile, their condition becomes more progressive.

A lack of oxygen and essential nutrients results in a weak immune system. Disease and parasites **cannot** live in an oxygenated environment. A strong immune system will help defend against these everyday threats to the body. Oxygenation results in maximum health.

Laying the carpet (friendly bacteria), nourishing the body (vitamins-minerals and supplements), better eating habits, the binding and elimination of the toxins with whole fiber, and the ozone-oxygen will help in cleaning out the plumbing. This combination will lay a foundation for the **"Ultimate Detoxification Process."** This detoxification process does not just treat the symptom. It gets right to the cause of your problem. Steady use will keep the body in balance. "This Is Essential."

I am frequently being asked about prescription drugs. Personally, I do not use drugs and find it very difficult to after becoming familiar with the Physicians Desk Reference (PDR). The PDR contains each side effect and

contradictions for each drug you are taking. If your drugs are listed, then ask yourself these questions. Have these prescription drugs worked in the past? Do they work now? What are the side effects? Is it worth it? Research is showing that some drugs and treatments are carcinogenic and actually increase the risk of cancer.

There are many natural alternatives for use instead of drugs or chemicals. All synthetic drugs have short-term side effects or long-term side effects. Drugs and some processed foods are poisons that can chemically alter personalities and normal body metabolism.

The 9th Amendment of the United States Constitution states: "The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people." This should mean that you have the right to freedom of choice in medicine and health care. This includes the right to choose your diet, obtain, purchase, and use any treatment, therapy, regimen, modality, drug, food, medicine, or health product for any condition you have or may have as evaluated by yourself, the doctor, nutritionist, therapist, or anyone of your choice.

Unfortunately, the FDA is constantly doing the will of the chemical and pharmaceutical companies. The American Medical Association (AMA) and other medical establishments are robbing us of our **"Freedom of Choice."** We already have these rights as free Americans and it should not be infringed.

I have personally experienced the unfair tactics of the FDA in trying to get ozone approved as a food additive on all perishable foods. The petition (#5A4449) had a total of 1,500 pages proving ozone's effectiveness and safety. FDA rejected this petition stating, "I was not responding

to their requests." The fact is they were not responding to the information or questions I was sending them. If you sense any resentment in reading this, you are right. I worked over 2 years at great expense in this effort to make foods safer for public consumption. FDA most definitely proved to me, they really do not care for the safety and welfare of the people. They only want to approve things that are expensive with undesirable side effects.

Ozone applications on foods and for medical reasons were used long before the inception of FDA. Ozone was in use before the 1906 Pure Food and Drug Act. Ozone has "Grandfathered Legal Status" but the FDA still considers it a food additive under their jurisdiction. FDA is clearly working out of their jurisdiction when it comes to the natural elements put here by "THE CREATOR."

Although I failed in my attempts to get ozone approved for all perishable foods, EPRI (Electric Power Research Institute) approached FDA in a different manner to get ozone approved. FDA allows independent affirmation of GRAS status of substances by a qualified panel of experts. EPRI requested an independent contractor to review the history and health aspects of ozone for possible use in processing foods and for GRAS (Generally Recognized as Safe) status. EPRI's Food Technology Center assembled an expert panel to evaluate published literature concerning the use and safety of ozone in food applications. After a year, the panel declared ozone to be GRAS, when applied under Good Manufacturing Practices. This eliminated the GRAS petitioning process and allows anyone to make his/her own declaration of GRAS (*Federal Register*, April 17, 1997). There is another article in *Food Technology* 51(6): 72-75, 1997. This is a great event for the safety and welfare of everyone in the US. This was

mentioned on the ABC News with Peter Jennings on Nov. 19, 1997.

In the mid 1960's, much negative information surfaced on ozone through Government grant money used for research. The EPA and other organizations did much of this research. The concentration levels used were very high and this practice continued for many years. Millions or perhaps even billions of taxpayers' dollars have been used to dispute the effectiveness of ozone. Some employees of the EPA have been pushing for the use of ozone as an alternative after seeing the effects of chlorine.

The misleading information on ozone is continuing at a much faster rate now than in the past. The Internet is becoming full of government and other organizations half-truths concerning ozone.

We have all been trained by the medical establishment, the media, and through advertising to believe that, conventional cut-and-dry treatments are our only choice. Most Government agencies play down the good effects of ozone. No Health and Human Services information on the ill effects of ozone proves it is unsafe. In most all of their Health Hazard information using ozone in high concentrations, merely states the word "**MAY.**" They expect us to believe this false and misleading information that they print from research paid for by taxpayer dollars. If a few of them tried it they may like it and print the truth.

One thing I hear at times is when someone purchases an ozone generator for an ailment like cancer, and they do not use it. This is because their doctor usually says it is useless and there is no cure or their drugs are their only cure. After taking their doctors' advice and all the drug treatments the insurance would pay for their minds become cloudy. Some become so weak and in pain that they will not listen to any

suggestions or try alternative treatments. They can not be responsible for themselves and will only listen to their doctors' advice. The pain is so great in the end that they just want it to end. Their doctor will cure them in the end from ever having to see any doctor again.

Some people are just plain lazy. Others want people to feel pity for them. They are always complaining of their ailments and always trying to get others to do their bidding. Meanwhile, some may be on some form of disability and to feel better would mean having to go back to work. To feel better would end their easy life style.

Just recently, I was listening to some young people being interviewed on the radio. They were asked what they thought would destroy the environment. One fellow said the ozone was going to destroy the Earth and all living things. You can probably imagine what my reaction was. What are these young people being taught in schools now? There are some that are blinded from the truth, and a lie is easier for them to believe and sweeter to the ears than the truth.

The truth is not based on how or what we perceive it to be. Truth is based on actual facts and proven.

At this present time, the aluminum companies have convinced most all the water suppliers to add their processing waste (sodium fluoride, a fine aluminum dust) or fluoride in a gas form to your water. What makes this so appealing to city water plants is the large sums of grant money they can receive for their full cooperation. The initial cost of installation and maintenance of fluoridation far exceeds the cost and maintenance of ozonation.

According to Dr. Jean Burke, former chief biochemist at NCI, three people die every half-hour from cancer caused by fluoride.

In a recent newspaper article Dr. John Orsi, president-elect of the Sacramento District Dental Society and a member of the California Fluoridation Task Force states, *"When the whole nation is 100 percent fluoridated, if you see problems, then you can think about lowering concentrations."* If by adding sodium fluoride to protect the children turns out to be harmful, how high will the mortality rate rise before something is done. If the uses of this substance in rat poison, roach powder, fumigants and insecticides are true, how can it be safe in our drinking water? We need clean and pure water to maintain our health. There are enough contaminants in the water now and it will not benefit our health by adding other poisonous substances to it. The more of it added to our water, the more of it will be found on our foods.

In over 100 years, there has never been a fatal accident with the use of ozone. Meanwhile, over 50,000 human deaths have occurred as a result of using chlorine in water during this same period.

In the future, you will see the mortality rate rising from drinking what you think is pure tap water. According to EPA there are more than 700 chemicals found in our drinking water, and 129 of these have been cited by the EPA as posing serious health risks. By law they only test for about 80 of these chemicals in your drinking water. In California, the chemical DBCP (dibromochloropropane) is still showing up in water supplies after banning it 20 years ago after finding it caused cancer. The Environmental Working Group claims an infant receiving a baby formula with the tainted water will get their entire allowable lifetime dose of DBCP before they turn two years of age.

Ozone is the safest purification and disinfecting agent in use today for purifying water. It is the only natural alternative to safe and better tasting foods. There are

no health risks with ozone at permissible exposure limit levels. If your water is contaminated with sodium fluoride, ozone will help oxidize it.

In 1976, FDA declared ozone a "toxic gas with no medical uses," again paid for by taxpayers' dollars to suppress the truth. It is obvious how this favors the drug therapies and ignores the years of safe medical use on thousands of humans. More billions of dollars are spent and wasted on treatments using drugs to treat symptoms, instead of true natural cures.

In 1896, Nikola Tesla patented his first ozone generator. By 1900, he formed "Tesla Ozone Company" and was granted many patents. Medical ozone and his products were widely used in the U. S. at the beginning of the century.

There were 644 ozone therapists surveyed in Germany who reported on 384,775 patients. These patients received 5,579,238 ozone treatments with .0007 percent of them having side effects. Compare this to the other therapies used that only treat symptoms.

On October 22, 1991, the American Lung Association and other plaintiffs or record filed suit to compel the EPA to complete its review of the criteria and standards for ozone. This action is to update the 1986 Criteria Document and its Supplement (57 FR38832). With the latest and more negative information produced, it appears ALA will succeed in lowering the ozone standards. Because now, ozone is considered as smog and pollution. Again, very high levels were used to get negative results.

In these present day times, some would like you to believe that ozone comes out your automobile exhaust as pollution. In actuality, ozone is nature's defense to the pollutants we create from technology. News reports on smog levels in large cities

are referred to as ozone pollution. Myths have been propagated with this misinformation.

We cannot take it for granted that what our government tells us and that what we read or hear is always the truth. When Health and Human Services and the EPA publish this misinformation on ozone, it is then published in millions of health books. The people that read them are kept from the truth and the effectiveness of ozone.

Currently, medical scientists are on a new quest in leading you to believe that oxygen causes damage to the tissues and is the major driver of aging process. A recent article states that a team of Italian scientists has linked a single gene to longer life in mice by genetic manipulation of their genes. Some of the experts feel this may yield a sharp insight into the genetic reasons for death because this research matches other findings on fruit flies and roundworms. Other experts in the field of aging called these findings a milestone that could someday lead to drugs that postpone the effects of aging. The article further states *"that oxygen may be the breath of life, but in the body it creates chemical byproducts, free radicals that can corrode the cell's working parts and corrupt the information in its DNA data bank. If the damage is too severe, cells are genetically programmed to self-destruct."* Well, what more can a lay person like me say about these wise words from the experts who presume to know everything.

"Man can deceive man and may get away with it but man can not change the natural force of nature."

Certain individuals in and out of government are suppressing the truth about the effectiveness of ozone. The United States used to be a leader in technology, but we seem to be the last in using ozone to its fullest potential. All one

has to do is look at the facts and come to their your own conclusion. The truth about ozone is traveling fast. Its approval in food processing may not pave the way for its approval in medicine. As time passes, maybe it will be approved.

Doctors do not receive training in alternative therapies or in the natural way of healing. Some ignore the truth because they are afraid of being harassed by their State Medical Board and being called a quack. In their training and education, they will only learn what the medical establishment wants them to learn. In a recent newsletter by Bob Livingston, he states; *"Education itself becomes a conspiracy against health and nutrition when the learned, educated and professional class is neutralized against common sense and objective reality. A peculiar trait of the educated man is that he cannot accept anything beyond the parameters of his training. A formally educated mind has neither the ability nor the inclination to appraise the merits of anything new and innovative."*

Since our early childhood, we have all been brainwashed through television and the media. They instill in our minds that doctors and medicine are good, and that we should trust them. They know what is right for us and we should do as they say.

It is almost unthinkable that science is used as a mask for the cover-up of the medical monopoly. When it concerns your health and nutrition, the foundation they use for conditioning your mind is through deception and misinformation. They are even trying to take credit for people living longer today. Your health begins with you being responsible. If you do not know the truth, how will you ever know a lie? Drugs do not heal, but they do an excellent job in masking your symptoms. Drugs and synthetic vitamins do not provide or heal if you are deficient or starving from

malnutrition! Disease is not a drug deficiency! Our body does not crave synthetic drugs when it is sick, nor is it dependent on them for getting well! Most are not living longer because of drugs. We are living longer because we are eating better and using alternate methods. People are ignoring their misleading commercials and refusing to take their poison after learning their side effects. Only your body can heal itself, providing it has the right nutrition.

For years the medical monopoly has made excuses and claimed there are no cures, and do not know the cause for many of the conditions this society suffers. Maybe these statements are to justify their actions in just treating symptoms because they know their drugs and other treatments just don't work. They say there is no cure, but they will keep looking as long as the funds are provided for research. As long as funds are provided, they can always find something to blame instead of admitting to the real cause. Why find a cure when they can keep making money treating your symptoms. They are obligated to protect their investments, reputation, and to keep from being embarrassed because of their deception and misinformation that has spread throughout the years.

However, there are many excellent doctors who have the guts and are bold enough to search for the truth. They will use alternative treatments in their practice because they truly want to help their patients. They can plainly see that drugs and some other methods do not work. Doctors write most of the information on alternative methods, supplements, and research on medical ozone. These doctors deserve our "praise" and "thanks" for defending what they know is good old common sense medical practice.

The American Medical Association has adopted a policy saying doctors should not sell health-related products; for example,

child safety devices, dietary supplements, and vitamins for profit. A former AMA president said, *"The practice is akin to snake oil peddling of the 1800s, and part of AMA's founding purpose in 1847 was to oppose such abuses."* Are they taking our best interest to heart when they consider healthful products and therapies that work, quackery? Would they rather profit and promote their products or therapies that actually make our condition worse? I hope not, but it certainly appears that way. Why do they think vitamins are snake oil, and why do they have a logo with a snake wrapped around a stick? Why are doctors allowed to receive free drug samples from sales representatives for distribution, testing and learning before they are thoroughly tested by an independent lab?

The chemical and pharmaceutical companies along with others in the medical field make statements claiming their products are "cures," but the manufactures of natural vitamins and herbs cannot make these claims. About the only thing they can legally say is it can reduce stress and maintain your immune system. Everything you read concerning health always has a disclaimer. I wonder why? Something good is always under attack or suppressed through greed and ignorance. Someday, maybe those responsible will be held accountable for their actions.

Sometimes, the FDA will rebuke a drug company for overstating the benefits of a particular drug or for minimizing the risks by failing to acknowledge that it may cause other health problems. This occurs mostly from television commercials where you are distracted by visual images and activity while they are presenting the risk information by audio. The drug companies comply with the token punishment by FDA but they have already planted the seed and got their point across to you. Meanwhile, there is probably some less fortunate doctor or manufacturer being

visited by the men in black and having his stock of vitamins or equipment confiscated. You never hear of the FDA harassing or trying to close down the manufacturers of destructive and lethal drugs or vaccines, only those who manufacture natural supplements.

When Americans spend about \$76 billion annually on medications and spend an equal amount to treat the effects of those medications should be a clear sign to anyone that something is wrong. Seniors account for one-third of all medications sold and buy about 40 percent of all over-the-counter drugs. About 15 percent of these seniors wind-up in the emergency room and some die as a result.

When new drugs are approved a few will die shortly thereafter but this is considered beneficial that outweighs the risks. How can anything be beneficial if it causes harm or death? Why is it beneficial when only a few die and not beneficial after hundreds have died. It seems the FDA is more interested in protecting the drug companies than it is in protecting the public. It takes years for them realize it is no longer beneficial before they finally ban it. What else would you expect when many of them have stock in the drug companies? This calamity is at its worst when the people we elect take their bribe money for their reelection. If they are more concerned about other things instead of what really damages our health, we should not let them represent us by electing them again.

In the past and present, there have been some professionals who truly care about helping others and saving lives. They have offered free treatments to AIDS people for research, tried to get the truth out about ozone, or used ozone therapy during their medical practice. Those who have tried to save lives have been harassed, called quacks and even sent to prison. Those against ozone can become

very forceful in making you believe that ozone therapy is a scam through their propaganda. The war is on because they have a lot invested and a lot to lose.

Ed McCabe gave a testimony at the National Institute of Health Office in Bethesda, Maryland in 1992 on ozone. Ed is an investigative journalist and author of the book "Oxygen Therapies."

An article in *Explore!* Vol. 3, No. 5, 1992, page 7-8, he states, "*Oxygen Therapies have been in use medically for over 100 years. Ultimately toxicity collects within the body over time. This buildup of toxicity can have physical, emotional, and behavioral co-factors, which must also be addressed. The buildup of toxicity within the body invites the proliferation of anaerobic disease causing microorganisms. Oxygen therapies are used to flood the body with active forms of oxygen, it reaches a state of purity wherein the disease microorganisms like HIV are killed, and the underlying toxicity is oxidized and eliminated.*"

Ed McCabe and his work have been popularized in many magazines and newspapers. He has lectured at health conferences here and abroad, and has been a guest on hundreds of radio shows. Ed is yet another who has paid the price for trying to save lives.

Government officials for providing ozone therapy for cancer victims harassed Lucas Boeve for years. Mr. Boeve was forced to leave the country. Numerous times the media has shown an interview with Mr. Boeve at his health center in the Dominican Republic. A couple of those interviewed were dissatisfied with the results. If a person does not fully follow through with any program or treatment, they will not receive optimum results.

Kenneth Thieffault was harassed for a few years and received a 6-year prison

sentence for making what they consider fraudulent claims about ozone. The one whom mostly deserves the credit for his numerous inventions, research, and the advancements in ozone technology that has revolutionized the field of medical therapy using ozone is Basil Earle Wainwright. Mr. Wainwright has been involved for over 18 years in the development and perfection of the new molecular oxygen structures (O3 & O4, and O8) for a broader and more effective delivery system applications for use in medical therapy. This improved the capabilities in addressing all bacterial, fungicidal, protozoa & virucidal infections, to eradicate a wider spectrum of diseases and medical conditions. Mr. Wainwright was nominated for the Nobel Peace Prize in Medicine on three separate occasions and won "The Inventors Expo Award" for five separate scientific projects because of his research and inventions. Many of his colleagues say his achievements exceed those of Edison, Tesla, and Rife. Many scientists and medical professionals from around the world have acknowledged the Polyatomic Apheresis and W.D.D.S (Wainwright Direct Delivery System) as the most advanced diseased cell purification therapy available. Mr. Wainwright has and remains to be probably the biggest threat ever to the worldwide drug cartel.

Soon after March 14th 1990, in Miami, Florida, when Mr. Wainwright converted his first HIV+ patient to PCR undetectable, the FDA, with weapons drawn, stormed and ransacked Basil's Research facilities. The United States authorities seized and confiscated his extensive research data, results, and equipment. Basil was thrown into jail for four years without trial on the pretext of practicing medicine without a license. A member of Pompano Beach Police Station told Basil "he could walk" if he would just go on national television and denounce the efficacy of medical ozone. Six recorded attempts were made on his

life while in prison, and only through certain international scientific pressure groups and Christian organizations was Basil released. The harassment and intimidation of Mr. Wainwright continues daily in keeping these therapies from the public.

Jacqueline M. Thom, a journalist in Nairobi, Kenya quotes: *"As with any revolutionary scientist, his ideologies and inventions have been subjected to harsh criticism and opposition due to his outspokenness on pertinent issues and his development of scientific disciplines and technology which commonly challenged the status quo of conventional commercial exploitation especially in the field of medicine and science."*

Quote by Richard Johnson (Historian), 1999: *"BASIL EARLE WAINWRIGHT is without question one of the greatest enigmas of our time. His incredibly diverse intellectual and scientific abilities are outstanding. His diversity in science is overwhelming and everyone should be proud to be living in his time."*

If you would like to know more about his sincere contributions to humanity, you can contact Polyatomic Apheresis Research, Ltd., P.O. Box 15120, Nairobi, Kenya. Complete information is available on the Internet at (www.PolyO2.org).

How many people will it take in giving up their freedom and paying the price so you can hold on to your rights of enjoying a life without sickness and disease? How many will suffer and die while these people continue fighting for what is right? How much pain will you and others endure?

In a small booklet titled *AIDS, Ozone and The Nutritional Stimulation of The Immune System*, by Alex Duarte, O.D., Ph.D., there is a quote that says; *"It has been said that because of science, we have made great progress in many areas of human*

endeavors including the field of medicine. It is true that science can mean great progress, but only because of one simple reason, it is self-correcting. When medical science is allowed to be truly objective and self-correcting, great discoveries translate into great benefits for mankind. However, when greed, avarice, prejudice and dirty politics of man control medical science, then unnecessary death and suffering is the price to be paid for such evil. This price is too high and we must now refuse to pay it. Together we have the power to change it. Join our cause and help us initiate Ozone Therapy in America and save millions of lives."

Medical ozone is being used in many other countries and was used in the US on foods without any restrictions up to the mid 1960's. This seems to be the second time when the ozone cover-up started by suppressing the truth and in telling lies as to its effectiveness. This attitude continues to this present day. Research from doctors and major universities support using ozone in the United States and other Countries.

Ozone therapy is recognized in Bulgaria, Cuba, Czech Republic, France, Germany, Israel, Italy, Mexico, Romania and Russia. Ozone is currently used legally in 16 Nations. States that have passed the "Access to Medical Treatment Act" as a medical alternative are Alaska, CA, CO, Georgia, MA, MN, MT, N. Carolina, New York, Ohio, Oklahoma, Oregon, Texas and Washington. Physicians in these states can legally use ozone and other safe effective non-conventional treatments as an alternative treatment in their practice without being persecuted.

It seems ridiculous that each state has to pass a new law to legally use a GOD given natural substance that is so critical in sustaining LIFE. If government insists in controlling oxygen and participating in making ozone illegal for medical purposes,

they should go to the extreme and outlaw oxygen in every medical establishment. Would they also consider all other compounds or chemicals that naturally contain one or more oxygen atoms a controllable substance. Let us hope the medical and pharmaceutical companies are not that desperate.

The following statements are only my opinion and based on what I have learned, my personal experience and some common sense. Try to keep an open mind because this goes against everything we have been taught. You will have to come to your own conclusion. The woeful condition of our society mostly originates from using the medical snake oils, chemicals, and consuming processed foods that have been devitalized and devitaminized. No one is forced to take, eat, or drink anything. Faults lie in bad choices. The solution does not lie in education the consumers in what or not to do when taking drugs, it lies in not producing anything that creates harm and doctors living up to their Hippocratic oath.

Upon graduation of medical school, older physicians pledged; I SWEAR by Apollo the physician, and Aesculapius, and Health, and All-heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation to reckon him who taught me this art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen which, according to my ability and

judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and, further from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice or not, in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret. While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men, in all times! But should I trespass and violate this oath, may the reverse be my lot! Out of guilt, this original version is being revised.

Every one of us is different in our own way. We react differently to different things. What we do, what we breathe, what we eat, what we drink will effect us all in different ways. For our every **"action"** there will be a **"good reaction"** or a **"bad reaction."** If we called these bad reactions **"symptoms"** and then take a group of people with the same symptoms, we can give them a **"name."** We can call them AIDS, Diabetes, Cancer, Heart Disease or add "Syndrome" to the end when we do not know what it is. Then we can say we inherited these from our parents because we have the same genes or proteins the other group of people has. If everyone's body chemistry is different because of our actions, is it not possible for the toxic chemicals from the bad

reactions and deficiencies to alter one's cells or genes? The actions of unhealthy lifestyles will contribute to bad reactions!

I find it extremely difficult to believe that disease is inherited. I do believe things like candida, parasites, microorganisms, and others can travel from the mother's blood to the baby during pregnancy. If it's in the mother's colon, it will be in the baby's blood as well. Pathogens in foods and other organisms ingested from water are also related to the cause. Inheriting this or that disease is merely an excuse that keeps you from knowing the truth or the real cause. The main causes of disease today are what the medical establishment professes to be good for you. The pharmaceutical drugs and the toxic vaccines infants are required to take may very well be responsible for most of their early and later forms of the so-called inherited health problems. The largest outbreak of disease will strike when everyone receives additional health care.

Most everyone has been led to believe that the rise in infectious disease is due to the ineffectiveness of antibiotics because the bacteria and virus are getting smarter. They believe these **"smart bugs"** are able to resist the antibiotics. Do you think this is just another created lie like the one that cholesterol (good fat) causes heart disease? Maybe they just want more funding so they can keep creating new antibiotics that do not work. Maybe the real reason antibiotics are so ineffective is because everyone's intestinal tract is so full of filth. If the antibiotics or other remedies can not penetrate through the thick buildup of hydrogenated oils and other filth, how do you expect it to destroy the bacteria? How can they expect any of their drugs to be effective when they keep splicing new genetic forms of bacteria and viruses into vaccines and food products?

"DEATH BEGINS IN THE COLON."

"The cause of natural diseases originates in one place, the colon." "All symptoms of disease are from one cause that originates in the colon." "All names given for natural diseases are the result of a toxic colon." "Early aging begins in the colon."

If your health were already suffering from parasites or some other form of disease, I would strongly urge you to consider irrigating the colon (colonics) as the first step toward the buildup of your immune system, and the regaining of your health. Some will experience the minor effects of fatigue during the healing crisis or after the first phase of colon cleanses. The minor effects are not from what you are doing to get better. They are a reaction from the toxins and poisons that are still in your body. Really, it is not as bad as it sounds. When you see what comes out and how much better you feel afterwards, you will wonder why you did not consider it sooner.

The success of ozone therapy depends on you and the knowledge of those professionals who administer ozone in their treatments. If you concentrate on cleaning the colon as the first step in whole body detoxification and follow through with it, you will succeed in your efforts in the restoration of any health problem. In the future, the **"truth"** and the **"power"** of ozone will prevail over the powers of greed and hypocrisy.

If you are without the symptoms of ill health, you may be among the few people that colon cleansing would not benefit at this time. However, deterioration of our health can occur slowly over time without any warning. The day may come when ozone and colon cleansing will be greatly beneficial to you, and remember these words by Dr. Steven Levine, author of "Oxygen Deficiencies". *"Hypoxia, or lack of*

oxygen in the tissues, is the fundamental cause of all degenerative diseases."

The threat of new viruses emerging in the future makes it a **"necessity"** to detoxify the body because these threats will occur. If the current percentage levels of oxygen in our atmosphere continue to drop because of pollution this threat will escalate. Oxygen is needed to keep nature in balance and without it only the bad (anaerobic) will survive. A weak immune system does not have time to defend itself from the new killer viruses. The immune system must be **"strong"** to protect itself from these ongoing threats and other everyday risks if you want to survive for what is to come.

The same risks that were here yesterday are here today. In the future, they will just be in different forms and neither you nor I will be able to stop what is going on from within unless the majority is informed. Skeptics will say these risk factors and other threats are not dangerous because if they were they would not be allowed. Occasionally a government agency will ban a certain chemical or drug that saves a few lives to show their existence is justified.

The times I wished not knowing what I know was scary and mentally upsetting. I could not imagine in my mind why much of what I have written was still allowed to continue repeatedly throughout the years. Now that I know why does not make it any easier to except or make it right. There are no words that justify the wrongs currently being done against humanity as being right or done for a righteous cause.

Nations prosper during and after conflicts of war. War is one of the main principle forces for developments in science and technology. It creates jobs for the unemployed and keeps the economy moving in production and consumption. There are many individuals who think war is essential and a necessity especially in

times of food shortages or overpopulation. The younger generation decreases while the good old guys and gals remain in control. The ones who survive the conflict continue to diminish over time because of genetically altered vaccines given to them for protection of disease and other agents. The weak are weeded out and the strong survive. They prosper and rid themselves of whom they consider as undesirables.

During times of peace, the war continues only it is a 'silent war', which still requires an enemy. For the government or military to continue defending and advancing national interests, it must create a need for its existence. The masterminds carefully devised their substitute plans and schemes to organize an imaginary enemy at any cost. During this time wasteful dollars are spent repeatedly on social programs like drug abuse, education, environment, health, housing, space, poverty, terrorism, transportation, and others. Situations and problems, which are a threat to society, must be created so you will except their political policies and approve further spending in order to defeat the created enemy. While all along, their plans of depopulation go undetected and the same old problems persist year after year. Their credibility is making you believe in these repeated life and death substitutes are natural and purely noncoincidental.

The genocide of the masses continues through the use of genetics. Biological warfare is used in the air we breathe, the water we drink, the foods we eat, in chemicals, and in the pharmaceuticals presumed to save lives. In reality you become the enemy because you produce more children, that threatens their existence. Even those that are trained to protect us during and after their military career are a threat to the establishment with continued health problems and eventual death for serving their country.

I have more than once stated that I do not believe disease is genetic or inherited from our parents. The reality here is that natural disease may be a condition of the past. Perhaps in the next few years all disease will be caused by genetics. For months, the headlines have read that science is now finding the genetic markers or DNA that causes disease. When science has been creating these designer germs and viruses and mass producing them for vaccines and other known agents does it not stand to reason that they can identify their own creations. It does not take a high IQ to see and understand this.

The World Health Organization is warning us of the threat from drug-resistant disease. They state; "*Microbes that cause disease ranging from sore throats and pneumonia to malaria and AIDS are mutating at an alarming rate around the globe into much more dangerous infections.*" This is blamed on the overuse of antibiotics and there resistance is causing them mutate is considered a naturally occurring phenomenon. Enough is enough already. I guess if you believe in Darwin's theory you able to believe in just about anything. Bacteria and virus do not cross breed and mutate into other forms by themselves. They can only achieve this impossible task with the aid of genetics or biotechnology.

There are thousands of patents in the field of genetics where research has been done through private companies and in universities funded through grants supplied by taxpayer dollars. In most cases, the main applicant(s) for the patents are the United States of America as represented by the Department of Health and Human Services. Their patents clearly show the cloning of known bacteria and viruses and the mutations that follow.

The woes from self created threats and risk factors are here to stay and will never disappear because they are the weapons

used in times of peace for the main purpose of depopulation. It will continue this way because people do not want to believe and except the facts. Society will let them continue with their master plan by ignoring the truth. Their techniques of brainwashing have convinced most in believing that government and social organizations are the only ones that can properly deal with and offer solutions to their menacing threats against society.

How these people can even begin to consider a threat of overpopulation seems a little premature when the total population covers only a small fraction of the Earth's surface. Maybe in another two thousand years it will be a problem but murdering the innocent is not the solution when there are other alternatives. Human life is precious it is not excess war material that needs to be exterminated thru acts of genocide!

Currently, many nations in the world are establishing an International Criminal Court. Its jurisdiction will include genocide, war crimes, and crimes against humanity. In the past, the U.S. has used the excuse of genocide to attack other nations and demanding trials for the violators of these crimes. Being on the defensive, the U.S. is opposed to this war-crimes court because they want to protect American soldiers and officials from falling under the jurisdiction of the world court.

I would urge anyone who disbelieves these facts or thinks this is just another conspiracy theory to seek the truth and do their own research before passing any judgement. The facts from mounds of evidence and documents over the years are indisputable. When the missing pieces of the puzzle begin coming together as one, the whole picture will be seen in a new perspective. All the unanswered questions put forth in this book will answer themselves. As you read the daily headlines in your local newspaper you can definitely read between the lines and see

what their future plans are and where the money will be spent. You can better understand why ozone and other alternatives are so ridiculed and suppressed by federal and state agencies.

Being forewarned is being able to recognize the real enemy and their continuing threats in the proliferation of human life. Being informed helps in making better decisions, creating a better future for your children and future generations. There are cures for these created pandemics against humanity so do not despair or let them create fear in your mind. The foods of the future will necessitate giving thanks and receiving GODS BLESSING at every meal!

Nobody else is going to take care or be responsible for your body. You have to do this on your own. Now it is your turn. You have the secret and how you use it. It is your choice. It's never too late to regain your health and prevent future problems.

**The time to get healthy is now;
tomorrow may be to late!**

I am willing to discuss this information in whatever detail that may be of value to you or answer any questions on ozone. Please call me anytime at (530) 268-6690 or write to me on your achievements using ozone in conjunction with colon cleansing. E-mail address is applied777@foothill.net. Visit our web site at www.appliedozone.com

Chuck Ankeney

"Only The Future Remains, It's Your Health, It's Your Choice."

Genesis 2:7: Then the Lord God formed man of dust from the ground, and breathed into his nostrils the breath of life; and man became a living being.

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PA International provides the following.

THE GENESIS & CHRONOLOGY OF THE DEVELOPMENT OF HIV/AIDS:

1920 to 1930: German researchers started work on offensive biological viral agents using sheep as the biological hosts, called the 'VISNA Program', which research was conducted in Iceland. The genetic genesis of the subsequent early HIV viral strains some 30 years later bears a direct correlation to these early German VISNA viral agents. The genetic link to VISNA clearly establishes the fingerprint of man's genetic sequencing of the AIDS virus (see Patented material by US entities & personnel enclosed herewith).

- **Source: Dr. Leonard Horowitz; "AIDS & EBOLA; Nature, Accident or Intentional".**

1945: At the end of WWII both the US & Soviet forces competed against one another to overrun Germany & capture as much material, data, research & equipment from the ex-Nazi research warfare programs as possible. The US Forces, under 'Project Paperclip' recruited, protected and financed over 2,000 Nazi research personnel & their families (war criminals) to work for the United States by contributing to US defense, missile/rocket programs & intelligence services, as well as other military research programs. Prior to the final close of WWII, Germany had been developing its own 'Biological Bomb' (VISNA Program) which was modeled to accomplish the Aryan philosophy by virally targeting specific population groups globally. Nazi Germany had concentrated its human genetic diversity research by developing specific viruses to attack the identified genetic weaknesses of specific human populations who were considered 'inferior' & 'undesirable' to the Aryan Order of Life. Bovine carcasses, infested with the viral VISNA cultures, were repatriated from Germany & were 'cultured' in American research laboratories.

- **Source: Dr. Leonard Horowitz; "AIDS & EBOLA; Nature, Accident or Intentional".**

1962: The US officially began its own 'population program'/biological warfare program, called the "Special Virus" Program, as an extension of the adopted German VISNA Program. This was authorized by former Secretary of State, Henry Kissinger, code-named 'MKNAOML' & was funded initially with USD \$ 10 million contract to counter the projected fear that the Soviet Union's own advances in offensive biological & chemical warfare agents. In the same year the UN Agency for International Development (UNAID) earmarked funds for 'Population Co-ordination Policy'.

- **Source: Dr. Leonard Horowitz; "AIDS & EBOLA; Nature, Accident or Intentional".**

1964: US Congress provided funds to the National Cancer Institute (NCI) to intensify research into 'virus-leukemia research' (blood-viral transmission).

- **Source: Progress Report #8 "Program History" '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1965: RNA-dependent DNA Polymerase, (RDDP), was isolated in the United States research laboratories. This development allowed for the mass culturing of viral agents cultured in animals but which could cross the species barrier & proved fatal to mankind.

- **Source: Robert E. Lee; "AIDS; Explosion of the Biological Timebomb."**

- **Source: Progress Report #8 "Program History" '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1967: June 5th, 1967: Contract # 67-1147 (PH43-NIH-NCI-E-67-1147). Initiation of "Temperature Sensitive Mutants of Polyoma Virus".

- **Source: Progress Report #8 "Program History" '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1967: The National Academy of Science (NAS) in the United States began work on mass-producing an AIDS like virus, cultured from the earlier VISNA Program.

- **Source: National Academy of Science (NAS) archives.**

1967: Dr Robert Gallo identifies the possible site of negative feedback control in Red Blood Cells as well as Amino-Acid (DNA) synthesis in White Blood Cells & cell reproduction, regulation by an identified enzyme & their control factors. (AIDS produces a reduction in the number of White Blood Cells from the Thymus T-lymphocytes & results in immunosuppression of the host).

- **Source: 'Journal of Biological Chemistry' 1967: 242:21:5059-5068.**

1968: Dr Robert Gallo identifies the specific enzyme which creates a 'base-pair' switch mutation in the protein (genes) of White Blood Cells, thus causing immune system dysfunction in the host.

- **Source: 'Nature' 1968, 218:465-466. "Enzymatic abnormality in Human Leukemia."**

1969: Dr Robert Gallo investigates tRNA (transfer of RNA) in plants capable of affecting human lymph cells. The tRNA components have potential immuno-suppressive properties (AIDS virus is an RNA virus, which causes immuno-suppression)

- **Source: 'Science' 1969: 165:400-402.**

1970: Dr Robert Gallo investigates RNA dependent DNA polymerase analogous versus RNA tumor viruses found in immature White Blood Cells. (Reverse transcriptase enzyme is identified. With the isolated HIV, this enzyme causes T-cells to produce additional viruses, whilst losing their immuno-competence).

- **Source: 'Nature' 1970: 228:927-929. "RNA dependent DNA Polymerase of Human Acute Leukaemic Cells."**

1970: Dr Robert Gallo developed the techniques by which the foreign uptake of tRNA by mammalian leukemia & normal immature Human White Cells is determined by an "energy independent, carrier-mediated, mechanism" and went on to establish several possible mechanisms of tRNA transfer in

mammalian cells. This published Paper linked Dr Robert Gallo to the National Academy of Sciences at that time to the Department of Defense who had contracted them to develop 'immune deficiency causing biological weapons', as well as linking several senior National Cancer Institute research positions/personnel to these programs in identifying the "entry of foreign nucleic amino acids (DNA) in cells" to effect immunosuppression in the target host. This research was published at the time of the controversial 'Fort Detrick symposium' (the US's largest Biological Warfare research & development facilities), attended by President Nixon, where Gallo presented his findings. This linked the program to NATO applied "defense" research.

➤ **Source: Dr. Leonard Horowitz; "AIDS & EBOLA; Nature, Accident or Intentional".**

1971: The United States Government commissions the 'Population Flowchart' & "Special Virus" Program Flowchart. Pages 2 & 61 describe the logic of the 'Flowchart'.

➤ **Source: Progress Report #8, pages 2 & 61 "Introduction" '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1971: USD \$ 35 million funding for fiscal year 1971, granted to National Cancer Institute to implement the new 'Convergence Techniques' in controlling human leukemia, lymphoma & inter-related immunosuppressant viral agents.

➤ **Source: Progress Report #8 at point 2. '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1971: Dr Robert Gallo investigated & found unique cellular proteins which specifically bind to HIV, included was the CD4+ immature White Blood Cells (lymphoblasts). This factor indicates how HIV specifically binds to CD4 (T) cells.

➤ **Source: 'Blood' 1971: 38; 2:246-252.**

1971: Dr Robert Gallo found that protein synthesis in cells is dependent on nucleic amino acids (basic building blocks of DNA/RNA). Purines & Pyrimidines can be bio-chemically methylated and can be easily identified by antibodies. This represents the basic research upon which Robert Gallo advanced his technology to produce the only antibodies available to detect the HTLV viruses (HTLV 1, -2 and -3) and is required in identifying HIV. The HIV antibodies developed from this early work were patented & sold by Gallo & NCI to develop the blood tests used in HIV detection. *These patent #'s are available from the US Patent Office in Washington.

➤ **Source: 'Biochemistry' 1971: 10;11:2009-2013.**

1971: The "Special Virus" logic Flowchart was produced by the US Federal Government, listing the processes to be followed to specifically develop,

cultivate, reproduce & envelope specific viral strains, effective in population control.

➤ **SVCP - RESEARCH LOGIC FLOW: 'Special Virus Cancer Program', Viral Oncology, Division of Cancer Cause & Prevention, National Cancer Institute (NCI), August 1972.**

1972: Dr Garth Nicholson at the 'Salk Institute' in the United States conducted "Temperature Sensitive Mutants of Polyoma Virus". Contract # 67-1147 (PH43-NIH-NCI-E-67-1147). Dr Walter Eckhart; Project Director 'Salk Institute' under the direction of Stuart Aaronson; 'NCI'. Objective; identification of polymer viruses capable of viral RNA/DNA 'transcriptase cell transformation' accomplished. Findings: Polyoma virus mutants categorized into 4 or 5 functional groups of virally infected cell cultures/lines capable of reproducing their own cell lines (*progenitor HIV 1 to 5 viruses?*).

➤ **Source: Progress Report #9 at point 278 '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1972: Dr Robert Gallo & Talal concluded that a "continued search for antibodies to natural hybrids seems warranted." This task of isolating antibodies to reverse transcriptase provided the incentive to develop the antibody isolation techniques which AIDS researchers the world over sought from Dr Robert Gallo alone. (*Not only had Gallo engineered & perfected the HIV viruses in the first instance, but Gallo developed, master patented & sold the only testing procedures able to detect the HIV infection!*).

➤ **Source: 'Nature New Biology' 1972: 240:240-242.**

1972: "An attempt should be made to ascertain whether viruses can in fact exert selective effects on immune function, e.g. by...affecting T cell function as opposed to B cell function. The possibility should also be looked into that the immune response to the virus itself may be impaired if the infecting virus damages more or less selectively the cells responding to the viral antigens.

➤ **Source: (Bulletin of the W.H.O., vol 47, pg. 257-274.) This is a clinical description of the function of the AIDS virus.**

1973: Second Contract "Special Virus" Program. Contract # 72-3207 (NIH-NCI-E-72-3207). "Growth Regulation of Normal & Transformed Cells & Immunological Approaches to Tumor Rejection & Prevention." Dr Garth Nicholson; 'Salk Institute'. Objective; PROJECT B - 'Role of cell surface in escape from immunological surveillance' (*HIV attribute; A cell envelope called the outer & inner lipid membranes which is the protective protein coating of the cell containing the virally infected RNA/DNA transcriptase material, had to be isolated & identified which would escape detection & elimination by the host body's own immune system -*

hence leading to Acquired Immune Deficiency Syndrome - AIDS?).

- **Source: Progress Report #10 at pp 228-229 '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1975: US Treaty signed with Zaire for 'Remote Sensing' in 29,000 square miles of eastern Zaire inhabited by 760,000 people for 'military purposes'. (This is where experimental Polio, Smallpox & Hepatitis B vaccination programs, purportedly laced with the developed HIV virus was deployed to Zairians, mainly in children. This area is very close to what is now known as the 'AIDS Highway' & Zaire is 'Ground Zero' to the eruption point of both the HIV & Ebola retrovirus in Man).

- **Department of State Memorandum of Understanding between ERTS-Zaire & the United States Aeronautics & Space Administration (NASA), Diplomatic List, Washington D.C., U.S Government Printing Office, (1977), 1975 pp. (4964) 1700-1704.**
- **Source: Dr. Leonard Horowitz; "AIDS & EBOLA; Nature, Accident or Intentional".**

1975: 'VII International Symposium on Comparative Research on Leukemia & Related Diseases', October 13th-17th 1975 in Copenhagen, Denmark. Cites Dr Robert Gallo's extensive expertise with retrovirology. One of the highlights of the Conference included Dr Robert Gallo's "isolation of an RNA virus from the 'Laboratory Grown Cells' of an Afro-American woman". (Why would a medical conference be debating an RNA virus 'found' in an Afro-American Woman?)

1976: Development of 'Predator Virus' mentioned (HIV) possibly already under deployment in vaccine programs in sub-Saharan Africa (see above).

- **Source: Progress Report #13 '1971 US AIDS Flowchart' & 15 Progress Reports from the "Special Virus" Program.**

1977: By 1977 more than 60,000 liters of this HIV retrovirus 'vaccine' had been mass-produced from the isolated virus produced by Dr. Robert Gallo in the hidden program using 'Roller Bottle' techniques.

- **Source: US contract # NIH-NCI-E-70-2048**

1977: The 'roller bottle' technique, (which is illegal according to international agreements on biological warfare manufacturing), produced multiple viral strains of HIV which was bonded to several 'vaccine contracts' issued by the WHO. Each 'roller bottle' batch generated up to 2.1 Trillion viruses per batch. These HIV retroviruses were allegedly attached to the HEPATITIS B, polio & smallpox inoculation programs carried out in sub-Saharan Africa by the WHO.

- **Source: US contract # NIH-NCI-E-70-2048**

1978 & 1979: this 'Spiked' HEPATITIS B vaccine, BATCH # 751, was administered to at least 1243 men in Manhattan, 1083 men in New York and over 7000 men in San Francisco. (All of the men involved in these 'vaccine/spiked' inoculations in the US were GAY & were sourced from advertisements placed in 'Gay Week' magazine).

- **Source: Lederer R. Origin and spread of AIDS. Covert Action Information Bulletin (Winter) 1988;29:60.**

1986: As concerns the distinct probability that the hepatitis B vaccine given to U.S. homosexuals (In: New York City, Los Angeles, San Francisco, St. Louis, Chicago, Denver) was contaminated with HIV, Francis et al. (1986) state on page 870: "Fifty serum specimens lacking any personal identifiers were taken from recipients of hepatitis B vaccine pools 73304 through 73307, each of which retrospectively was found to include plasma from at least one donor in whom AIDS subsequently developed," and "The material that was assayed for the presence of nucleic acids from the AIDS virus was the final aqueous product of two different production pools of hepatitis B vaccine, each of which was found retrospectively to include plasma from at least one donor in whom AIDS subsequently developed."

- **Source: "Hepatitis B Vaccine Pools Included Plasma from Donor(s) with AIDS." (JAMA 1986 Aug 15; 256 (7):869-72)**

1994: A Congressional review of the military's chemical and biological defense program in 1990 uncovered substantial safety problems at USAMRIID, including the disappearance in 1981 of almost two quarts of Chikungunya virus, a highly infectious disease with no known treatment and the US Army itself reported in 1987 that personnel at Fort Detrick were in danger of exposure to lethal viral material on twenty separate occasions from 1983 to 1987 due to accidental spills, needle punctures or knife cuts.

- **Source: 'Good Medicine', USA, Autumn, 1994.**

2000: Abstract from, Bridging the Gap: Human Diploid Cell Strains and the Origin of AIDS, by B. Goldberg & R. Stricker. Recent descriptions of the first human and chimpanzee cases of human immunodeficiency virus type 1 (HIV-1)-related retroviral infections dating from 1959 have stirred interest in the origin of AIDS. Although the theory of a chimpanzee origin of HIV-1 with cross-species transfer to man has now gained popularity, a more likely scenario is that chimps and humans were infected by an HIV-1 precursor virus derived from a contaminated polio vaccine. The reason for the rapidity and ease of cross-species transfer of this precursor virus has not been elucidated. We hypothesize that the polio vaccine was passaged in

a human diploid cell strain. This simple manipulation allowed the retrovirus to adapt to human tissues and may have spawned the AIDS pandemic.

➤ **Source:** Journal of Theoretical Biology, 21 June 2000, Vol. 204, No. 4, pages 497-503.
<http://www.idealibrary.com/links/toc/jtbi/latest>

Goldberg & Stricker conclude: "At least two different epidemics arose on different continents at different times: (1) heterosexuals in Africa infected with HIV-1 (non-B), and (2) homosexuals in the United States infected with HIV-1B. Statistically, such an event would be unlikely unless the gap between the epidemics was bridged. We now know that human diploid cell strains were used to produce polio vaccines, and that the cells are theoretically capable of supporting SIV and HIV-1 replication. We propose that human diploid cell strains were the vehicle that "bridged the gap", resulting in SIV/HIV zoonosis from monkeys to humans. The purpose of using human diploid cell strains was to eliminate "known" simian virus contamination of vaccines. Even with the best of intentions, however, it would have been impossible to eliminate "unknown" simian retroviral contamination in the pre-AIDS era. This lesson becomes particularly relevant as we now contemplate AIDS vaccine trials using novel vaccine production strategies in developing and developed nations.

2000: (May 20) Dr. Robert Gallo, head of the Institute of Human Virology in Baltimore, recently announced plans to test a new oral AIDS vaccine during the next two years. Set to be tested in both Baltimore and Uganda, the vaccine was developed by George Lewis, director of the vaccine division at Gallo's institute, with colleague David Hone. The vaccine uses a weakened form of Salmonella typhi to transport the HIV protein gag and parts of several other viral proteins. The researchers hope the vaccine will cause cytotoxic T-lymphocytes to recognize and destroy cells infected with HIV. The International AIDS Vaccine Initiative will give \$1 million for the project.

➤ **Source:** "Bacterial AIDS Vaccine Ready for Testing" Nature (www.nature.com) (05/25/00) Vol. 405, No. 6785, P. 386; Smaglik, Paul

Note: Dr. Robert Gallo remains in full control of U.S. government policy disbursements in HIV research internationally.

The history of US 'depopulation' Policies lies in several official Govt. documents, including: ~

1. The Conference Papers from Fort Detrick Conference held on April 4 - 5, 1969.
2. The 'full' testimony of Dr Donald MacArthur on June 9, & July 1 1969.

3. The 'full' text of the 'Special Memo to Congress on Population' by then President Richard Nixon, July 18, 1969.
4. The 'full' text of Henry Kissenger; Memorandum # 45.
5. The 'full' text of the National Security Study Memorandum - 200 (NSM-200).
6. The 'full' text of the National Security Study Memorandum # 314 (NSDM # 314).
7. The fifteen (15) 'Progress Reports' of the "Special Virus" (SVCP) Program conducted in the United States from 1962.
8. The Department of Defense Appropriations for 1970, Subcommittee Of The Committee On Appropriations House Of Representatives, Ninety-First Congress, H.B. 15090, Part: 5; Research, Development, Test, and Evaluation.

Human Immuno-deficiency Virus (HIV), as we all have come to know it, has had 3 official name changes during its "Special Virus" development:

- 1) 'Leukemia and tumor viruses of Animal and Man' - to -
- 2) 'Cancer Virology' - to -
- 3) 'HIV/AIDS'.

United States Patent #4,647,773

Method of continuous production of retroviruses (HTLV-III) from patients with AIDS and pre-AIDS.

Abstract: A cell system is disclosed for the reproducible detection and isolation of human T-lymphotropic retroviruses (HTLV-family) with cytopathic effects (HTLV-III) from patients with the acquired immune deficiency syndrome (AIDS), pre-AIDS and in healthy carriers. One neoplastic aneuploid T-cell line derived from an adult with lymphoid leukemia, and termed HT, was susceptible to infection with the new variants of HTLV, which are transformed and providing T-cell populations which are highly susceptible and permissive from HTLV-III, and convenience for large scale production, isolation and biological detection of the virus.

Inventors: Gallo; Rorert C. (Bethesda, MD); Popovic; Mikulas (Bethesda, MD)

Assignee: The United States of America as represented by the Department of Health (Washington, DC).

(Note who pays for the Patent and Research)

Appl. No. 602946

Filed: April 23, 1984

THE GENESIS & CHRONOLOGY OF THE DEVELOPMENT OF HEPATITIS C VIRUS

1913 • The RF [Rockefeller Foundation] board on December 5 makes its first grant: \$100,000 to the American Red Cross for the purchase of property in Washington, D.C., for its headquarters. Chronology <http://www.rockfound.org/frameset2.html>

Note: Mullins describes in his book "Murder by Injection" how the Rockefellers with the help of the American Medical Association and government officials gained control of America's "health" care industry in the early part of this century. "Educating" medical students was instrumental in their plan, Mullins writes: "Rockefeller's Education Board has spent more than \$100 million to gain control of the nation's medical schools and turn our physicians to physicians of the allopathic school, dedicated to surgery and the heavy use of drugs." Published by the National Council for Medical Research in 1988. Hard-cover, 348 pages.

<http://www.ioa.com/~davehart/>

1915~1945 • Rockefeller - Yellow Fever - Aimed at yellow fever, RF's most concentrated public health effort begins. Writes President Raymond B. Fosdick later: "On no disease in the long list of human afflictions did the Rockefeller Foundation put greater emphasis or a larger proportion of time and financial support than on yellow fever." In this 30-year effort, RF sends scientists throughout Africa and Latin America to conduct research and test new approaches. Six die. Chronology

<http://www.rockfound.org/frameset2.html>

1932 • The next step was to try inoculation on human beings; Sellards and Laigret in France did this in 1932 by the Rockefeller group and – in both cases with success. However, the use of the mouse vaccine was thought to involve certain risks. This led Dr. Theiler and his collaborators, Lloyd, Smith, and Ricci, to try to produce a vaccine less potentially dangerous. After much hard work, they achieved their purpose by means of a special technique. This variant of the virus, which is quite harmless to man, was called 17D.

<http://nobel.sdsc.edu/laureates/medicine-1951-press.html>

1935 • Max Theiler - Vaccine to prevent yellow fever is developed in RF's New York laboratories.

<http://www.rockfound.org/frameset2.html>

1938 • More than one million Brazilians were inoculated with the vaccine before it was discovered that it had been contaminated with hepatitis B virus. 330 000 people came down with hepatitis B virus infection linked to vaccine lots given to approximately 50 000 US Army personnel. There were at least 84 deaths from the 1942 hepatitis outbreak.

<http://www.uow.edu.au/arts/sts/bmartin/dissent/documents/AIDS/EI4.html>

1938 • Yellow fever vaccination with cultured virus (17D) without immune serum. Am. J. Trop. Med. 18: 437-468.

1939 • Rockefeller Institute for Medical Research in New York studied the virulent, unmodified strain of yellow fever virus, ostensibly for the purpose of developing a cure for the disease. Japanese Army doctor, Ryoichi Naito, [right-hand man of General S. Ishii] visited the laboratory to obtain a sample of that strain of the Yellow Fever virus. It was determined by Army Intelligence that Japan was interested in the yellow fever virus for bacteriological warfare purposes.

<http://www.tdbooks.com/ebooks/lastcircle/chpt15pt1.html>

1940~1945 • During World War II, more than 140000 Allied prisoners of war (POWs) were held captive by the Japanese in conditions of extreme privation. The only exception is diseases of the liver, which may be due to infection with hepatitis B or C virus during captivity. PMID: 10609817

Note: 1939~1945 • With increasing number of Japanese prisoners of war captured in the South Pacific, the U.S. found out that not only was Japan engaged in significant Biological research; its program was on a far larger scale than previously suspected. Americans then knew that Tokyo was the center for biological experimentation and that Ishii was the forerunner of Japanese biological warfare with his epidemic prevention and water purification headquarters at Harbin. Also known to the Americans, mainly from Japanese naval sources, was the size of Unit 731 and germ bombs being manufactured.

<http://www.aiipowmia.com/731study.html#Introduction>

Note: 1939 • Mongolia - By 1939, Ishii's work bore fruits, as Unit 731 took part in Japan's five-month war against the Soviet Union at Nomonhan in east Outer Mongolia. In late 1941, Ishii had successfully developed a germ bomb. The Japanese high command was ready to use biological warfare against China and later against the United States. http://www.acs.ucalgary.ca/~jhkeong/alpha_ww2_wu.html

1940's • A single lot of globulin prepared from plasma that was collected in 1944 from United States Army soldiers also contained detectable anti-delta. These data indicate that delta-infection has been occurring among hepatitis B surface antigen (HBsAg) carriers in the United States since the 1940s. 1984. PMID: 6092192

1940's • There are very few reports of anaphylactic reactions to yellow fever (YF) vaccine in the literature, and these date from the 1940s. YF vaccine can cause anaphylactic reactions. 1999. PMID: 10200022

1941~1945 • WWII - Veterans - Vaccines - Unlicensed vaccines and bioweapon defense in World War II. 1999. PMID: 10478686

1942 • Epidemic of hepatitis B in the U.S. Army. U.S. Army veterans given yellow fever vaccine contaminated with hepatitis B virus in 1942. 69,988 men were the subjects of the cohort study. The small excess liver cancer mortality seen in the cohort study and the results of the case-control study are consistent, nevertheless, with the now well-established etiological role of hepatitis B virus infection in liver cancer. 1993. PMID: 8406352

1942 • Epidemic of post-vaccination hepatitis in the United States Army. An epidemic of icteric hepatitis in 1942 affected approximately 50,000 U.S. Army personnel. This outbreak was linked to specific lots of yellow-fever vaccine stabilized with human serum. We conclude that hepatitis B caused the outbreak, that about 330,000 persons may have been infected. 1987. PMID: 2436048

1942 • HBV - Yellow Fever - US Army - Dr Alwyn Zoutendyk, a respected member of the staff of the South African Institute for Medical Research, attention is called to the studies of the immunological disorders. While investigating serum hepatitis affecting soldiers of the US army following the administration of yellow fever vaccine [1942], an antigen similar to that later called the Australia antigen, now hepatitis B surface antigen, was found in the acute phase serum and the corresponding antibody was found in convalescence. This finding and subsequent studies suggested there was a group of disease, which we called the hyperreactive auto-allergic disorders, of which examples were to be found in every system. The obverse of these we called the hyporeactive immunologically deficient disorders resulting from defects of the cell or serum components of the immunological reactions, of which many examples have also been found. 1992. PMID: 1729733

1947 • Under Gen. MacArthur's protection, the Japanese germ-warfare researchers became some of Japan's most prominent citizens – university presidents, heads of medical centers. Lt. Col. Ryoichi Naito, Ishii's right-hand man, founded Green Cross, one of Japan's top pharmaceutical companies. Other Unit 731 leaders joined him there. On April 18, 1947, Gen. MacArthur's headquarters issued an order - "Every step, interrogation, or contact must be coordinated with this section, the utmost secrecy is essential in order to protect the interests of the United States and to guard against embarrassment."

<http://kimsoft.com/korea/jp-germ.htm>

Note: Alpha Therapeutics Corporation: Defendant in the following suits brought by infected victims: 1997: Louisiana (76 plaintiffs, represented by MULL &

MULL) Acquired in 1978 by GREEN CROSS and made a wholly-owned subsidiary. Run by Thomas Drees from its acquisition until he resigned in 1983 when Green Cross refused to address warnings issued by the CDC after meetings in November, 1982 which clearly established the transmission of the then unknown AIDS virus through blood.

<http://www.freerepublic.com/forum/a375b24382eb6.htm>

1949 -1954 • Mortality of Korean War Veterans Infected with Hepatitis C Virus. A cohort of approximately 100 veterans have been identified as Hepatitis C Virus (HCV) infected by testing a collection of serum specimens collected from approximately 9,500 military recruits during the period 1949 to 1954.

<http://www2.nas.edu/mfua/2172.html>

1954-1963 • Serum hepatitis at the Veterans Administration Research Hospital, Chicago 1954-1963. PMID: 5958905

1958-1967 • Serum hepatitis at Henry Ford Hospital, 1958-1967. 1970 PMID: 5418757

1964 • Rockefeller Foundation's virus research program (successor to the yellow fever vaccine campaign) is transferred to Yale University as the Yale Arbovirus Research Unit. Chronology

<http://www.rockfound.org/frameset2.htm>

1965 • Japan - Symposium on serum hepatitis. Chronic hepatitis caused by serum hepatitis. PMID: 5894570

1969 • The original hemorrhagic fever: yellow fever. PMID: 4981419

1969 • The Defense Department's Biological Warfare division requested funds to develop through gene-splicing a new disease that would both resist and break down a victim's immune system. "Within the next 5 to 10 years it would probably be possible to make a new infective micro-organism which could differ in certain important respects from any known disease-causing organisms. Most important of these is that it might be refractory to the immunological and therapeutic processes upon which we depend to maintain our relative freedom from infectious disease." (See "A Higher Form of Killing: The Secret Story of Chemical and Biological Warfare" by R. Harris and J. Paxman, p 266, Hill and Wang, pubs.)

1972 • World Health Organization proposal: "An attempt should be made to ascertain whether viruses can in fact exert selective effects on immune function, e.g. by...affecting T cell function as opposed to B cell function. The possibility should also be looked into that the immune response to the virus itself may be impaired if the infecting virus damages more or less selectively the cells responding to the viral antigens." (Bulletin of the

W.H.O., vol 47, p 257-274.) This is a clinical description of the function of the AIDS virus.

1974 • FBI, FDA Documents obtained by Washington Weekly, Magnussen, 4/18/99. Documents evidence 1974 investigations into the plasma distribution in the U.S. and Canada by Continental Pharma Cryosan.

<http://www.freerepublic.com/forum/a375b2b76399a.htm>

1974 • Non A, Non-B, Hepatitis disclosed by the CDC.

1976 • Brazil - Hepatitis B antigen (Australia antigen) in serum of yellow fever patients. PMID: 1273407

1977 • The efficacy of the ISG [Immune Serum Globulin], manufactured in 1944, against apparent type non-A, non-B hepatitis suggests that this overlooked disease has existed from at least that time. The use of commercial blood was observed to be the most important risk factor. PMID: 318578

1980 • Virus hepatitis, an overview - It has now been known for 40 years that the particular liver disease, which has been called "icterus catarrhalis" in former times is being caused by virus infection. Before that, Virchow's thesis ("occlusion of the papilla by mucus"), and later Eppinger's thesis ("serous hepatitis due to intoxication by unidentified protein break-down products") were held to be true. Only after liver biopsy was introduced, became it known that this particular disease is in fact an inflammatory process. Since neither bacteria nor protozoa could be found, it had to be assumed that viruses were the positive agents. It then took another 30 years until two viruses causing hepatitis (A and B) could be identified. The most important steps in this process of identification were: (1) proof of the oral and parental route of infection by Voegt in Germany and by American authors (following yellow fever vaccination in the US Army); (2) detection of the Australia (HBS) antigen by Blumberg; and (3) transfer of the infectious disease to monkeys. In conclusion, the present day status of hepatitis research (virology, epidemiology, immunology) is presented and chances of prevention are discussed. PMID: 7432072

1986 • Simultaneous administration of hepatitis B and yellow fever vaccines. Since no untoward reactions were noted, it is concluded that hepatitis B and yellow fever vaccines can be administered at the same time. PMID: 2943870

1986 • Viral hepatitis, notably non-A non-B hepatitis, is the most frequent infectious risk of transfusion in the United States today. The risk of HIV infection is very low because of voluntary donor self-deferral and screening of donated blood for evidence of the infection. PMID: 3786281

1986 • Aug - "Hepatitis B Vaccine Pools Included Plasma from Donor(s) with AIDS." As concerns the distinct probability that the hepatitis B vaccine given to U.S. homosexuals (In: New York City, Los Angeles, San Francisco, St. Louis, Chicago, Denver) was contaminated with HIV, Francis et al. (1986) state on page 870: "Fifty serum specimens lacking any personal identifiers were taken from recipients of hepatitis B vaccine pools 73304 through 73307, each of which retrospectively was found to include plasma from at least one donor in whom AIDS subsequently developed," and "The material that was assayed for the presence of nucleic acids from the AIDS virus was the final aqueous product of two different production pools of hepatitis B vaccine, each of which was found retrospectively to include plasma from at least one donor in whom AIDS subsequently developed." (JAMA 1986 Aug 15; 256 (7): 869-72)

1987 • Descriptive epidemiology of an outbreak of hepatitis B in the U.S. Army, Europe. PMID: 3112631

1987 • Post-transfusion hepatitis B virus [HCV] infection and effect of prevention with hepatitis B immunoglobulin. PMID: 3443029.

1990 • The Centers for Disease Control conducted intensive surveillance for acute non-A, non-B hepatitis in four sentinel counties over a 7-year period. There were significant changes in disease transmission patterns. The proportion of patients with a history of blood transfusion declined from 17% to 6%, but the proportion with a history of parental drug use increased from 21% to 42%. PMID: 2170702

Note: 1998 • Sentinel Counties: Denver County, Colorado; Pierce County, Washington; Jefferson County, Alabama; and Pinellas County, Florida. PMID: 9815207

1991 • NANB PTH is as common in Taiwan as in the United States and Japan, and is demonstrated by this study to be due mostly to HCV. PMID: 1908889

1991 • US - Antibodies to HCV is 10.08% among commercial plasma donors. PMID: 1709949

1991 • CDC - Non-A, non-B hepatitis is more likely to occur outside the transfusion setting. Surveillance data from the CDC show that in 1988 patients with non-A, non-B hepatitis reported a history of blood transfusion, 2% medical or dental employment involving frequent blood contact, less than 1% hemodialysis, and 40% no known source. High anti-HCV rates (50-80%) in parenteral drug users and hemophiliacs, intermediate rates among the sexually active (5-15%), and low rates among health care workers (1%). PMID: 1656745

Hepatitis B Experiments According to the Mortality and Morbidity Weekly Report, there were 358 reported cases of Hepatitis B in New York City and 438 cases in Upstate New York for all of 1992. Despite CDC claims that there would be 200,000 cases nationwide in 1992, there were, in fact, only 13,857 reported cases. The vast majority of these cases were contracted through high-risk sex, drug abuse, and medical contact. Hepatitis B disease peaked in the mid 1980's and has been declining ever since. Despite these facts, our legislators in Albany are trying to mandate this vaccine for all newborn babies in New York State. The vaccine has been added to the list of mandated vaccines for entry to school.

<http://www.trufax.org/vaccine/hepb.html>

1992 • History of the research on differentiating Hepatitis A and B]. The numerous researches devoted to 'jaundice' during the Second World War have brought to light the existence of an infectious type of hepatic jaundice or 'homologous serum jaundice' following parenteral injection of vaccines containing human serum and blood transfusions, which were carried out on a large scale at the time. This type of serum jaundice was then gradually differentiated from 'catarrhal', contagious or epidemic jaundice by clinical trials along with large series of animal studies. Finally, the epidemiological, clinical and biological data obtained made it possible to establish, between 1944 and 1954, the viral etiology of these two types of jaundice: the A virus, present in the patients' blood and stools, was considered to be the agent responsible for epidemic hepatitis; the B virus, present primarily in the blood, was held to be responsible for serum hepatitis. PMID: 1308284

1996 • Transfusion-associated hepatitis was recognized in 1943. PMID: 8800511

1996 • Brazil - Concomitant high prevalence of hepatitis C virus antibodies and hepatitis B virus markers in a small village of the Amazon Region, Brazil. PMID: 9163988

1997 • Southern USSR - Mongolia - HCV = 10.7% in Mongolia. The 1b genotype predominated everywhere (68.9%), its incidence being the highest in Moldova (96%). Unclassifiable variants of HCV were found in (6%) of sera. The regularities of HCV genotypes circulation in the European Russia were the same as in other European countries, whereas their prevalence in Eastern Russia was rather like that in China or Japan. PMID: 9304294

1997 • 1991 to 1994 - A four-year review of patients with hepatitis C antibody in Department of Veterans Affairs facilities. [HCV] has recently been recognized as an emerging pathogen of surprising proportions. From 1991 to 1994. This represents an increase of more than 285% during the 4-year

period. Increases in HCV antibody for the same period were seen in all major regions of the United States and in the specified large metropolitan areas. PMID: 9358714

Note: 1997 • 26 Million US Veterans - The present veteran population is estimated at 25.6 [26] million, as of July 1, 1997.

<http://www.va.gov/organization/Vavdva.htm>

Note: The Math - 26 million total veterans x 31% HCV veteran rate = more than 8 million veterans in the US with HCV. 2000 - HCV Veterans - Era of service, 4.2% from WWII, 4.8% Korean conflict, 4.3% post-Korean conflict, 62.7% Vietnam era. Post-Vietnam at 18.2%, 2.7% Persian Gulf veterans.

<http://veterans.house.gov/hearings/schedule106/apr00/4-13ben/groselle.htm>

1998 • June - CDC - Alter MJ - "There isn't a lot we've been able to do," says Miriam Alter, chief of epidemiology for hepatitis at the CDC. Alter adds, "therapy has been very disappointing for most people." US News Cover Story; 6/22/98. Hepatitis C: A Silent Killer, by Nancy Shute.

1998 • June - CDC - Alter MJ - Injection drug use is the single most important risk factor for acquiring (HCV) infection. PMID: 9663617 [Published in an AIDS Publication]

1998 • Facing up to re-emergence of urban yellow fever. PMID: 10334247

1999 • HCV - Veterans - tests for hepatitis C conducted among veterans last year [31%] were positive for the hepatitis C antibody. Source: House Committee on Veterans' Affairs.

1999 • The U.S. Veteran population represents a unique patient group to study different HCV genotypes because of geographically diverse exposures. The aim of this study was to characterize the distribution of HCV genotypes in U.S. veterans undergoing liver transplantation (OLT) (45%) patients had serological evidence of prior hepatitis B (HBV) infection. PMID: 10520862

1999 • Most [HCV] infected persons are younger than 50 years old. PMID: 10622567

1999 • A magic sword or a big itch: an historical look at the United States biological weapons program. In the late 1950s interest in entomological warfare increased, and literature describing the US biological warfare programs on the use of the mosquito *Aedes aegypti*, the vector for transmitting yellow fever, has now been released. Yellow fever was considered as a suitable disease to use in southern regions of the former Soviet Union. PMID: 10472190 Note: southern regions of the former Soviet Union = Mongolia.

2000 • (HCC) is increasing in many countries because of an increase in (HCV) infection since World War II. PMID: 10728807

2000 • VA - HCV Veterans - Era of service, 4.2% from WWII. VA - HCV Veterans - Era of service, 62.7% Vietnam era. Post-Vietnam at 18.2%. VA - HCV Veterans - Era of service, 2.7% Persian Gulf veterans.

2000 • Persons born between 1940 and 1965 will be at highest lifetime risk of acquiring HCV. PMID: 10706572

2000 • The major risk factors for this [HCC] cancer have been identified as chronic infection with (HBV) and (HCV) viruses and dietary exposure to aflatoxins. PMID: 10767647

2000 • Rockefeller Foundation Mission Statement - "Our highest priorities include AIDS, malaria and tuberculosis."

2000 • May - First Hepatitis-C Center in Northeast Region Established by Rockefeller University, New York-Presbyterian, and Weill Cornell.

2000 • June - Bridging the Gap: Human Diploid Cell Strains and the Origin of AIDS, by B. Goldberg & R. Stricker. Abstract: Recent descriptions of the first human and chimpanzee cases of human immunodeficiency virus type 1 (HIV-1)-related retroviral infections dating from 1959 have stirred interest in the origin of AIDS. Although the theory of a chimpanzee origin of HIV-1 with cross-species transfer to man has now gained popularity, a more likely scenario is that chimps and humans were infected by an HIV-1 precursor virus derived from a contaminated polio vaccine. The reason for the rapidity and ease of cross-species transfer of this precursor virus has not been elucidated. We hypothesize that the polio vaccine was passaged in a human diploid cell strain. This simple manipulation allowed the retrovirus to adapt to human tissues and may have spawned the AIDS pandemic. *Journal of Theoretical Biology*, 21 June 2000, Vol. 204, No. 4, pages 497-503.

Goldberg & Stricker conclude: "At least two different epidemics arose on different continents at different times: (1) heterosexuals in Africa infected with HIV-1 (non-B), and (2) homosexuals in the United States infected with HIV-1B. Statistically, such an event would be unlikely unless the gap between the epidemics was bridged. We now know that human diploid cell strains were used to produce polio vaccines, and that the cells are theoretically capable of supporting SIV and HIV-1 replication. We propose that human diploid cell strains were the vehicle that "bridged the gap", resulting in SIV/HIV zoonosis from monkeys to humans. The purpose of using human diploid cell strains was to eliminate "known" simian virus contamination of vaccines. Even with the best of intentions, however, it would

have been impossible to eliminate "unknown" simian retroviral contamination in the pre-AIDS era. This lesson becomes particularly relevant as we now contemplate AIDS vaccine trials using novel vaccine production strategies in developing and developed nations.

Comment: Since the end of WWII over 200 reports of experimental Biological Warfare tests have been conducted on civilians and military personnel in the US. One example; the test spraying from Sept. 20-26, 1950 of *Bacillus globigii* and *Syracusamaracezens* over 117 square miles of the San Francisco area, causing pneumonia-like infections in many of the residents. The family of one elderly man who died in the test sued the government, but lost. To this day Syracuse is a leading cause of death among the elderly in the SF area. Another case was the joint Army/CIA BW test in 1955, still classified, in which an undisclosed bacteria was released in the Tampa Bay region of Florida, causing a dramatic increase in whooping cough infections, including twelve deaths. A third example was the July 7-10, 1966 release of bacteria throughout the New York subway system, conducted by the US Army's Special Operations Division.

The incidence of AIDS infections in Africa coincides exactly with the locations of the massive W.H.O. smallpox vaccination program in the mid-1970's Source: *London Times*, May 11, 1987.

The first detailed charges regarding AIDS as a biological weapon were published in the "Patriot" newspaper in New Delhi, India, on July 4, 1984.

See "Project Paperclip" by Clarence Lasby, Atheneum 214, NY and "Gehlen: Spy of the Century" by E. H. Cookridge, Random House.

MYCOPLASMA REFERENCES

"Today, there are a vast number of "symptom-set" disease labels/names that curiously enjoy "unknown" and/or disputed etiology. Variable of these diagnosis have been afforded to millions and millions of patients although symptoms can overlap such that there are not always clear distinctions between one condition and another. Examples of these illnesses include, but are not limited to, conditions such as chronic fatigue immune dysfunction syndrome, auto-immune disorders (lupus, multiple sclerosis and Lou Gehrig's Disease/ALS), arthritis, attention deficit disorder, fibromyalgia, Epstein-Barr virus (chronic), CMV, HHV-6, sarcoidosis, Creutzfeldt-Jakob disease including the new-variant, mad-cow disease, Stevens-Johnson syndrome, meningitis, acquired immune deficiency syndrome, "idiopathic" CD4 positive T-lymphocytopenia (aka HIV-negative AIDS), Crohn's disease, cancers, lymphoma,

leukemia, encephalopathies, pelvic inflammatory disease, allergies, asthma, sjogren's syndrome, somatization, chronic mononucleosis, scleroderma, interstitial cytitis, and alzheimers. Interestingly, all of these conditions can be caused by one peculiar species of contagious pathogen, mycoplasma." Quote by George Hylak

1962 is the year the United States began "artificially growing" mycoplasmas. SEE Proceedings of the United States of America, National Academy of Sciences, Vol. 48, pp 41 -49, (1962); "Growth on Artificial Medium of an Agent Associated with Atypical Pneumonia and its Identification as a PPLO", communicated by Robert J. Heubner and co-authored by Len Hayflick. It has been scientifically proven that mycoplasmas regulate HIV's 'Long Terminal Repeat' (LTR) sequence. SEE FEMS Microbiol Lett 128, 63 - 68, (1995).

1992 • Joklik WK et al. (eds): Zinsser Microbiology. East Norwalk, Connecticut: Appleton & Lange, 1992 (p. 730)

Mycoplasmas are very small pleomorphic cells bounded by a trilaminar membrane 8 to 10 nm thick. they range in size from 0.2 to 0.8 mcm in diameter and are capable of passing through a membrane filter of 450nm pore size. Because they lack a rigid cell wall, they assume a number of morphologic forms, ranging from spherical or pear-shaped structures to filamentous cells with branching or with terminal structures.

1992 • Joklik WK et al. (eds): Zinsser Microbiology. East Norwalk, Connecticut: Appleton & Lange, 1992 (p. 913).

Title: Unusual Nucleic Acid Bases. The genomes of several bacteriophage contain unusual nucleic acid bases. For example, the T-even coliphage DNAs contain 5-hydroxymethylcytosine in place of cytosine, and the majority of the hydroxymethylcytosine residues in these DNAs also are glucosylated. The DNA of certain B. subtilis phage show a remarkable diversity of thymine replacements, including uracil, 5-hydroxymethyluracil, glycosylated and phosphorylated 5-(4',5'-dihydroxypentyl) uracil, and alpha-glutamyl thymine.

These various base substitutions confer an important advantage on infecting phage genomes--namely, they render the DNA resistant to degradation by host restriction systems. As described in Chapter 8, many bacterial cells produce restriction enzymes that degrade foreign DNA, and nearly all restriction enzymes are inactive against these substituted phage DNAs. A second advantage of the substituted bases is that the infection phage is able to specifically degrade the host DNA (containing normal bases), thereby generating a large pool of nucleotide precursors for

its own replication. Each bacteriophage with unusual bases simply induces nucleases that degrade only DNA with normal bases, providing the necessary specificity to prevent degradation of phage DNA.

1993 • Behbahani N, Blanchard A, Cassell GH, Montagnier L. Phylogenetic analysis of Mycoplasma penetrans, isolated from HIV-infected patients. FEMS Microbiol Lett 1993 May 1;109(1):63-6 Institut Pasteur, Departement du SIDA et des retrovirus, Oncologie Virale, Paris, France.

Abstract: A novel mycoplasmal species designated as Mycoplasma penetrans has recently been isolated from patients infected with human immunodeficiency virus. The 16S rRNA gene from this mycoplasma was cloned and its nucleotide sequence determined. This sequence was aligned with previously published homologous sequences from several mycoplasmas and with related Gram-positive bacteria and a phylogenetic tree was constructed. The results indicate that M. penetrans belongs to the evolutionary group Pneumoniae.

1993 • Montagnier L, Blanchard A. Mycoplasmas as cofactors in infection due to the human immunodeficiency virus. Clin Infect Dis 1993 Aug;17 Suppl 1:S309-15.

Institut Pasteur, Departement du SIDA et des Retrovirus, Unite d'Oncologie Virale, Paris, France.

Abstract: Results obtained in vitro suggest that mycoplasmas act as cofactors with the human immunodeficiency virus (HIV) in the development of AIDS. Mycoplasmas, including Mycoplasma fermentans, Mycoplasma pirum, and Mycoplasma penetrans have since been isolated from HIV-infected individuals. In addition, M. fermentans has been detected by different investigators in numerous tissues and in the blood of HIV-infected patients. Higher titers of antibodies to M. penetrans have also been found in HIV-infected patients as compared with noninfected individuals. These mycoplasmas have been shown to have the capacity to invade cells and to be potent immunomodulators. Although there is no doubt that mycoplasmas are found in HIV-infected individuals and eventually produce systemic infections, their pathogenic role in association with HIV remains to be determined.

1993 • Asai T, Okada M, Ono M, Irisawa T, Mori Y, Yokomizo Y, Sato S. Increased levels of tumor necrosis factor and interleukin 1 in bronchoalveolar lavage fluids from pigs infected with Mycoplasma hyopneumoniae. Vet Immunol Immunopathol 1993 Oct;38(3-4):253-60.

Zen-noh Institute of Animal Health, Chiba, Japan.

Abstract: We examined the levels of tumor necrosis factor (TNF)-alpha and interleukin-1 (IL-1) in bronchoalveolar lavage fluids (BALF) from pigs experimentally infected with Mycoplasma

hyopneumoniae using biological assays with WEHI-164 cells and D10.G4.1 cells, respectively. Increased TNF-alpha and IL-1 in BALF were found in infected pigs with gross and/or microscopic lesions. A time-course study suggested TNF-alpha and IL-1 to be persistently elevated in infected pigs. Their presence in BALF would thus appear to be associated with the development of pneumonic lesions in *M. hyopneumoniae* infected pigs.

1994 • Stemke GW, Huang Y, Laigret F, Bove JM. Cloning the ribosomal RNA operons of *Mycoplasma flocculare* and comparison with those of *Mycoplasma hyopneumoniae*. *Microbiology* 1994 Apr;140 (Pt 4):857-60.

Department of Microbiology, University of Alberta, Edmonton, Canada.

Abstract: In contrast to other mycoplasma species the 16S/23S rRNA and 5S rRNA operons of *Mycoplasma flocculare* and *Mycoplasma hyopneumoniae* map at least 150 kb apart (20% of the genome). Both operons from *M. flocculare* have been cloned and sequenced. The 23S rRNA gene sequence showed 96.7% homology with the corresponding gene of *M. Hyopneumoniae*, equalling that found earlier for 16S rRNA and confirming the close phylogenetic relationships of these organisms. A possible upstream promoter was identified. Sequence elements upstream and downstream from each structural gene could form a stem needed for maturation of the immature rRNA transcript to mature 16S and 23S rRNA. We also identified two possible stem-and-loop sequences 3' to the 23S rRNA gene. The 5S rRNA gene itself also showed high homology with the corresponding structural gene of *M. hyopneumoniae*, although the upstream and downstream sequences were highly heterologous.

1994 • Asai T, Okada M, Ono M, Mori Y, Yokomizo Y, Sato S. Detection of interleukin-6 and prostaglandin E2 in bronchoalveolar lavage fluids of pigs experimentally infected with *Mycoplasma hyopneumoniae*. *Vet Immunol Immunopathol* 1994 Dec;44(1):97-102.

Zen-noh Institute of Animal Health, Chiba, Japan.

Abstract: In this study, interleukin-6 (IL-6) and prostaglandin E2 (PGE2) were detected in the bronchoalveolar lavage fluids (BALF) from pigs experimentally infected with *Mycoplasma hyopneumoniae*. IL-6 was detected at 2 weeks post-inoculation (PI), and significantly increased levels of PGE2 were observed at 4 weeks PI. In the BALF collected from infected pigs at 4 weeks PI, the levels of IL-6 increased significantly in the pigs with pneumonic lesions. However, increased levels of PGE2 were observed in all the infected pigs.

1995 • Shen R, Su ZZ, Olsson CA, Fisher PB. Identification of the human prostatic carcinoma oncogene PTI-1 by rapid expression cloning and

differential RNA display. *Proc Natl Acad Sci U S A* 1995 Jul 18;92(15):6778-82.

Department of Pathology, Columbia University, College of Physicians and Surgeons, New York, NY 10032, USA.

Abstract: Elucidating the relevant genomic changes mediating development and evolution of prostate cancer is paramount for effective diagnosis and therapy. A putative dominant-acting nude mouse prostatic carcinoma tumor-inducing gene, PTI-1, has been cloned that is expressed in patient-derived human prostatic carcinomas but not in benign prostatic hypertrophy or normal prostate tissue. PTI-1 was detected by cotransfecting human prostate carcinoma DNA into CREF-Trans 6 cells, inducing tumors in nude mice, and isolating genes displaying increased expression in tumor-derived cells by using differential RNA display (DD). Screening a human prostatic carcinoma (LNCaP) cDNA library with a 214-bp DNA fragment found by DD permitted the cloning of a full-length 2.0-kb PTI-1 cDNA. Sequence analysis indicates that PTI-1 is a gene containing a 630-bp 5' sequence and a 3' sequence homologous to a truncated and mutated form of human elongation factor 1 alpha. In vitro translation demonstrates that the PTI-1 cDNA encodes a predominant approximately 46-kDa protein. Probing Northern blots with a DNA fragment corresponding to the 5' region of PTI-1 identifies multiple PTI-1 transcripts in RNAs from human carcinoma cell lines derived from the prostate, lung, breast, and colon. In contrast, PTI-1 RNA is not detected in human melanoma, neuroblastoma, osteosarcoma, normal cerebellum, or glioblastoma multiforme cell lines. By using a pair of primers recognizing a 280-bp region within the 630-bp 5' PTI-1 sequence, reverse transcription-PCR detects PTI-1 expression in patient-derived prostate carcinomas but not in normal prostate or benign hypertrophic prostate tissue. In contrast, reverse transcription-PCR detects prostate-specific antigen expression in all of the prostate tissues. These results indicate that PTI-1 may be a member of a class of oncogenes that could affect protein translation and contribute to carcinoma development in human prostate and other tissues. The approaches used, rapid expression cloning with the CREF-Trans 6 system and the DD strategy, should prove widely applicable for identifying and cloning additional human oncogenes.

1995 • Sasaki Y, Blanchard A, Watson HL, Garcia S, Dulioust A, Montagnier L, Gougeon ML. In vitro influence of *Mycoplasma penetrans* on activation of peripheral T lymphocytes from healthy donors or human immunodeficiency virus-infected individuals. *Infect Immun* 1995 Nov;63(11):4277-83

Departement du SIDA et des Retrovirus, Institut Pasteur, Paris, France.

Abstract: *Mycoplasma penetrans* is a mycoplasma species newly isolated from the urine of human immunodeficiency virus (HIV)-infected individuals and presents the only case in which an association has been found between antibodies against a mycoplasma and HIV infection. To further explore the effects of *M. penetrans* on the immune system, we studied the influence of this mycoplasma on peripheral blood mononuclear cells (PBMCs) from healthy donors and HIV-infected individuals. *M. penetrans* induced, in addition to blastogenesis of PBMCs, a significant proliferative response associated with the expression of some activation markers such as CD69, HLA-DR, and CD25. This *M. penetrans*-dependent lymphocyte activation was observed not only in healthy donors but also in HIV-infected persons at different stages of the disease. In addition, our study revealed that both CD4+ and CD8+ T lymphocytes were responsive to *M. penetrans*. Interestingly, the mitogenic activity of *M. penetrans* was associated with mycoplasma cells but not with the supernatants of mycoplasma culture. The potent stimulating activity of *M. penetrans* on T lymphocytes from HIV-infected individuals is of particular interest in view of the supposed contribution of immune activation to HIV replication and disease progression.

Pages 4280: Various mycoplasma species, including *Mycoplasma fermentans*, *Mycoplasma pneumoniae*, and *Mycoplasma arthritidis*, have been found to polyclonally activate human T lymphocytes in proliferation assays.

Page 4282: Since preliminary data indicate that *M. penetrans* stimulation of PBMCs induces secretion of monokines, including tumor necrosis factor alpha and IL-6, it can be excluded that the effects observed in the present study on T lymphocytes might be the consequence of an initial activation of monocytes or macrophages.

1995 • Shen et al. (1995) "Identification of the human prostatic carcinoma oncogene PTI-1 by rapid expression cloning and differential RNA display" state: "The 5' region of PTI-1 displays no sequence similarity to eukaryotic genes, but instead is about 85% similar to the prokaryotic 23S ribosomal RNA gene from *Mycoplasma hyopneumoniae*. This region of PTI-1 contains the 214-bp DNA marker (core) sequence obtained by DD. The 5' region also contains a large number of stop codons (TAA, TGA, and TAG sequences). These data suggest that PTI-1 is a fusion gene consisting of two regions: a 630-bp 5' region, together with a 3' truncated and mutated EF-1alpha gene." *Proc. Natl. Acad. Sci. U.S.A.* 92 (15), 6778-6782 (1995)

1996 • Rawadi G, Roman-Roman S, Castedo M, Dutilleul V, Susin S, Marchetti P, Geuskens M, Kroemer G. Effects of *Mycoplasma fermentans* on

the myelomonocytic lineage. Different molecular entities with cytokine-inducing and cytotoxic potential. *J Immunol* 1996 Jan 15;156(2):670-8.

Roussel Uclaf, Domaine Therapeutique Immunologie, Romainville, France.

Abstract: *Mycoplasma fermentans* is a mycoplasma species that has been accused of serving as a cofactor of AIDS development. Here, we show that *M. fermentans* affects the function of human monocytes and myelomonocytic cell lines on at least two different levels. Heat-inactivated mycoplasma particles induce inflammatory cytokines such as IL-1, IL-6, and TNF in monocytes, as well as in THP-1 cells. Moreover, *M. fermentans* induces IL-10 (but not IL-12) in freshly isolated human monocytes. The cytokine-inducing effect is mediated by lipid-associated molecules. In addition, we have detected a novel biologic activity that resides in the nonlipid-associated protein fraction of *M. fermentans* (approximate molecular mass: 15 to 30 kDa) and that has a cytotoxic effect on nondifferentiated myelomonocytic cell lines (U937 cells, HL-60 cells), as well as on actinomycin-D-sensitized monocytes. Death is accompanied by oligonucleosomal DNA fragmentation and loss of chromosomal DNA. U937 and HL-60 cells fail to produce cytokines and rather undergo cell death in response to heat-inactivated *M. fermentans*, provided that they are kept in a relatively undifferentiated stage. Whereas the cytokine-inducing activity is a general feature of many mycoplasma species, it appears that only a restricted panel of mycoplasma species exert a cell death-inducing activity. In addition to *M. fermentans* strains, *Mycoplasma penetrans*, another hypothetical cofactor of AIDS, possess a cytotoxic activity. This does not apply to other mycoplasma species, including pathogenic ones such as *Mycoplasma pneumoniae* and *Ureaplasma urealyticum*. The cell death-inducing effect of *M. fermentans* is not mediated by cytokines and obeys different principles than TNF-alpha-mediated apoptosis. Thus, in contrast to TNF-alpha-induced death, it is not accompanied by a decrease in the mitochondrial transmembrane potential and is not inhibited by preincubation with the antioxidant drug N-acetylcysteine. In synthesis, it appears that certain AIDS-associated mycoplasma species perturb the function and/or generation of cells from the myelomonocytic lineage via several distinct pathways.

1997 • Sun Y, Lin J, Katz AE, Fisher PB. Human prostatic carcinoma oncogene PTI-1 is expressed in human tumor cell lines and prostate carcinoma patient blood samples. *Cancer Res* 1997 Jan 1;57(1):18-23.

Department of Pathology, Columbia-Presbyterian Comprehensive Cancer Center, College of

Physicians and Surgeons, Columbia University, New York, New York 10032, USA.

Abstract: Rapid expression cloning and differential RNA display identifies a gene, named prostate tumor inducing gene-1 (PTI-1), that is differentially expressed in prostate cancer versus normal prostate and benign prostatic hypertrophy. PTI-1 encodes a truncated and mutated human elongation factor 1 alpha, and its 5' untranslated region (UTR) shares significant homology with the 23S rRNA gene of *Mycoplasma hyopneumoniae*. PCR with human genomic DNAs, using PTI-1 5' UTR-specific primers, suggests that this sequence is part of the human genome. Furthermore, reverse transcription (RT)-PCR, with one primer specific to the 5' UTR region and the other to the elongation factor 1 alpha coding region, amplifies PTI-1 transcripts from total RNA of various human tumor cell lines and blood samples from prostate carcinoma patients. RT-PCR products with the predicted size and sequence of PTI-1 are detected in RNAs from cell lines of human prostate, breast, and colon carcinomas. This RT-PCR product is shown by Southern blotting and sequence analyses to contain the junction sequence between the 5' UTR and the coding region of the PTI-1 gene. Furthermore, RT-PCR analysis indicates that the PTI-1 gene is also expressed in prostate carcinoma patient-derived blood samples. On the basis of serial dilution experiments, PTI-1 can detect 1 prostate carcinoma cell in 10(8) cells not expressing PTI-1. In this context, PTI-1 represents a sensitive marker for detecting human prostate cancer in the bloodstream. This study confirms the authenticity of the PTI-1 gene and documents its potential clinical utility as a sensitive and specific indicator of prostate cancer progression.

Page 22: Documentation of the presence of the 5' UTR *Mycoplasma* homology region in the human genome forces one to examine the potential origin of such prokaryotic gene sequences in the eukaryotic genome. Although no mechanism is provided, a recent study suggests a potential relationship between persistent chronic infection with *Mycoplasmas* and malignant transformation. Unlike retroviruses and DNA tumor viruses that can incorporate their genetic material into the host genome, no evidence is currently available indicating that *Mycoplasma* gene sequences can integrate into the human genome as part of their infectious cycle. However, it is possible that *Mycoplasma*, or more likely one of its ancestors may randomly insert its genetic material into human or one of its ancestor's genome. This integration may occur by a mechanism that is similar to that by which foreign gene sequences insert into the genome of transgenic animals. The presence of sequences that are highly homologous to prokaryotic genes in the human genome has been

reported previously, although the functions of these sequences are not known. It is very tempting to speculate that, based on the high degree of homology between the 5' UTR of PTI-1 and *Mycoplasma* gene sequences, such an event may have occurred recently in evolution, thereby generating the PTI-1 gene.

Additional important issues are the mechanism by which PTI-1 expression is activated in human tumor cells and the role of PTI-1 in mediating the cancer phenotype. Differential expression of PTI-1 in cancer cells may occur by activation of transcription from an upstream promoter from the EF-1alpha or another target gene, resulting in transcription of the 5' UTR and EF-1alpha region of PTI-1. Alternatively, gene activation could result from genome rearrangement, including gene deletion, inversion, and translocation, which are common occurrences in many cancers.

1997 • Karlin S, Mrazek J, Campbell AM. Compositional biases of bacterial genomes and evolutionary implications. *J Bacteriol* 1997 Jun;179(12):3899-913.

Department of Mathematics, Stanford University, California 94305-2125, USA.

Abstract: We compare and contrast genome-wide compositional biases and distributions of short oligonucleotides across 15 diverse prokaryotes that have substantial genomic sequence collections. These include seven complete genomes (*Escherichia coli*, *Haemophilus influenzae*, *Mycoplasma genitalium*, *Mycoplasma pneumoniae*, *Synechocystis* sp. strain PCC6803, *Methanococcus jannaschii*, and *Pyrobaculum aerophilum*). A key observation concerns the constancy of the dinucleotide relative abundance profiles over multiple 50-kb disjoint contigs within the same genome. (The profile is $\rho_{XY} = f_{XY}/f_X f_Y$ for all XY, where f_X denotes the frequency of the nucleotide X and f_Y denotes the frequency of the nucleotide Y, both computed from the sequence concatenated with its inverted complementary sequence.) On the basis of this constancy, we refer to the collection $[\rho_{XY}]$ as the genome signature. We establish that the differences between $[\rho_{XY}]$ vectors of 50-kb sample contigs of different genomes virtually always exceed the differences between those of the same genomes. Various di- and tetranucleotide biases are identified. In particular, we find that the dinucleotide CpG=CG is underrepresented in many thermophiles (e.g., *M. jannaschii*, *Sulfolobus* sp., and *M. thermoautotrophicum*) but overrepresented in halobacteria. TA is broadly underrepresented in prokaryotes and eukaryotes, but normal counts appear in *Sulfolobus* and *P. aerophilum* sequences. More than for any other bacterial genome, palindromic tetranucleotides are underrepresented in *H. influenzae*. The *M. jannaschii* sequence is

unprecedented in its extreme underrepresentation of CTAG tetranucleotides and in the anomalous distribution of CTAG sites around the genome. Comparative analysis of numbers of long tetranucleotide microsatellites distinguishes *H. influenzae*. Dinucleotide relative abundance differences between bacterial sequences are compared. For example, in these assessments of differences, the cyanobacteria *Synechocystis*, *Synechococcus*, and *Anabaena* do not form a coherent group and are as far from each other as general gram-negative sequences are from general gram-positive sequences. The difference of *M. jannaschii* from low-G+C gram-positive proteobacteria is one-half of the difference from gram-negative proteobacteria. Interpretations and hypotheses center on the role of the genome signature in highlighting similarities and dissimilarities across different classes of prokaryotic species, possible mechanisms underlying the genome signature, the form and level of genome compositional flux, the use of the genome signature as a chronometer of molecular phylogeny, and implications with respect to the three putative eubacterial, archaeal, and eukaryote domains of life and to the origin and early evolution of eukaryotes.

1998 • Su Z, Goldstein NI, Fisher PB. Antisense inhibition of the PTI-1 oncogene reverses cancer phenotypes. *Proc Natl Acad Sci U S A* 1998 Feb 17;95(4):1764-9

Departments of Pathology and Urology, Herbert Irving Comprehensive Cancer Center, Columbia University College of Physicians and Surgeons, New York, NY 10032, USA.

Abstract: The genetic alterations and molecular events mediating human prostate cancer development and progression remain to be defined. Rapid expression cloning and differential RNA display detect a putative oncogene, prostate tumor-inducing gene 1 (PTI-1), that is differentially expressed in human prostate (as well as breast, colon, and small cell lung) cancer cell lines, patient-derived prostate carcinomas, and blood from patients with metastatic prostate cancer. PTI-1 consists of a unique 5' untranslated region (5' UTR) with significant sequence homology to *Mycoplasma hyopneumoniae* 23S ribosomal RNA juxtaposed to a sequence that encodes a truncated and mutated human elongation factor 1 α (Trun-EF). Stable expression of a nearly full-length 1.9-kb PTI-1 gene, but not the separate PTI-1 5' UTR or Trun-EF region, in normal rat embryo fibroblast cells, CREF-Trans 6, induces an aggressive tumorigenic phenotype in athymic nude mice. Blocking PTI-1 expression with antisense PTI-1 results in reversion of transformed PTI-1-expressing cells to a more normal cellular morphology with suppression in both anchorage-independent growth and tumorigenic potential in athymic nude mice. These findings

document that PTI-1 is indeed an oncogene, and directly blocking PTI-1 expression can nullify cancer phenotypes. In these contexts, PTI-1 not only represents a gene with discriminating diagnostic properties but also may serve as a target for the gene-based therapy of human prostate and other cancers.

Page 1764: The full-length PTI-1 cDNA is 2,123 bp, consisting of a unique 630-bp 5' untranslated region (UTR) with significant homology to *Mycoplasma hyopneumoniae* 23S ribosomal RNA fused to a sequence that is a truncated and mutated human elongation factor 1 α (EF-1 α) (Trun-EF) (7). PCR with human genomic DNAs from normal human brain and kidneys, using PTI-1-specific 5' UTR primers, provides evidence that this sequence is present in the human genome (8). Support for this conclusion comes from Southern blotting of genomic DNAs. Moreover, reverse transcriptase-PCR, using one primer specific for the 5' UTR and the other for the EF-1 coding region, amplifies PTI-1 transcripts from total RNAs of prostate, breast, and colon carcinoma cell lines and blood samples from patients with metastatic prostate cancer (8). Taken together, these data suggest that the identification of PTI-1 was unlikely to be due to a contamination of samples with bacteria or cloning artifacts. Serial-dilution experiments indicate that PTI-1 can detect 1 prostate carcinoma cell in 10⁸ cells not expressing PTI-1 (8). The exquisite sensitivity of PTI-1 in detecting carcinoma cells in the bloodstream of patients with metastatic prostate cancer suggests that this gene will prove extremely valuable as a sensitive and specific monitor of prostate cancer progression as reflected by the presence of cancer cells in a patient's bloodstream.

Page 1765: Expression Vector Constructs and DNA Transfection Assays. A 1.9-kb PTI-1 cDNA, containing an '500-bp region from the 5' UTR, the Trun-EF coding region, and the 39 UTR, was cloned in S and AS orientation into a pZeoSV vector as previously described (9, 10). Additionally, a 500-bp region of the 5' UTR of PTI-1 and the Trun-EF of PTI-1 were also cloned in a S and AS orientation into a pZeoSV vector. To study the effects of these constructs on monolayer colony formation the vector (pZeoSV) containing no insert, PTI-1 S, PTI-1 AS, 5' UTR S, 5' UTR AS, Trun-EF S, or Trun-EF AS expression constructs was transfected into the various cell types by the Lipofectin method (GIBCO/BRL), and zeocin-resistant colony formation or tumorigenic potential in nude mice was determined (10-12).

Page 1765: PTI-1 Is a Dominant-Acting Oncogene. To determine if PTI-1 has oncogenic properties, a 1.9-kb PTI-1 clone, missing '215 bp from the 5' UTR of the original predicted PTI-1 cDNA, isolated from a human prostate LNCaP cDNA library, was cloned

into a pZeoSV vector and transfected into CREF-Trans 6 cells. Transfectants were selected for zeocin resistance, and pooled colonies from four separate plates were each injected into 4 athymic nude mice, total 16 nude mice. Within 10 days of injection, tumors were apparent in all animals (Fig. 1). As anticipated, nude mice injected with CREF-Trans 6:4 NMT cells, resulting from transfection with high molecular weight DNA from LNCaP cells and expressing PTI-1, also induced rapidly growing tumors (Fig. 1). Seven independent tumors derived from animals injected with pooled PTI-1- transfected CREF-Trans 6 cells were excised and established in cell culture. All of these tumor-derived cell lines exhibited a transformed morphology and expressed PTI-1 and the Zeocin-resistance gene (Fig. 2 and data not shown). No tumors developed when animals were injected with CREF-Trans 6 cells or CREF-Trans 6 cells transfected with an empty pZeoSV expression vector or pZeoSV expression vectors containing a 500-bp region of the 5' UTR of PTI-1, the Trun-EF of PTI-1, or a combination of the separated 500-bp 5' UTR and the Trun-EF regions of PTI-1 (Fig. 1). These results document that PTI-1 is a dominant-acting oncogene and the intact gene is required to elicit a biological effect.

Page 1769: Because the unique 5' URT of PTI-1 is found in the genomes of both normal and cancer cells, it will be important to isolate these genes and compare their genomic structure. An evaluation and analysis of these genetic elements should provide important insights into the potential origin and role of PTI-1 in cancer.

1998 • Vojdani A, Choppa PC, Tagle C, Andrin R, Samimi B, Lapp CW. Detection of *Mycoplasma* genus and *Mycoplasma fermentans* by PCR in patients with Chronic Fatigue Syndrome. *FEMS Immunol Med Microbiol* 1998 Dec;22(4):355-65 Immunosciences Laboratory, Beverly Hills, CA 90211, USA. immuni@ix.netcom.com

Abstract: *Mycoplasma fermentans* and other *Mycoplasma* species are colonizers of human mucosal surfaces and may be associated with human immunodeficiency virus infection. While many infectious agents have been described in different percentages of patients with Chronic Fatigue Syndrome (CFS), little is known about the prevalence of mycoplasmas and especially *M. fermentans* in CFS patients. A polymerase chain reaction (PCR)-based assay was used to detect *Mycoplasma* genus and *M. fermentans* genomes in peripheral blood mononuclear cells (PBMC) of CFS patients. Blood was collected from 100 patients with CFS and 50 control subjects. The amplified products of 717 bp of *Mycoplasma* genus, and 206 bp of *M. fermentans* were detected in DNA purified from blood samples in 52% and 34% of CFS samples, respectively. In contrast, these genomes were found in only 14% and 8% of healthy control

subjects respectively ($P < 0.0001$). All samples were confirmed by Southern blot with a specific probe based on internal sequences of the expected amplification product. Several samples, which were positive for *Mycoplasma* genus, were negative for *M. fermentans* indicating that other *Mycoplasma* species are involved. A quantitative PCR was developed to determine the number of *M. fermentans* genome copies present in 1 microg of DNA for controls and CFS patients. *Mycoplasma* copy numbers ranging from 130 to 880 and from 264 to 2400 were detected in controls and CFS positive subjects, respectively. An enzyme immunoassay was applied for the detection of antibodies against p29 surface lipoprotein of *M. fermentans* to determine the relationship between *M. fermentans* genome copy numbers and antibody levels. Individuals with high genome copy numbers exhibited higher IgG and IgM antibodies against *M. fermentans* specific peptides. Isolation of this organism by culture from clinical specimens is needed in order to demonstrate specificity of signal detected by PCR in this study.

1999 • Gopalkrishnan RV, Su ZZ, Goldstein NI, Fisher PB. Translational infidelity and human cancer: role of the PTI-1 oncogene. *Int J Biochem Cell Biol* 1999 Jan;31(1):151-62.

Department of Neurosurgery, Columbia University, College of Physicians and Surgeons, Herbert Irving Comprehensive Cancer Center, New York, NY 10032, USA.

Abstract: Several components of the eukaryotic protein synthesis apparatus have been associated with oncogenic transformation of cells. Altered expression of translation elongation factor 1 alpha (EF-1 alpha), a core component of protein synthesis and closely related sequences have been linked with transformed phenotypes by several independent studies, in diverse systems. A dominant acting oncogene, prostate tumor inducing gene-1 (PTI-1) has provided further evidence for this link. PTI-1 appears to be a hybrid molecule with components derived from both prokaryotic and eukaryotic origins. The predicted protein coding moiety represents an EF-1 alpha molecule, truncated N-terminal to amino acid residue 68 and having six additional point mutations. This coding sequence is fused to a 5' untranslated region (UTR) showing strongest homology to ribosomal RNA derived from *Mycoplasma hyopneumoniae*. Expression studies using the cloned cDNA in nude mouse tumor formation assays have confirmed the oncogenic nature of the molecule. A broad spectrum of tumor derived cell lines, from varied tissue sources and blood samples from patients having confirmed prostatecarcinoma, all scored positive for expression of PTI-1, while corresponding normal tissues or blood samples were negative. Based on its near identity to EF-1

alpha, it is proposed that PTI-1 represents a new class of oncogene whose transforming capacity probably arises through mechanisms including: (i) protein translational infidelity, resulting in the synthesis of mutant polypeptides due to loss of proofreading function during peptide chain elongation, (ii) by its association with and alteration of the cytoskeleton, (iii) by impinging on one particular or several different signal transduction pathways through its properties as a G-protein.

1999 • Kozak M. Initiation of translation in prokaryotes and eukaryotes. *Gene* 1999 Jul 8;234(2):187-208.

Department of Biochemistry, University of Medicine and Dentistry of New Jersey, 675 Hoes Lane, Piscataway, NJ 08854, USA.

Abstract: The mechanisms whereby ribosomes engage a messenger RNA and select the start site for translation differ between prokaryotes and eukaryotes. Initiation sites in polycistronic prokaryotic mRNAs are usually selected via base pairing with ribosomal RNA. That straightforward mechanism is made complicated and interesting by cis- and trans-acting elements employed to regulate translation. Initiation sites in eukaryotic mRNAs are reached via a scanning mechanism which predicts that translation should start at the AUG codon nearest the 5' end of the mRNA. Interest has focused on mechanisms that occasionally allow escape from this first-AUG rule. With natural mRNAs, three escape mechanisms - context-dependent leaky scanning, reinitiation, and possibly direct internal initiation - allow access to AUG codons which, although not first, are still close to the 5' end of the mRNA. This constraint on the initiation step of translation in eukaryotes dictates the location of transcriptional promoters and may have contributed to the evolution of splicing. The binding of Met-tRNA to ribosomes is mediated by a GTP-binding protein in both prokaryotes and eukaryotes, but the more complex structure of the eukaryotic factor (eIF-2) and its association with other proteins underlie some aspects of initiation unique to eukaryotes. Modulation of GTP hydrolysis by eIF-2 is important during the scanning phase of initiation, while modulating the release of GDP from eIF-2 is a key mechanism for regulating translation in eukaryotes. Our understanding of how some other protein factors participate in the initiation phase of translation is in flux. Genetic tests suggest that some proteins conventionally counted as eukaryotic initiation factors may not be required for translation, while other tests have uncovered interesting new candidates. Some popular ideas about the initiation pathway are predicated on static interactions between isolated factors and mRNA. The need for functional testing of these complexes is discussed. Interspersed with these theoretical topics are some practical points concerning the interpretation of

cDNA sequences and the use of in vitro translation systems. Some human diseases resulting from defects in the initiation step of translation are also discussed.

1999 • Ripple MO, Henry WF, Schwarze SR, Wilding G, Weindrich R. Effect of antioxidants on androgen-induced AP-1 and NF-kappaB DNA-binding activity in prostate carcinoma cells. *J Natl Cancer Inst* 1999 Jul 21;91(14):1227-32.

M. O. Ripple, S. R. Schwarze, Institute on Aging, University of Wisconsin, Madison, and Geriatric Research, Education and Clinical Center, William S. Middleton Memorial Veterans Hospital, Madison.

Abstract: BACKGROUND: Previous studies have suggested that male hormones (androgens) and certain forms of oxygen (reactive oxygen species) are linked to the development of prostate cancer. We hypothesized that androgens contribute to prostate carcinogenesis by increasing oxidative stress. We further hypothesized that antioxidants reduce prostate cancer risk by modulating androgen effects on cellular processes. METHODS: To test these hypotheses, we looked for 1) a change in the level of reactive oxygen species in the presence of androgens, 2) androgen-induced binding activity of transcriptional activators AP-1 and NF-kappaB, whose activities are known to be altered during cell proliferation, and 3) the effect of antioxidants on androgen-induced transcription factor binding. RESULTS: Physiologic concentrations (1 nM) of 5alpha-dihydrotestosterone or 1-10 nM R1881, a synthetic androgen, produced sustained elevation of AP-1 and NF-kappaB DNA-binding activity in LNCaP cells, an androgen-responsive human prostate carcinoma cell line. Androgen-independent DU145 cells (another human prostate carcinoma cell line) were unaffected by R1881 treatment. AP-1-binding activity increased 5 hours after 1 nM R1881 treatment; NF-kappaB DNA-binding activity increased after 36 hours. Both activities remained elevated for at least 120 hours. Nuclear AP-1 and NF-kappaB protein levels were not elevated. Antioxidant vitamins C plus E blocked both androgen-induced DNA-binding activity and production of reactive oxygen species. CONCLUSION: Physiologic concentrations of androgens induce production of reactive oxygen species and cause prolonged AP-1 and NF-kappaB DNA-binding activities, which are diminished by vitamins C and E.

Note: The molecular mechanisms underlying CpG-induced activation have been determined and involve various signal transduction pathways resulting in activation of AP-1 and NF-kB transcription factors. Unmethylated CpG sequences do not utilize cell surface receptors to activate cells, but are internalized into acidified intracellular compartments (Hacker et al., 1998; Yi & Krieg, 1998). Redford et al. (1998) state: "CpG DNA also

degrades I κ B through a reactive oxygen species-sensitive pathway, leading to subsequent translocation of NF- κ B to the nucleus." So, prostate cancer, AP-1 & NF- κ B, and "PTI-1 encodes a truncated and mutated human elongation factor 1 alpha, and its 5' untranslated region (UTR) shares significant homology with the 23S rRNA gene of *Mycoplasma hyopneumoniae*." And, bacterial DNA CpGs activate AP-1 & NF- κ B.

1999 • Campbell A, Mrazek J, Karlin S. Genome signature comparisons among prokaryote, plasmid, and mitochondrial DNA. *Proc Natl Acad Sci U S A* 1999 Aug 3;96(16):9184-9189

Department of Biological Sciences, Stanford University, Stanford, CA 94305-2125.

Abstract: Our basic observation is that each genome has a characteristic "signature" defined as the ratios between the observed dinucleotide frequencies and the frequencies expected if neighbors were chosen at random (dinucleotide relative abundances). The remarkable fact is that the signature is relatively constant throughout the genome; i.e., the patterns and levels of dinucleotide relative abundances of every 50-kb segment of the genome are about the same. Comparison of the signatures of different genomes provides a measure of similarity which has the advantage that it looks at all the DNA of an organism and does not depend on the ability to align homologous sequences of specific genes. Genome signature comparisons show that plasmids, both specialized and broad-range, and their hosts have substantially compatible (similar) genome signatures. Mammalian mitochondrial (Mt) genomes are very similar, and animal and fungal Mt are generally moderately similar, but they diverge significantly from plant and protist Mt sets. Moreover, Mt genome signature differences between species parallel the corresponding nuclear genome signature differences, despite large differences between Mt and host nuclear signatures. In signature terms, we find that the archaea are not a coherent clade. For example, *Sulfolobus* and *Halobacterium* are extremely divergent. There is no consistent pattern of signature differences among thermophiles. More generally, grouping prokaryotes by environmental criteria (e.g., habitat propensities, osmolarity tolerance, chemical conditions) reveals no correlations in genome signature.

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- Legal References:
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 - 48) Trading With the Enemy Act, 50 USC Appx 1 et seq.
 - 49) MCL 750.492a.
 - 50) *McGarry v J.A. Mercier Co.*, 272 Mich 501, 262 NW 296 (1935).
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 - 52) Privacy Act, 5 USC 552A.
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 - 54) Governmental Tort Liability Act, MCL 691.1407.
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- THE THOMAS M. COOLEY LAW SCHOOL MYCOPLASMA RESOLUTION:**
- During Michaelmus/1997 term, the following resolution was signed by several hundred members of the Thomas M. Cooley Law School community:
- "THE BELOW DESIGNATED STUDENTS,

FACULTY, AND ADMINISTRATION of Thomas M. Cooley Law School hereby support investigation into the connection between mycoplasmas and numerous forms of human illnesses including, but not limited to, Chronic Fatigue Immune Dysfunction Syndrome, Gulf War Illness, "Idiopathic" CD4 Positive T-Lymphocytopenia (aka HIV-Negative AIDS), auto-immune disorders (Lupus, MS and ALS), Epstein-Barr Virus, CMV, HHV-6, Sarcoidosis, Cancers, Lymphomas, Fibromyalgia, Arthritis, Attention Deficit Disorder, Creutzfeldt-Jakob Disease (new variant), Spongiform Encephalopathies, and Alzheimers. In addition, we request the availability of mycoplasma-sensitive laboratory testing procedures through commercial laboratories to properly diagnose (species, subtype and isolate by way of PCR/DNA-amplification) and properly treat (antimicrobial sensitivity) these suspected mycoplasma diseases. In regards to this PUBLIC HEALTH EMERGENCY, we request immediate action from appropriate health care professionals, scientists, public officials, and our Michigan Legislature and appropriate standing committees thereof in accord with germane authorities including, but not limited to, mandating provisions of the Michigan Constitution. Further, we support the establishment of committees to address these issues, together with an appropriate level of funding therefor, through both the governmental and the private sector including the Thomas M. Cooley Student Bar Association, officers and organizations thereof." Source of 1 thru 57 reference information and Thomas M. Cooley Law School Mycoplasma Resolution by Geroge Hylak.

To get an accurate polymerase chain reaction (PCR) blood test for mycoplasmal and other infections:

Mycoplasma infections are found in patients diagnosed with Chronic Fatigue Syndrome, Fibromyalgia and Gulf War Illness, autoimmune diseases, Rheumatoid Arthritis, Lupus, Sclerodema, ALS, MS, Leukemia and AIDS. The Mycoplasma Registry has the following recommendations:

1. Do not perform the General (or Family) Mycoplasma species screening test, since it is not as accurate as hoped. This test should not be used as a screening test for mycoplasmal infections in patients.
2. Do not perform the "multiplex" ("3 in 1" or "4 in 1") multi-species Mycoplasma PCR blood tests. They are less expensive but their accuracy has not been completely established. Instead, perform individual tests for specific species that are most likely to be present.

The top three pathogens that Mycoplasma Registry patients test positive for are: Mycoplasma fermentans, HHV-6A, and Chlamydia pneumoniae

Others pathogens found individually or in combination with the other infections are: Mycoplasma pneumoniae, Mycoplasma hominis, Mycoplasma genitalium, Mycoplasma penetrans, Mycoplasma pirum, and Ureaplasma urealyticum

3. Have the blood drawn at the lab in order to obtain the most accurate results. If that is impractical, the second best solution is to have the blood delivered to the lab within twenty hours. If a sample of blood containing mycoplasmas is left at room temperature, within 24 hours half the mycoplasma are dead and within 72 hours all are dead. Once dead, they disintegrate and the specific genetic sequences needed to be found for PCR amplification will have vanished. Blue ice will keep the blood sample at a refrigerated temperature. Place some packing material between the blood sample and the blue ice to prevent the blood sample from touching the blue ice. This avoids freezing of the blood sample, which causes coagulation, ruining the sample for testing

4. If patients draw blood for overnight shipping, have it drawn later in the day to shorten the hours before the sample is processed. Also, have the blood drawn early in the week, rather than on a Friday, so that the sample arrives on a day when the lab is open, rather than sitting unprocessed over a weekend.

5. Do not take any antibiotics at least one month or more before a PCR blood test. This also applies to natural products that kill mycoplasmas, such as colloidal silver, flax seed and fish oils.

6. Do not take vitamins, herbs or supplements that boost the body's immune system and might reduce the mycoplasma count before the blood is drawn. Examples would be Vitamin C, IP6, immune boosters, garlic, transfer factor, olive leaf extract, etc. Unfortunately, no research exists to guide patients on how long patients should avoid these products before drawing blood.

7. The best time to have blood drawn is when the patient is symptomatic. Mycoplasmas can become dormant from time to time, so if a patient is feeling well it might not be the best time to test.

8. If a patient receives a negative result, and is still symptomatic, they should consider being retested. Review our suggestions for how and when to be tested to see if they were followed. Discuss the merits of retesting with your physician.

9. Some patients start antibiotics before being tested as an experiment to see if they will show improvement. Then, to avoid a relapse, they refuse to stop using antibiotics before a PCR test. Unfortunately, once they start antibiotics, they risk getting a false PCR result. Even if patients stop taking antibiotics for one to several months, there are no guarantees that the PCR test can find

mycoplasmas in their blood stream. This leaves patients unsure of their infection(s) and they may not be taking the correct antibiotic(s). Also, without a positive test result, physicians are reluctant to prescribe long term antibiotic treatment. For patients on antibiotics, there may be an alternative to PCR. Traditional antibody tests to detect mycoplasmas are NOT as accurate as PCR. Although it is a "long shot," detection may be possible if a patient has developed antibodies to mycoplasmas.

Laboratories that offer PCR blood tests for mycoplasmal infections in the United States

Immunosciences Lab., Inc.
8730 Wilshire Blvd., Suite 305
Beverly Hills, CA 90211
Toll-free: (800) 950-4686
Phone: (310) 657-1077
Fax: (310) 657-1053

E-mail: immunsci@ix.netcom.com

Web site: <http://www.immuno-sci-lab.com>

[Offers both a PCR and an antibody test for mycoplasmas]

Medical Diagnostic Laboratories
133 Gaither Drive, Suite C
Mt. Laurel, New Jersey 08054
Toll-free: (877) 269-0090
Phone: (609) 608-1696
Fax: (609) 608-1667

E-mail: SALES@MDLAB.COM

Web site: <http://www.mdlab.com>

The Arthritis Research Center
504 E. Diamond Avenue, Suite I
Gaithersburg, MD 20877.

Phone: (301) 216-1231

Fax: (301) 216-0302

[Offers both a PCR and an antibody test for mycoplasmas]

International Molecular Diagnostics, Inc.
15162 Triton Lane
Huntington Beach, CA 92649-1041
Toll-free: (888) 882-8838
Phone: (714) 799-7177

Fax: (714) 799-9787

Client Service Direct Line
(714) 902-2323

E-mail: clientservice@imd-lab.com

Web site: <http://imd-lab.com>

GeneTex, Inc., Molecular Diagnostics
14785 Omicron Dr. Suite 101
San Antonio, TX 78245
Toll-free: 1-877-GENETEX (436-3839)
Phone: 1-210-677-8529
Fax: 1-210-677-8843

E-mail: support@genetex.com

Web site: <http://www.genetex.com>

Mycoplasma Registry

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CHRONOLOGY of MEDICAL OZONE

Compiled from "O3 vs. AIDS" By Ed McCabe
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1885 • Florida Medical Association published "Ozone" by Charles J. Kenworthy, M. D., M.R.S.V. from Jacksonville Florida. This proves that ozone was in regular medical usage in the U.S. before 1885, and therefore predates the 1906 Pure Food and Drug Act, its subsequent revisions, and the FDA as well. Therefore, ozone's medical usage is grandfathered in the United States, and held as perfectly legal for any M.D. to use without censure. Ozone generating medical devices is claimed by the FDA to be a separate question. (Note: see commentary further on about Dr. Willner's case in 1991)

1896 • Sept 22 - Inventor genius Nikola Tesla patents the first ozone generator in the U.S.

1898 • Institute for Oxygen Therapy-Healing started in Berlin by Thauerkauf & Luth. First injection of ozone into animals, first bonding of ozone to solid form products (Haemozon, now Homozon). Proprietary bonding technology method still unknown and un-believed by all but certain American, German and Russian scientists. The chemistry is substantiated in Russian texts.

1898 • Dr. Benedict Lust from Germany practices in NY. He was the originator & founder of Naturopathy, and wrote many books and articles on ozone.

1900 • Medical ozone was used in the U.S. by Nikola Tesla who formed the "Tesla Ozone Company" which was the first company to use high voltage, high frequency, low amperage AC systems and was granted many ozone patents. Medical ozone and ozone products were used widely in the beginning of the century and their use actually predates the FDA's inception in 1906.

1902 • J.H. Clarke's "A dictionary of Practical Materia Medica," London, describes the successful medical use of "Oxygenium" in treating Anemia,

Cough, Cancer, Diabetes, Influenza, Morphine poisoning, Canker Sores, Strychnine poisoning, Whooping-cough. Oxygenium is ozone charged water.

1902 • Dr. C. O. Linder M.D. was written up in Spokane, WA "Centennial" magazine as injecting medical ozone and commonly using state of the art ozone equipment in his medical practice.

1904 • Ozone charged olive oil has been sold in pharmacies for years all over the U.S. and used by thousands of physicians under the trade name "Glycozone." As reported in nineteenth edition of "The Medical Uses of Hydrozone and Glycozone" by Chas. Marchand. The New York Chemist's 339-page book is in the Library of Congress with the U.S. Surgeon general's stamp of approval on it.

1910 • (+/-) Tesla's "Violet Ray" ozone producing device commonly sold all over U.S. under many brand names and configurations, even finding its way into the Sears catalogs. Many had provisions for therapeutic breathing of strong concentrations of ozone after bubbling it through certain organic essential oils. Violet Ray now available through all beauty supply shops in the U.S.

Copyright 1911, 13, 15, 16, 19, 20 Noble M. Eberhart M.D., Ph. D., D.C.L. was published by New Medicine Publishing Company. "A Working Manual Of High Frequency Currents" Chapter 9 Ozone; Nature; Physiological Action; Methods of Administration; Diseases In Which It Is Indicated. Dr. Eberhart was head of the Department of Physiologic Therapeutics, Medical Department of Loyola University. Professor of High Frequency, Illinois School of Electrotherapeutics. Head of Department of Electrotherapy, Chicago College of Medicine and Surgery. Member of Chicago and Illinois State Medical Societies, American Medical Association, American Medical Editor's Association, Victoria Institute or Philosophical Society of Great Britain.

He used ozone in Tuberculosis, Anemia and Chlorosis, Chronic middle ear deafness and Tinnitus, Whooping Cough, Asthma, Bronchitis and Hay Fever, Insomnia, Pneumonia, Nervous Disability, Diabetes, Gout, and "Its beneficial action in syphilis has been attested by many physicians."

"Ozonizing the air of a patients room is the best method of employing ozone in this disease (tuberculosis)."

"In one sense of the word, since oxygen is so essential, it might be easily claimed that ozone was indicated in any bodily ailment... there are some diseases in which it is of particular benefit. Among these are anemia; all diseases off the respiratory organs, including tuberculosis; infectious diseases; and all conditions where there is imperfect oxidation and impaired nutrition."

"H. de LaCoux, Chemical Expert to the Council of the Prefecture of the Siene, Paris, says: "In the application of ozone for tuberculosis, it is an undeniable clinical fact the number of bacilli in the sputum diminishes after the second or third treatment, even before the general condition of the patient is improved."

"Dr. George Stoker, London, reports nine cases of tuberculosis treated within a year at the Stoker Oxygen Hospital, of which eight were discharged with the disease definitely arrested."

1913 • Eastern American Association for Oxygen Therapy formed by Dr. Blass & German associates.

1914 • Nov 20 - Dr. Charles O. Linder was advertising the availability "At a great expense" on his part, of his new medical ozone machine in the Vol 1 No. 1 "Not yet named Magazine" at the Apple Show near Spokane, WA. He was passing the ozone through Eucalyptus, Pine, and Cedar oils as scrubbers before inhalation of the gas.

1920 • Dr. Charles S. Neiswanger, M.D. publishes "Electro Therapeutical Practice" Ritchie & Company, Chicago. "A Ready Reference Guide for Physicians in the Use of Electricity and the X-Rays." Chapter 32 "Ozone as a Therapeutic Agent." Dr. Neiswanger was the President and Professor General Electro-Therapy Illinois School of Electro Therapeutics; Chicago Hospital College of Medicine. "Ozone acts as a powerful antiseptic in contact with diseased mucous surfaces, consequently its beneficial action is quickly apparent in the treatment of bronchial and laryngeal affections, catarrh, hay fever and all diseases of the respiratory organs."

1929 • "Ozone and Its Therapeutic Action." Book names 114 diseases and applications of ozone and prints the research from the centers and doctors centers using ozone. Armor Research Foundation Institute of Technology, IL, American College of Physical Therapy, Berlin University, Behren Memorial Hospital, Glendale, CA, Board of Education, St. Louis, Bouvicant First Hospital Paris, British Army Medical Service, London, Chicago College Of Medicine and Surgery, Chicago, Harvard University, Cambridge, MA, Polytechnic Institute, Brooklyn, NY, Physical Chemistry University, IL, Post Graduate Medical School, NY, S. California University of Los Angeles, Salaberry Hospital, Buenos Aires, Spaulding General Hospital, Portland , OR, Western Reserve University, Cleveland, OH, Washington University, Seattle, WA. A 40 page book with a different medical paper from a different expert on each page.

1930 • May 3 - Journal of The American Medical Association article "The Therapeutic Use of Oxygen in Coronary Thrombosis" by Robert L. Levy, M.D.,

and Alvan L. Barach, M.D. Oxygen tents help oxygen starved heart attack victims.

1930 • German dental physician E.A. Fisch was regularly using ozone in his dental practice in Zurich Switzerland and writes large number of ozone papers in Italian, French, & German. Patents the "Cytozon," the first dental use ozone apparatus.

1931 • Dr. Otto Warburg wins first Nobel Prize for work proving cancer is caused by a lack of oxygen in the cells. He states in "The Prime Cause and Prevention of Cancer" that the cause of cancer is no longer a mystery, we know it occurs whenever any cell is denied 60% of its oxygen requirements. This occurs through a buildup of pollution or toxicity within and around the cell which blocks and then damages the cellular oxygen respiration mechanism.

1932 • Renowned Austrian surgeon Dr. Erwin Payr receives ozone therapy and thereby learns of medical ozone by treatment from E. A. Fisch. Goes on to use ozone in his medical practice, increasing its acceptability in surgery.

1935 • Nov.- Societe Francais d'Electrotherapie et de Radiologie publishes M. Sourdeau (Le Mans) paper on "Ozone in Therapy." Four machines to produce ozone installed in the Electro-Radiology service in Beaujon-Clichy.

1938 • Parisian Medical Bulletin - Bul Med Paris 52 or 42:745-749, Paul Aubourg, Honorary Electro-Radiologist in the Hospitals of Paris, publishes "Medical Ozone: Production, Dosage, and Methods of Clinical Application Using rectal insufflation he noted that of 465 patients, the colon capacity varied from 150 to 800ccs (no megacolons), so everyone was x-ray photographed to ascertain the proper dosage without forcing the ileo-cecal valve. Ozone injections into wounds last for 6 to 15 minutes, verified by laboratory bacteriological results. Vaginal insufflations were common. Breathable concentrations of ozone were routinely applied to infected sinuses. Intermuscular injections were abandoned as too painful and ineffective. In 8000 applications of ozone, there were no accidents or harmful side effects.

1938 • Paul Aubourg "Results of 119 cases of coliform infection treated by ozone in Beaujon-Clichy." Presse Med 1938; 46:1987-1900.

1940's • German Doctor Hans Wolfe wrote the book "Medical Ozone."

1940's • FDA starts seizing ozone machines, and this policy continues to this day.

1940's • "Polyzone," "Aetheozone," and other ozone machines were marketed in the U.S.

1942 • "Gordon Detoxification and Hydro Surgery - Theory and Practice" book published covering medical uses of ozone as colon cleanser.

1943 • During the Second World war, Dr. Robert Mayer treated the FBI prisoners of war in the Ellis Island, NY POW camp. Dr. Mayer subsequently learned of medical ozone from one of the German prisoners and has since been applying ozone to patients in the United States for over 45 years. Dr. Mayer is a pediatrician, and has safely and effectively given ozone therapy to over 12 thousand people, most of them children. He pioneered the technique of ozone being injected directly into the spinal fluid to end meningitis. Dr. Mayer has authored many medical papers including: "Using Ozone As A Chemotherapeutic Agent For the Treatment Of Diseases" Out of compassion, he recently came out of retirement (he's in his seventies) and began treating hundreds of AIDS patients with medical ozone.

1944 • Dr. Otto Warburg wins second Nobel Prize for his work linking cancer to damaged cell respiration due to a lack of oxygen at the cellular level.

1951 • June - Dr. William Turska, Chairman of the Committee on Scientific Research of the American Naturopathic Association publishes in the Journal of the American Naturopathic Association "Oxidation." Dr. Turska pioneered the breathing of Aethozol (ozone passed through selected oils). He also pioneered and maintained one of the best methods of putting ozone into the body was to put up to 250 cc's directly into the portal circulation via the rectal veins with no pain, discomfort, or side effects. With repeated application, this completely cleans the liver.

1953 • Dr. Hans Wolff, general practitioner in Frankfurt, Germany starts his own ozone clinic after coming into contact with and learning about ozone from Dr. Hanseler.

1954 • "Oxygen: Master Of Cancer" book published by Frank Totney.

1956 • Feb 24 - Two time Nobel Prize winner Dr. Otto Warburg (who won this prestigious award for discovering and proving that cellular respiration, once damaged by a lack of oxygen, caused cells to mutate uncontrollably and turn into cancer cells) publishes in SCIENCE 24 February 1956, Volume 123, Number 3191 "On the Origin Of Cancer Cells."

1958 ~ 1973 • Dr. Robert Mayer and Dr. Edmund J. Ryan were granted eight ozone patents. 1950, 55, 58 patent # 3,063,904 granted Nov. 13, 1962: "Polymeric Oxygen (Ozone) In Blood and Sera Treatment and the Product Thereof."

1961 • Encyclopedia of Chemical Technology, Volume 16, Third Edition, John Wiley and Sons.

The symptoms of breathing high concentrations of ozone are acute, there appear to be no chronic effects among normally healthy people because the body has the ability to repair such damages. "No free radical reactions which directly involve ozone have been observed. During the 80 year history of the large scale usage of ozone, there has never been a human death attributed to it."

1965 • Senator Edward Long holds U.S. Senate hearings where Dr. Herbert Ley, FDA Commissioner testifies that the FDA "protects" the big drug companies and are subsequently rewarded, and using the government's police powers they attack those who threaten the big drug companies.

"People think what the FDA is protecting them. It is not. What the FDA is doing and what the public thinks it is doing are as different as night and day."

"First it is providing a means whereby key individuals on its payroll are able to obtain both power and wealth through granting special favors to certain politically influential groups that are subject to its regulation. This activity is similar to the 'protection racket' of organized crime: for a price, one can induce FDA administrators to provide 'protection' from the FDA itself."

Secondly, as a result of this political favoritism, the FDA has become a primary factor in that formula whereby cartel oriented companies in the food and drug industry are able to use the police powers of government to harass or destroy their free market competitors.

"And thirdly, the FDA occasionally does some genuine public good with whatever energies it has left over after serving the vested political and commercial interest of its first two activities." - Barry Lynes, "The Healing of Cancer" Marcus Books, Queensville, Ontario, Canada.

1966 • June 20 Meeting of Nobel Laureates: "The Prime Cause and Prevention of Cancer with Two Prefaces on Prevention." Dr. Warburg delivers revised lecture at the meeting of the Nobel Laureates at Lindau, Lake Constance, Germany. He is the Director of the Max Planck Institute For Cell Physiology, Berlin Dahlmer; English edition published by Dean Burk, National Cancer Institute, Bethesda Maryland, USA 1967.

1969 • U.S. Congress studies the FDA and states that 37 of the top 49 officials of the FDA who left the agency moved into high corporate positions with the large companies they had regulated.

1971 • Dr. Hans Wolf (President) and Prof. Dr. Siegfried Rilling (Vice President) founded The German Medical Society for Ozone Therapy.

1972 • The International Association For Oxygen Therapy, Dr. George Freibott, President, emerges.

Association formed out of International Oxidation Institute, which came from the Eastern American Association for Oxygen Therapy

1975 • U.S. G.A.O. Government General Accounting Office studied the FDA and revealed that 150 FDA officials owned stock in the companies they were supposed to regulate.

1976 • The FDA publishes in the Federal Register 21 CFR 801.415-Dated 2/13/76, amended 7/24/85, and 9/27/89: "Ozone is a toxic gas with no known medical uses." Ed McCabe comments in "The Family News:" "Printing this statement in a publication paid for with our taxes is either a blatant attempt at suppression of truth from the highest levels, or one of the poorest research jobs ever done. It obviously favors competitive therapies, and ignores well over 50 years of safe and effective medical use on hundreds of thousands of humans - backed up with thousands of medical references and clinical studies in Switzerland, Italy, France, Germany, Australia, New Zealand, Mexico, and the U.S."

1978 • FDA reports 1.5 million people were hospitalized in the USA due to side effects from medication. On the other hand, medical ozone has been legally used in clinics worldwide on a daily basis since the forties. In Germany, Ozone side effects are typically minor irritations that are caused by incorrect application and quickly disappear. This side effect rate is incredibly far, far, lower than U.S. drug therapy side effect rates wherein each year approximately 140,000 people die from prescription drug usage. That is two and a half times more Americans than were killed in Vietnam.

1979 • First case of AIDS treated by medical ozone therapy. Dr. George Freibott, ND from the International Association of Oxygen Therapy saw his first AIDS case. A Haitian living in Avon Park, Florida came to him with Kaposi's Sarcoma mouth lesions and was treated with medical ozone in rectal insufflations, ozone colonics, and direct ozone IV injection off and on for 1 1/2 years, only once a week. All external lesions were healed.

1979 • Dr Hans Wolff publishes his book on ozone.

1980 • Aug 22 - Sweet F, Kao M S, Lee S-CD (Dept of obstetrics and Gynecology, Washington University School of Medicine, St Louis, Mo) & W. Hagar (St Louis Air Pollution Control) publish in "Science" Vol 209: 931-933, a U.S. peer reviewed scientific journal, their study: "Ozone Selectively Inhibits Human Cancer Cell Growth." They announce "Evidently the mechanisms for defense against ozone damage are impaired in human cancer cells." "All of the cancer cells (lung, breast, uterine and endometrial) showed marked dose-dependent growth inhibition in ozone at .3 and .5 ppm" while the normal cells were not affected.

"Evidently cancer cells are less able to compensate for the oxidative burden of ozone than normal cells." They also stated that ozone inhibits cancer 40 to 60%, and up to 90% in a dose dependant manner, yet there is no response from mainstream medicine.

1980 • Jan - The German Medical Society for Ozone Therapy commissioned Marie Theresa Jacobs and Prof. Dr. Dr. Hergetbegan from the University Klinikum Giessen and the Institute for Medical Statistics and Documentation of Giessen University to begin an inquiry entitled "Adverse Effects and Typical Complications In Ozone Therapy." 2,815 questionnaires were sent out to all western German ozone therapists known by the Medical Society for Ozone Therapy (AGO, Arztliche Gesellschaft fur Ozontherapie). 884 went to physicians and 1931 to therapists.

1980 • May - By now, The German Medical Society had collected 1,044 replies, or 37% of the total. The replies that were returned stated 384,775 patients were treated with ozone with a minimum of 5,579,238 applications and the side effect rate observed was only .000005 per application! The report also stated "The majority of adverse effects were caused by ignorance about ozone therapy (operator error)." The University of Innsbruck's Forensic Institute published Dr. Zacob's dissertation quoting this in The Empirical Medical Acts of Germany.

1982 • German medical textbook published: "Medical Ozone" 2nd Ed. by Dr. Ewald Fischer Medical Publications in Heidelberg.

1983 • "Ozone As Therapy In Herpes Simplex & Herpes Zoster Diseases;" Mattassi R. MD, D'Angelo F. MD, Franchina A. MD, Bassi, P. MD. Santa Corona Hospital, Division of Vascular Surgery & Neurology, Milano, Italy 58 cases of Herpes Simplex showed complete recovery in two to five days following ozone therapy. "Results, Herpes Zoster: in all patients healing of skin lesions were observed after a minimum of 5 and a maximum of 12 ozone injections. Herpes Simplex: all patients healed after 1-5 injections. (Daily endovenous injections of 20cc of an oxygen-ozone mixture.

1983 • June - The chairman of neurosurgery at Jefferson Medical College in Philadelphia, Dr. Jewell Osterholm, announced that stroke damage can be reversed with spinal injections of an oxygen-rich mixture. Experiments on lab cats showed the procedure does reverse stroke damage.

1983 • May 24-25 - PROCEEDINGS - SIXTH WORLD OZONE CONFERENCE
Washington, D.C. 412 page book: "Medical Applications of Ozone." International M.D.'S List 33 Major Diseases Successfully Treated With Ozone. "OZONE Removes viruses and bacteria from blood, human and stored...Successfully used on AIDS,

Herpes, Hepatitis, Mononucleosis, Cirrhosis of the liver, Gangrene, Cardiovascular Disease, Arteriosclerosis, High Cholesterol, Cancerous Tumors, Lymphomas, Leukemia.. Highly effective on Rheumatoid and other Arthritis, Allergies of all types...Improves Multiple Sclerosis, ameliorates Alzheimer's Disease, Senility, and Parkinson's...Effective on Proctitis, Colitis, Prostrate, Candidiasis, Trichomoniasis, Cystitis. Externally, ozone is effective in treating Acne, burns, leg ulcers, open sores and wounds, Eczema, and fungus."

1985 • International Ozone Association publishes Robert A. Mayer's Experience of a pediatrician using ozone as a chemotherapeutic agent for the treatment of diseases of children. Medical Applications of Ozone, Julius Laraus editor.

1985 • Jan - "The Biochemical Process Underlying Ozone Therapy" published in Germany by Renate Viebahn of Dr. J. Hansler GmbH, Germany submitted for publication April 1984 accepted for publication January 1985. Professor Viebahn is in constant contact with most all of Europe's ozone using clinics. Her paper demonstrates ozone's ability to...disinfect and sterilize...employ bactericidal and virucidal mechanisms...is a circulatory enhancer...penetrates viruses.

1985 • Sept - "The Basic Clinical Applications of Ozone Therapy" Siegfried Rilling, MD President of German Medical Association for Ozone Therapy publishes in German medical publication, received for publication January 1985, accepted for publication September 1985. Complete descriptions of almost all ozone therapies and suggested protocols, based on his lifetime of clinical practice.

1986 • Dr. Alexander Preuss in Stuttgart, FRG, "Positive Treatment Results in AIDS Therapy; OzoNachrichten 5 (1986) Heft 1/2, published case histories of AIDS patients treated with ozone who are now completely healthy and back at work. Details printed in "Oxygen Therapies" by Ed McCabe, Energy Publications, 1988.

1986 • Dec 30 - Patent # 4,632,980 was granted and now held by Medizone, Inc. NYC, NY. "OZONE DECONTAMINATION OF BLOOD & BLOOD PRODUCTS." Medizone states all stored blood can be decontaminated with ozone and all HIV can be eliminated. Medizone applies for human test approval. Despite 50 years of medical ozone's use on humans by over 7,000 physicians, and flawless animal studies, the FDA will not allow human testing in the U.S.

1987 • Dr. Horst Kief, Heidelberg, FRG, announces successful treatment of 3 AIDS patients brought from Stage 8 back to Stage 1 at his German clinic using autohemotherapy ozone/1 gram vitamin C

therapies. Dr. Kief states "You can kill the AIDS virus with ozone therapy. No side effects." 15 ARC patients exhibit "full remission." Gained weight, T cells went from 300 back up to 1500 (normal), gone back to work. "One patient was so weak he couldn't turn on the radio. After only 3 treatments, he walks to the bathroom unaided." Typical treatment twice a week (method now outdated) continues for 7 to 11 months.

1987 • Dr. Hans Neiper, an ozone using doctor in Hanover, FRG, worked with NASA, past president of a German Oncology in an interview by videographer Jeff Harsh, talks about his colon cancer work. Although he cannot divulge the name of his patients, "President Reagan is a very nice man." In addition, "You wouldn't believe how many FDA officials or relatives or acquaintances of FDA officials come to see me as patients in Hanover. You would not believe this, or directors of the American Medical Association, or American Cancer Association, or the presidents of orthodox cancer institutes. That's the fact."

1987 • "The Use of Ozone In Medicine" Classic medical ozone textbook published by Karl F. Haug, Heidelberg, by Professor Siegfried Rilling, M.D. and Renate Viebahn, Ph.D, co-authors. 225 Ozone Medical References and Over 48 Diseases Commonly Treated With Ozone.

Including: "Abscess, Acne, AIDS, Allergies, Anal Fissure, Antiviral effect, Cerebral sclerosis, Circulatory disturbances, Cirrhosis of the liver, Menopause, Constipation, Cystitis, Bedsores, Dermatology, Fistulae, Funguses, Furunculosis, Gangrene, Gastroenterology, Gerontology, Hepatitis, Herpes, High Cholesterol, Colitis, Neurology, Dental Medicine, Tumors, Cancer, Orthopedics, Osteomyelitis, Parkinson's, Rheumatism, Proctology, Gynecology, Radiology, Raynaud's disease, Scars, Inflammation of the vertebrae, Stomatitis, Joint dystrophy, Surgery, Phlebitis, Open sores, Urology, Vascular surgery, Wound Healing."

1987 • March 8~12 - K.S. Zanker presents ozone has benefit in cancer treatment paper at the 2nd International Conference on Anticarcinogenesis and Radiation Protection Gaithersburg Maryland "The selectively inhibitive effect of medical ozone prepared from pure oxygen on tumorous human cell cultures has been known for a long time, and has recently been confirmed once more." - Washuttl, Viebahn, and Steiner reviewing this study.

1987 • Cuban (FDA equivalent) National Inst. For Scientific Research conducts ozone animal studies proving ozone is non-toxic, non-mutagenic, non-carcinogenic. (Ozone will not cause toxicity, mutations, or cancer)

1987 • Strahlenther Onkol (German Cancer Journal) 1987;163:37-42 "Zur Wirkung von Ozone und ionisierender Strahlung am In-Vitro-Modell - eine Pilotstudie an vier gynakologischen Tumoren" Karlic H., Kuccra H., Metka M., et al. "Recently, evidence was provided that ozone has a selective effect on an ovarian carcinoma, two solid adenocarcinomas of the ovary and one endometrial carcinoma." - (Zanker/Kroczeck)

1987? • FDA contacts 15-20 MD's who have bought Hansler German ozone machines from a U.S. importer (McGrath/Boeve) and demands they all turn in the generating tubes. Some comply, some ignore them.

1987 • H G Knoch, W Roschke, W Klug publish in The German Articles of Colo Proctology (Aktuelle Koloproktologie) 1987; Band 4:161-173 "The use of Ozone Therapy In Proctology" (Die Sauerstoff-Ozontherapie in der Proktologie. After studying the work of Leipzig Surgeon E. Payer since 1936, they stated "It is known that the rectal application of oxygen/ozone has a therapeutical effect on diseases of the rectum and colon."

Animals. Animal experiments were conducted to clarify the O₂ diffusion through the wall of the colon, and the increase of PO₂ in the venous and arterial blood flow...when O₂ and O₂/O₃ gas insufflation was applied." Using 10 rabbits averaging 2500 g rectal insufflation was applied. After O₂/O₃ gas was applied at 5.1 mg over 10 seconds, the PaO₂ was up 300%. O₂ diffuses through the wall of the colon and increases the O₂ concentration in the vascular system and the liver.

"Due to the known properties of ozone (bactericidal, circulatory enhancement, virucidal, fungicidal, hemostatic, wound leaning and metabolic stimulant), its rectal application is also recommended for human patients."

Clinical human examinations: "An adult human tolerates 800 ml of an ozone/oxygen gas mixture applied rectally over a period of one minute without any complaints." "Gas absorption is slow, on average within one hour. Both the oxygen and the oxygen/ozone mixture is absorbed through the wall of the large intestine, enters the blood stream and results in a PaO₂ increase within the entire organism. No adverse effects occur when ozone is applied."

Ozone is recommended for colitis and proctitis and is "superior to all previously known methods of therapy. In proctology, we view the indication of rectal insufflation to be valid for colitis." " 16 patients with hepatitis B were given ozone and compared to a control group. Those who got the ozone had an increase in wellbeing and 75% of those treated could be placed in the "healed" category within a period of 14 days.

1988 • Historian Eustice Mullins writes: "The Office of Technology Assessment of the U.S. Government states that 95% of the prescription and over the counter drugs on the market have not been proven to work."

1988 • "International Bio-Oxidative Medical Foundation" Charles H. Farr, M.D. President, is formed by several hundred U.S. M.D.'s trying to advance oxygen therapies in the U.S. by publishing their successful clinical results. Yearly meetings attended by physicians from all over the world.

1988 • Dr. Gerard Sunnen publishes: "Ozone in Medicine: Overview and Future Directions" in The Journal of Advancement in Medicine. Dr. Sunnen, at the Bellevue Medical Center in New York City, lists medical ozone as commonly being used worldwide on: "Herpes, AIDS, and Flu. Wounds, burns, staph infections, fungal and radiation injuries, and gangrene. Colitis, fistulae, hemorrhoids and anal infections. It promotes healing. Blood ozone treatments have been used to treat virus infections including AIDS, hepatitis, flu, some cancers, diabetes, and arteriosclerosis. Used in dental surgery, periodontal disease, mixed in water, swallowed for use on gastric cancer, and applied as a wash in intestinal or bladder inflammation. Mixed with olive oil it is used on fungal growths and skin ulcers. Ozone baths are used to irrigate the skin, to disinfect and treat eczema and skin ulcers. "All of the world's blood supplies may be made bacteria and virus free (AIDS, etc.) by passing 40-50 mcg/ml of ozone through them."

1988 • "OXYGEN THERAPIES" book by Ed McCabe lists 5 AIDS case histories showing successful treatment by ozone, and lay translation of paper based upon 74 medical references proving ozone's effectiveness in disease treatment. First widely distributed international publication in history to describe effectiveness of every known oxygen therapy, those being commonly self administered, and those administered under a physician's care. Becomes best seller.

1988 • June Dr. Scott Ricke and inventor Basil Wainwright conducted an HIV in vivo scientific study involving five patients in Nogales, Mexico. In just ten days of treatment, Ozone and a new AIDS monoclonal measurement process developed by Epitope, Inc. demonstrated a reduction of 28% and higher of viral activity.

1988 • "The Treatment of Viral Diseases with Ozone" published in "Erfahrungsheilkunde, Number 7, July 1988 by Dr. Horst Kief. "Ozone is highly effective against viruses." The present study provides statistical proof of its extraordinary efficacy in cases of chronic aggressive hepatitis. In the case of AIDS and ARC patients, hyperbaric ozone

therapy can lead to astonishing improvement in the clinical status..."

1988 • Sept Dr. William Closon, M.D. working with Basil Wainwright at Brunswick Blood Laboratories establish that the precise non-cytotoxic window of ozone concentration to achieve maximum HIV viral inactivation is 2% by weight, or approximately 27 micrograms per milliliter.

1988? • Boguslaw Lipinski, Ph.D., Boston Cardiovascular Health Center, and Tufts University School of Medicine, Wellesley, MA publishes "Rationale For Treatment Of Cancer With Ozone." Citing 35 medical references, Dr. Lipinski concludes, "Preliminary clinical studies indicate that oxidative therapy might produce desirable results in cancer treatment."

1988 • Sept.- Dr. Horst Kief presents his findings at the Fourth International Conference on AIDS. He followed 13 AIDS patients for 12 months of treatment, Kief suggested that the absolute CD-4 count could be increased in such patients and their T₄/T₈ quotient returned towards normal through ozone Therapy.

1989 • William Campbell Douglass, M.D. publishes "AIDS, The End Of Civilization" In it he says, "At present we have the ambulance- at-the-bottom-of-the-cliff mentality in which the only solution entertained is to pick up the bodies rather than go to the top of the cliff and solve the problem." Dr. Douglass visited scores of empty villages in Africa where whole tribes had died of AIDS. He reports seeing mound after mound of burial sites along roadsides in which natives were buried when and where they fell dead. Dr. Douglas now actively promoting blood ozonation\UV (photophoresis) treatments in the U.S.

1989 • April-May - Raum & Zeit Vol 1, No. 1, "The Treatment of Virus Infections with Ozone-Oxygen Mixtures;" Alexander Preuss M.D. (Preuss's work was featured in Ed McCabe's book "Oxygen Therapies" in 1988) He cites 8 of his AIDS case studies wherein ozone therapy had dramatically improved their health. "Therefore I may conclude that AIDS in the state of an opportunistic infection is treatable for at least 17 months - nobody has to die from it any longer."

1989 • July -"Ozone Science and Engineering" Vol 11 pp. 411-417 publishes Immunological Examinations In Patients With Chronic Conditions Under Administration Of Ozone/Oxygen Mixtures;" J. Washutti, R. Viebahn, I. Steiner "... a significant increase in IgG, the most important immunoglobulin in the immune system...must be assessed as an immunostimulation. ...No immunosuppressive effect occurs. On a long-term basis, no kind of immunosuppressive behavior caused by ozone

application can be found in the dosage range selected.

1989 • July 6 - "Ozone Science and Engineering" Vol 12 pg. 65-72 publishes "The Influence Of ozone On Tumor Tissue In Comparison With Healthy Tissue" J. Washuttl, R. Viebahn, I. Steiner "The in vitro results clearly show that a pronounced influence on tumor metabolism, which does not occur in healthy tissue, is indeed possible with ozone. Because, here in particular, the respiratory cycle and glycolysis as well as general oxygen utilization in tumor tissue are positively influenced by ozone therapy..."

1989 • Aug 8 - "Newsweek" Vol. 114, No.6, P. 50 A highly developed AIDS underground composed of entrepreneurs and AIDS activists smuggles unsanctioned drugs and even an ozone- injection machine into the United States. Desperate people feel the underground network is the only hope they have.

1989 • Sept.- Dr. Harald Vetter ND of 8126 Hohenpeissenberg, Germany publishes "AIDS, Can Ozone Help?" the meticulously documented results of his application of 600 ml autohemotherapy ozone therapies to 100 patients with AIDS (44 with AIDS / WR 6, 47 with ARC / WR 3-5, 9 with Lymphadenopathy (LAS) / WR 1-2. An insurance expert reviewed a typical case and declared such dramatic improvements are in fact almost incredible.

1988 • Oct 26 - Associated Press "Ozone may limit AIDS Symptoms?" Bethesda Naval Hospital's Dr. Kenneth Wagner reports ozone stopped the HIV virus from multiplying, and left cells undamaged. Dr. Steven Kleinman from The American Red Cross says it should be experimented with further. AP then reports on Dr. Carpendale, Chief of Rehabilitative Services at the San Francisco VA Hospital's ozone study controlling diarrhea, and possibly hindering the AIDS virus.

1988 • Nov 28 - "Insight" Vol. 4, No. 48, P. 56 by Dina Van Pelt. Ozone may be able to kill HIV without harming infected blood cells. The Bethesda Naval Hospital in Maryland conducted tests on HIV infected blood in which ozone killed the virus without damaging the cells that contained it. Dr. Kenneth F. Wagner, senior research physician for HIV research at the Henry M. Jackson Foundation for the Advancement of Military Medicine in Rockville, MD., says that European physicians have safely used ozone to safely treat viruses for years. In a study of five patients at San Francisco's VA Hospital, all five showed significant improvement without signs of toxicity.

1989 • First Modern U.S. Hospital Test of Ozone on Humans Stopped. George Perez, M.D., Dir. of Virology at Saint Michaels Med Center, Newark, NJ,

and Chief Investigator of the hospital's Institutional Review Board was commissioned to undertake a 75 day institutional review board supervised ozone/AIDS protocol. 5 terminally ill AIDS patients underwent only 15 days of ozone treatments at Saint Michaels Hospital in Newark, New Jersey. The T4 counts of the patients were from a low of 5 to a high of 86. At the start, one was so badly covered with herpes lesions he could not wear clothes. All had T-cell counts of below 200. By the end of the 15 days each treatments, the herpes patient's skin had healed, and all had been released from the hospital. No adverse side effects or toxicity could be found. T4 counts remained stable or increased. Viral protein core (p24) counts decreased - indicating mass virus destruction. Four M.D.'s state ozone therapy is non toxic, and should be adopted. Due to political pressure, the tests were aborted.

Comment: "Political pressure" means that after the fact, the FDA forced Dr. Perez to sign a bogus statement that ozone is "worthless," or he was through as a doctor, and the hospital would never get any more millions in funding. Heavily censored copies of this are available through the Freedom of Information Act.

1989 • Nov - Cuban M.D.'s successfully treating sickle cell anemia, ankle ulcers, farm accidents, and ocular (RP, retinitis pigmentosa) disease. James Caplan, CAPMED/USA, and Dr. Manuel Gomez, National Institute for Scientific Research, Havana, Cuba has patent pending for treating sickle cell anemia disease crises and ulcers with oxygen/ozone. They began large-scale human trials leading to Cuban Ministry of Health approval for general use of ozone for sickle cell anemia, ulcers, and topical wounds. Ozone had been approved for the treatment of retinitis pigmentosa before the sickle cell anemia started.

1989 • "Ozone In Medicine, Vol 3" Proceedings of The Ninth World Ozone Congress, New York, published by International Ozone Association of Zurich. 14 presentations of the medical therapeutic applications of medical ozone by bona fide international M.D.'s and scientists.

1990 • Jan 24 - The Canadian National Defense Headquarters wrote to Health and Welfare Canada Bureau of Biologics, "Ozone Therapy in AIDS / project #231, Summary of Findings." Significant positive response in CD4 counts. No detrimental effects on absolute CD4 counts. "Contrasted with the control samples which quickly became (highly) positive for HIV-1...These data clearly demonstrate that no HIV-1 activity was detectable in any of the ozone-treated samples. It would appear that this form of therapy constitutes a potent means of inactivating HIV-1 in contaminated blood supplies, and may also provide a means for patient specific

"autovaccination" in selected cases." They strongly asked for more funding to continue the research.

1990 • Experimental Chemotherapy 1990;36:147-154 "In vitro Synergistic Activity of 5-Fluorouracil with Low-Dose Ozone against a Chemoresistant Tumor Cell Line and Fresh Human Tumor Cells" "Our results indicate that ozone in combination with 5- fluorouracil (5-FU) makes a 5-FU resistant cell line susceptible for the combined treatment modality. Furthermore, ozone acts synergistically or at least additive to chemotherapy in different tumor cell suspensions, derived from the breast and the colon."

1990 • April-May University of Bologna Italy department of optical physiology publishes in Panminerva Medica "Effects of Oxygen-Ozone Therapy on Age Related Retinal Macular Degeneration" "The majority of patients showed an improvement of their ocular condition."

1990 • Haematologica, 1990 75:510-5, famous European Medical Journal publishes the work of Velio Bocci and Luana Paulesu "Studies On the Biological Effects of Ozone 1. Induction of Interferon On Human Leukocytes." sponsored by grants from the Italian Ministry of Education. "...ozonation of blood is a medical procedure followed in several countries for treatment of viral diseases... we feel that the exploration of the effects of ozone on PBMC (peripheral blood mononuclear cells) has opened a new field of investigation that may yield useful results both in biological and practical terms. Ozone or its reactive oxygen species may act mainly via the stimulation of PBMC and release of lymphokines. The hypothesis can be made that ozone could lead to the release of tumor necrosis factor (TNF), interleukins (ILs) and IFN (interferon, a powerful antiviral protein with immunomodulatory activities could produce some benefits in patients with viral diseases). (See the rest of the study 1991, Nov 5th)

1991 • Susan M. Lark, M.D. Los Altos, CA sends Ed McCabe a draft copy of her article entitled "Ozone and Its Uses In Medical Therapy". She reviewed the research studies on ozone therapy and concluded "the studies find benefit in the clinical use of ozone for a variety of conditions with a minimum of side effects." She told Ed "After a decade of product development/research with oxidative modalities, I have found ozone/oxygen therapy to be one of the most powerful and effective therapeutic modalities I have ever worked with."

1991 • March - Proceedings of the 10th World Ozone Conference in Monaco " The efficacy of O2/O3 Low Pressure Application In Badly Healing Wounds" Horst Werkmeister - Former head of the Radiography Department, Lutheran Hospital, Oberhausen Germany. "There is little

inconvenience to the patient, ozone is not capable of engendering further damage, and produces a significant stimulation of wound healing in a large number of cases due to its disinfectant and pronouncedly hyperemizing effect. If applied early enough, it is often able to prevent the development of large lesions. The unprejudiced presentation of wound developments following the application of ozone/oxygen gas treatment on the basis of measurement values given above has the aim of encouraging a wider and more frequent application of this method as it has shown its efficacy in many severely affected patients."

1991 • March - Proceedings of the 10th World Ozone Conference in Monaco "Resolution of Intractable Diarrhea of Unknown Etiology in Patients With AIDS Treated by Medical Ozone - A pilot study." Ozone rectal insufflation stops AIDS patients' diarrhea.

1991 • Apr.- Erfahrungsheilkunde Vol 40, No. 4 "Ozone Therapy – The underlying Therapeutical Concept And Models Of Efficacy." Renate Viebahn-Hansler "Due to its very specific reaction, medical ozone, as a pharmaceutical agent, has an accurately defined range of efficacy. According to the dosage and concentration range, we make use of the different properties of ozone, i.e.: its germicidal action (by oxidative destruction), its inability to inactivate microorganisms, and its restitutional effect (at a low concentration range). This involves three major indications: external ulcers and severe skin lesions, diseases of viral and bacterial origin, and arterial circulatory disturbances. The restitutional effect of ozone can be understood via its oxidative influence on the oxygen metabolism, the induction of specific enzymes, and the activation of immunocompetent cells.

1991 • Oct 1 - Peer reviewed "JOURNAL OF THE AMERICAN SOCIETY OF HEMATOLOGY"

In a major breakthrough for U.S. medical thinking, three years after the study concluded, the ozone/HIV work of M.D.'s Wells, Latino, Galvachin, & Poesz is published in a well-respected U.S. peer reviewed medical journal. Their article:

"Inactivation Of HIV Type 1 by Ozone In Vitro" appears in "Blood Journal, Volume 78 Number 7, Oct 11, 1991, pg. 1882" describing the research coordinated by Dr. Bernard Poesz from Syracuse State University of New York Research Hospital. They performed 15 replications of an ozone study that interfaced ozone with HIV infected factor 8 blood. The ozone completely removed the HIV virus from the blood 97 to 100% of the time, yet was non-toxic to normal healthy blood components. Ed McCabe announced this study back in 1988, in his "Oxygen Therapies" book.

1991 • Oct.- Dr. Michael T. Carpendale M.D. Veteran's Administration Hospital, San Francisco, & Joel Freeberg M.D., UC Medical School San Francisco, Bay Medical Research Foundation, San Francisco, publish in The Journal of Antiviral Research 1991; Volume 16 Number 3 :281-292 the following medical paper:

"Ozone Inactivates HIV At Non-cytotoxic Concentrations "HIV (p24) was reduced in all ozone treated cultures compared to controls."

Dr. Carpendale also privately published "Ozone Treated HIV+ patient Becomes PCR Negative", the stories of two ozone rectal insufflation using AIDS patients - one who became PCR-.

1991 • Dr. Robert Mayer (using ozone over 50 years, since the forties) has late stage AIDS patients in his research center clinical study some who only have a count of 5 T cells. Normal is 600-1500+. Although they have a count of only 5 T cells, they are completely healthy. In a hope indicating development, local FDA office told Dr. Mayer to go ahead and use ozone, as long as he only makes it himself in his own office with his own self manufactured machine.

1991 • A brave humanitarian U.S. M.D. (Dr. J.B., ret.) in a southern state comes forward with his secret clinical ozone/hyperbaric therapy results. All his testing was performed at a major hospital and within independent labs. Out of 248 HIV POSITIVE patients he reported bringing 113 to HIV NEGATIVE, each within 60 Days, using ozone autohemotherapy immediately followed by hyperbaric therapy.

1991 • Publication: The use of ozone-treated blood in the therapy of HIV infection and immune disease - a pilot study of ozone safety and efficacy. "AIDS" 5:981-984. G. Garber, D Cameron, N Hawley-Foss, D Greenway and M. Shannon.

This is the study the detractors of ozone like to quote to falsely try and prove it does not work. In an early Canadian establishment attempt to see if there is any validity to ozone, and to see if it was safe, a poorly designed and executed protocol was used in a pilot study by well meaning but inexperienced practitioners. The Ottawa General Hospital Infectious Disease Division, Canadian Health and Welfare, Canadian Federal Center For AIDS, Department Of National Defense, and The Mueller Medical Company of Canada sponsored the trial.

Comment: Poorly designed because the study only gave 10cc's of ozone into a muscle (dismissed by Aubourg in 1938 as too painful and ineffective), not I.V., and not enough to do any good, and not for a long enough time period. How are you going to clean up the 100 plus pounds of water that humans are by putting 10cc's into a muscle only three times a week? The daily environmental toxic load intake

on the body alone would quickly negate any benefit, let alone the stress of a disease like AIDS!

Poorly executed because during the second half of the too short study, the principals admitted the ozone machine had broken, and was not producing any ozone, yet they ignored this fact when they wrote up the second phase of the study!

So, they used a protocol that any serious practitioner would laugh at, and based their conclusions upon false data. They then compounded their errors by seriously overstepping their boundaries and wrongly making the unjustified broad pronouncement that "Ozone therapy does not enhance parameters of immune activation nor does it diminish measurable p24 antigen in HIV-infected individuals."

The tragedy of allowing such studies to be published, and such pronouncements to be made, is that this false conclusion is often repeated by the FDA to our elected representatives while they ignore the thousands of studies that show ozone does work. This intellectual dishonesty is used to politically justify barring further real research that would eliminate suffering and save lives.

1991 • Nov 5 - Lymphokine and Cytokine Research Vol 10, Number 5, 1991 publishes "Studies on the Biological Effects of Ozone: 2. Induction of Tumor Necrosis Factor on Human Leucocytes, Luana Paulesu, Enrico Luzzi, and Velio Bocci. "Because ozonation of blood is a procedure followed in several European countries for the treatment of viral diseases and tumors, the release of factors with antiviral and immunomodulatory activities by leukocytes may explain the mechanism of action of ozone and of autohemotherapy. "The "ozone concentration is critical in terms of TNF production and of cell mitogenesis. Owing to the presence of erythrocytes, higher concentrations are required to be effective in blood than in PBMC."

1991 • Dec Dr. Robert Mayer joins the doctors reporting patients sero-converted to HIV NEGATIVE through use of ozone autohemotherapy.

1991 • Major northeast area university scientist in conjunction with BSME engineer/researcher J.W. (names withheld by request to prevent being closed down by big money interests) undertaking two year plus microbe group eradication study using ozone equipment. Reporting 100% kill in vitro in 20 studies completed. Ft. Lauderdale police sergeant associated with FL Wainwright case phones one of the researchers & warns them, "You will be part of a criminal conspiracy if you continue to study ozone's effectiveness."

1991 • Medizone ozone company negotiating with Canadian Armed Forces to commence 2 1/2 million dollar ozone research study to commence in 1992,

comprised of animal studies, blood sterilization studies, human trials, the works.

1992 • Jan - Captain Michael Shannon, Deputy Surgeon General for the Canadian Naval Forces has 350 scientists under him. He is commencing a 2 1/2 million-dollar ozone medical research study that will include blood sterilization, animal trials, and more. The Canadian Government realized that if a major event occurs, their army's blood supply would be inadequate in its present condition. He states "With thousands of people going to Europe yearly at a considerable cost to get this treatment - there must be something to it."

1992 • May 8 - Associated Press: Dr. Wayne Jonas, Walter Reed Army Institute of Research. Testifies before the North Carolina legislative panel. "Requiring that current medical practices be based on solid scientific evidence is building our house on a rock. Requiring that such practices be 'prevailing' is building that house on sand. What is prevailing in medical practice shifts with the wind of opinion and the tide of profit."

1992 • June - Author Ed McCabe begins working closely with former U.S. Congressman Berkeley Bedell. They decide to have Ed invited to testify before the newly created National Institute of Health's Office of Unconventional Medicine. He testifies that, "Due to the many interviews I have conducted, it is my opinion that the AIDS problem has been solved. If immunity from state, and federal agency, and medical board prosecution could be assured, these humanitarian doctors would gladly make available their knowledge for the public good. I stand ready to do the same. They don't even need your money; they'll fund it themselves. If we can get ozone doctors immunity from prosecution, within 90 days the only thing left to do would be to implement the existing solution."

Ed and Berkeley decided that they need a MD to be there as well, and chose Dr. John Pittman from North Carolina to represent the ozone using doctors undergoing political harassment. Dr. Pittman told his story of being closed down even though the therapy was working.

1992 • June - Ed McCabe and Dr. John Pittman meet with Dr. Killian, Deputy Director of the NIH's N.I.A.I.D. (AIDS institute). He and his assistant were very enthusiastic about ozone once they saw the proof they were brought that ozone was successful in treating AIDS patients. Later, upon follow up, they were very closed mouthed, without enthusiasm, and acted like they never heard a word they were told.

1992 • Bolton, A. "Report on Scientific Studies to Elucidate "Ozon-O-Med" Treatment of Peripheral Vascular Disease" Intermune Life Sciences, Etobicoke, Ontario, 1992

1992 • July - Ed McCabe went to Washington on July 22, 1992. The trip was made after setting up private meetings with 2 U.S. Congressmen to coincide with the meeting that former Iowa Congressman Berkly Bedell and Ed McCabe had set up on the same day with U.S. Senator Tom Harkin, the former Presidential Candidate.

Mr. Bedell and Mr. McCabe decided to invite 2 doctors that had each brought a patient from HIV+ to HIV-. They also invited Jim Caplan, the man responsible for convincing the Cubans to approve medical ozone therapy for general use, and Dr. John Pittman, an ozone using doctor, and one of his recently denied treatment AIDS patients. Dr. Pittman's office was closed down by the North Carolina state medical board in the middle of successful clinical ozone trials due to "ozone not being FDA approved." They visited the Congressmen, were warmly received at each meeting, and ended up in turn at Senator Harkin's office for our meeting with him, where they were joined at this point by Dr. Michael Carpendale and his boss from the San Francisco Veterans Administration Hospital.

Senator Harkin scheduled us for only a 1/2-hour meeting, but he was so intrigued by our proof that we discussed ozone successfully treating AIDS with him for one and one half-hours. He immediately decided to set up a meeting between us and the NIH's (National Institute of Health) Institute of Allergy and Infectious Diseases Director, Dr. Anthony Fauci. The AIDS "problem" comes under the jurisdiction of this institute, and Dr. Fauci has been referred to as the U.S. Government's "AIDS Czar." Senator Harkin is on the NIH appropriations committee, so he has their ear.

1992 • On August 20 we met in NIH's building 31 wing 7A room 24 with Dr. Fauci and his boss Deputy NIH Director Dr. Moskowitz. Also present were Dr. Hill, Dr. Killan, and other legislative and legal aides. Mike Hall and Marina Metallios were there to observe for Senator Harkin's Office. About 30 people attended.

We presented our two ozone treated patients who no longer were HIV+, and no longer had fevers, swollen lymph nodes, diarrhea, pain, night sweats, weight loss, or any other manifestation of the AIDS/ARC disease. We handed Dr. Fauci and the others copies of their medical documentation, and they listened to Doctor Carpendale and one other doctor and their former AIDS patients. Dr. Latino from Medizone spoke of the flawless ozone animal trials that had already been done by Medizone. Dr. Pittman and one of his patients made emotional pleas for the open medical use of ozone so he could finish his clinical ozone trials. I asked for the same, gave them a brief 50-year history of the effectiveness of medical ozone on hundreds of

thousands of people in Europe, and cited ozone's perfect safety record in millions of dosages. We made a sound, experienced, documented, and reasonable case for the immediate investigation of ozone's effectiveness in treating AIDS successfully. I also asked if anything could be done to influence the FDA to halt its suppressions of ozone-using M.D.'s. We were told that the NIH had no power over the FDA.

Comment: Picture this. Here is our small but dedicated group gathered at a round table with the U.S. Government's official AIDS policy makers. Around the outside of the table are aides, secretaries, assistants, and division chiefs. There were no big corporations funding us, as is usually the everyday case at these meetings. Although the NIH people only had to walk down the hall to be there, we all had to take time out from work and pay our own considerable travel, hotel, and meal expenses. We came from all over the country simply to help our fellow countrymen dying from AIDS. We were sitting right there at the table with two now perfectly healthy former AIDS patients testing HIV negative - one PCR (Polymerase Chain Reaction - a test for any of the seven nucleotides of the HIV virus itself) negative, and one Western Blot/Elisa (HIV antibody presence) negative. We were sitting there with the examples and their records showing complete eradication of all secondary diseases, their actual doctors, a politically harassed-doctor and his patient who can't get the treatment, and several thick notebooks of ozone medical references from the U.S. and Europe.

What answer did we get? "We see no reason to pursue this." Let me repeat that: "We see no reason to pursue this." And, "They are obviously so healthy that they must not have had the disease." And, "We won't look at this treatment unless you have the patients PCR tested twice before treatment proving the presence of the HIV virus, stored blood from when they were positive, two PCR tests during treatment, and two PCR tests after ozone treatment proving the absence of the virus." What a reply from an institution funded by our tax dollars to find a cure for AIDS while people suffer and tragically slowly waste away. Not exactly encouraging was it? The weight of evidence sitting right there was enough to immediately investigate ozone, without adding all the new requirements on. The NIH has billions of dollars, and they could have done something after all we went through, you would think they could have at least made some phone calls to other doctors and patients as a goodwill gesture, but to only say in effect, "Go home"? Even though they did give us a clearly defined goal to shoot for, I could not help feeling that the goal line was just moved way back.

Analysis: Here's the problem with the current NIH reasoning:

1. Although they said they were unknowledgeable about the FDA's history of seizing ozone machines, harassing ozone using doctors, and forcing doctors to falsely claim ozone as worthless, they did hear me tell them of all this and how hard it was to get any doctors to show up at all to testify and present evidence to them. How can anyone conduct open trials on this beneficial treatment if the FDA will close them down as soon as they open the doors?

2. Promoting the unproven "HIV causes AIDS" scenario, they want 6 PCR HIV tests, each costing around 350 dollars. Total of \$2,100+ per patient. First, there are several PCR tests around, and none of this is covered by insurance, so which PCR test will they believe? In addition, who is going to pay for it? The ozone doctors are financially strapped, and the AIDS patients have already spent their savings on hospitals, doctors, and drugs like AZT, DDI, and etceteras. There were also no PCR tests commonly available back when the patients we brought in first tested HIV positive, so having PCR's on them was an impossible requirement! In addition, many of the patents on ozone therapy are now in the public domain, so no pharmaceutical company will support research.

3. They told us, via their announcement that they will not consider ozone unless we met the new PCR requirements that the HIV virus is the ONLY thing to look for. Nowhere has it ever been proven that the HIV virus is the only definitive cause of AIDS; it was simply announced one day in the media as a probable cause. Dr. Gallo's work "HIV causes AIDS" was proven fraudulent. According to the latest international AIDS conference held in Amsterdam (1992), people die from AIDS who never test positive for HIV! The virus is probably only a promoter or possibly a co-factor of the disease. So, why judge ozone's effectiveness upon the presence or absence of a possibly non-essential virus? Why ignore the most significant facts proving complete eradication of all secondary diseases and symptoms? This is a far more compelling test of whether or not to immediately begin research into ozone, if those who suffer can have their suffering eliminated, whether or not they test "PCR negative."

Comment: What about the quality of their life since ozone all by itself? The way the Center for Disease Control has decided to officially classify if someone has AIDS or not tells the story. They look for the presence of several "hallmark" diseases all occurring at once. Both patients that we brought in had completely eliminated their secondary infections and any clinical symptoms. Therefore, by definition, besides testing HIV negative, they no longer had AIDS according to CDC guidelines! The real live people with their medical records and blood tests

were sitting right in front of the NIH employees - yet they could not see. Or they chose not to see. Let us hope more practical thinking will win out in the end.

Just so you understand medical ozone in the proper treatment of AIDS, a few shots of medical ozone are not going to be magic bullets. Successful ozone AIDS treatment has always been 2 to 5 hours a day of a number of oxidative and other therapies for three to six weeks in a row, depending upon the particular aggregate methods employed. These methods are always combined with lifestyle changes, proper diet, eliminative organ cleansing, a spiritual or moral balance to help eliminate denial of self, and the inclusion of an immune system rebuilding regimen.

Six U.S. doctors have reported to me over 200 people turning HIV negative. I also have video interview proof that this therapy is remarkably effective on cancer and even diseases like multiple sclerosis. As a society, we should look in the direction of ozone soon, instead of watching more die needlessly as we continue chasing the old ways that obviously do not work.

1992 • Sept - "Research and Development Bulletin" No. 234 Science and Technology section of the Canadian Government's Supply and Services Dept publishes "Better Blood Sterilization With Ozone." "Under a \$303,943 contract with the Surgeon General's Branch of Department of National Defense [DND] Headquarters, researchers from the National Reference Laboratory at the CRCS are investigating two ozone sterilization technologies to confirm their reported efficacy in deactivating a variety of potential viral contaminants in blood, including HIV-1 and hepatitis. In Europe an estimated 350,000 people were treated with ozone between 1980 and 1985. The University of Bonn reviewed these cases and reported virtually no side effects of ozone therapy when properly administered. 'The products of this research have worldwide applications,' says DND's Capt. Shannon. 'In the right concentration, ozone sounds almost too good to be true. We're trying not to be overly enthusiastic, but the data so far is very compelling.'"

1992 • Acta-Chir-Plast. 1992; 34(3): 182-4 "The use of ozonotherapy in nose correction operations" Kawalski, H. Sondej J., Cierpiol Tracz E. Positive results of application of ozonotherapy in rhinoplasty are described. 25 patients were administered ozone intravenously for 3 days prior to operation and days post-operatively, resulting in a significant reduction in post-operative complications duration as compared with the control group consisting of 20 patients who were not administered ozonotherapy. - From Medline

1992 • Sep - Medical Hypothesis. 1992 Sep; 39(1): 30-4 "Ozonation of blood for the therapy of viral

diseases and immunodeficiencies. A hypothesis." By V. Bocci. In the last three decades major ozone autohemotherapy has been used in Europe in uncontrolled trials carried out in patients with many illnesses, particularly chronic viral diseases, and neoplasm's. It appears that the treatment may activate the host's immune system by inducing the production of immunoactive cytokines, and it may now be possible to rationalize the procedure, improve the regimen, and assess the outcome. Once this is done, owing to the large range of medical applications and the simplicity of the procedure, autohemotherapy could become very valuable particularly in undeveloped countries. - From Medline

1992 • Oct - Pol-Tyg-Lek 1992 Oct 19-26; 47(42-43): 964-6 (Non English Polish Medical Journal) "Clinical assessment of treatment results for Atherosclerotic ischemia of the lower extremities with intraarterial ozone injections." Seven Polish researchers gave 10 injections of O3 into the femoral arteries of 50 patients with atherosclerotic ischemia of the lower extremities and to 49 diabetic patients. "The treatment showed a significant improvement in both groups. The treatment with O3 is both valuable and safe." - From Medline

1992 • Dec - Aids Patient Care Magazine publishes in Vol. 6 No. 6 "Point Of View: A Case For Ozone Therapy" by Ed McCabe. This was a reprint of Mr. McCabe's testimony before the NIH Office of Unconventional Medicine. "I have interviewed six U.S. M.D.'s who, independent of each other, have collectively reported bringing over 300 AIDS patients to HIV negative status (confirmation with Western Blot, ELISA, and PCR), including complete eradication of any secondary disease factors such as energy loss, weight loss, diarrhea, etc."

1993 • Feb - Dr. Simi Khanna MBBS; DHOM publishes "Ozone-Oxygen Therapy, Treatment at Last" from her office in the suburbs of London, England. She indicates 31 common disease conditions routinely treated by ozone. She discovered "'magical' Ozone-Oxygen therapy" (her words) after it personally brought her back from the brink of death - four and a half months of fever, sleepless, itching-rash, swollen and painful joints, rapid weight loss, after nothing else worked (two hospitals and 112 different medical tests).

1993 • April Journal Of The Canadian Medical Association - Medical Science News (Can Med Assoc. J 1993; 148(7) pg. 1155). "Are Worry Free Transfusions Just A Whiff of Ozone Away?" By Albert C Baggs, BSc. "Scientists in the U.S. and Canada are investigating the use of ozone to destroy the HIV virus, the hepatitis and herpes viruses and other infectious agents in the blood used for transfusion. The studies were endorsed by medical circles of the North Atlantic Treaty

Organization (NATO) because of a concern that viral pandemics have compromised the ability of world blood banks to meet urgent and heavy military demands." "...In a brief to the NATO Blood Committee the surgeon general of the Canadian Armed Forces reported upon Canadian findings that ...a 3 minute ozonation of serum spiked with one million HIV-1 particles per milliliter would achieve virtually 100% viral inactivation. It was also found that the procedure would destroy several other lipid-encapsulated viruses, including simian immunodeficiency virus and various strains of interest to veterinarians." The journal report described the work of Mueller Medical and Medizone International.

1993 • May - American Surgery Journal 59(5): 297-303. "Irrigation of the abdominal cavity in the treatment of experimentally induced microbial peritonitis: efficacy of ozonated saline." Nine researchers implanted gel capsules of fecal slurry into the peritoneal cavities of rats. "Ozonated saline statistically proved the most effective solution for reducing abscess formation in survivors."

1993 • May - H. D. Wolfsteadter, Berlin MD publishes "Ozone Therapy" under the auspices of the International AIDS Society - Natural Alternative Traditional Complementary Medicine. NATC of the IAS."... The more recent results in viral research, especially the results of the in-vitro experiments on 'retro-viruses' and activating effects on the immune system, will make ozone therapy an interesting subject of modern research in the foreseeable future. There is unanimity in recognizing an urgent need for clinical clarification of the effectiveness of ozone therapy based on the claimed indications."

1993 • June 2, 1993 Headline: Medizone's Blood Decontamination Technology Proven Successful In Canadian Monkey Trial. Still trying to inch their way through the system, Medizone announces its successful trials on monkeys. This was one of the requirements imposed last August when McCabe/Bedell/Latino et. al. met with Dr. Fauci at the NIH. Dr. Fauci said, "Why can't you do a simple monkey trial?" So Medizone did, and now they are announcing the successful completion of the first two phases of a Canadian research project overseen by scientists representing the Canadian Red Cross, Canadian Departments of Defense and Agriculture, Cornell University Veterinarian Medical College and Medizone Canada Ltd.

Two groups of monkeys were infused with plasma infected with highly virulent strains of Simian Immunodeficiency Virus (monkey equivalent of HIV). The first group died within 12 days. The second group's infected plasma was first infused with ozone through Medizone's process. None of the second group showed any sign of infection.

Dr. Latino, Medizone's president stated; "These preliminary research results indicate the capability of Medizone's patented scientific and technological process to inactivate blood and blood products of certain viral contaminants, including the AIDS virus."

Including the above monkey trial, Medizone has so far submitted to the FDA all the following data:

1. Long Island College of Pharmacy rabbit study showing no toxicity at concentrations up to 10 times the dose proposed in man.
2. Cornell University Veterinary College feline study showing no detectable toxic effects.
3. The Hematology Journal HIV inactivation study showing 100% inactivation.
4. Mount Sinai School of Medicine, New York revealing hemolysis and coagulation changes well within the standard for reinfusion of packed human blood.

The FDA still will not allow human testing or admit there is any scientific proof of ozone's efficacy.

1993 • Aug~Sept - International Ozone Association holds Eleventh Ozone World Congress & Exhibition August 29 to September 3rd, 1993 in San Francisco. Tours were given of 9 San Francisco water treatment plants using ozone, booths of industrial ozone manufacturers were perused, plus the two day medical ozone meeting was well attended by participating doctors from all over the world.

Comment: O3OHATOP - That is ozone in Russian. The meeting plainly demonstrated to us that even the Russians have more health freedom than we do.

Dr. Claudia Koscherkova, head of research & development at the Nisnerokinov Medical Institute is presently treating 39 arteriosclerosis patients with ozone. He and C.N. Kontorschikova M.D., Head of Central Research, and especially Sergi P. Peretyagin M.D., Manager of the research center (he's the father of modern Russian ozone usage), and others are using medical ozone on babies, animals, adults, and even gunshot wounds! They have four major medical ozone treatment centers in their largest cities; Nezhni Novgorod, Ivanovo, Kirov, and Smolensk, plus others in the Baltic Republics.

They are also using ozone inhalation therapy - a 1-4 mcg/ml concentration of ozone is humidified by ultrasound and inhaled, and pioneering a recirculatory extracorporeal ozonation of human blood for up to 1 1/2 hours at a low concentration of 1 1/2 to 2 micrograms per milliliter technique.

Over 120 Russian MD's have, over the past six years, treated thousands of people with ozone! Because of the rampant greed of our drug companies who influence all levels of our society to

suppress ozone, ALL THE OTHER COUNTRIES ARE REALLY SHOWING U.S. UP!

The Russian MD's I met at IOA were kind enough to lend me a copy of their video. I secured a good copy of it - a 20-minute explanatory medical ozone video (in English). They have many innovative techniques, and you can now order your own copy of it through "The Family News."

Also at the IOA conference, the IOA held tours of local ozone water treatment plants, and had three days of presenting papers on ozone municipal drinking water treatment plants, the newest industrial ozone generation methods, waste water treatment plants, ozone used in the pulp and paper and cooling/process industries, in swimming pools and municipal aquariums, groundwater treatment, and its biological effects.

The conference wound up with two days of medical presentations on completed and ongoing ozone medical studies - done mostly outside of the United States due to U.S. political pressures. Here is a synopsis and list of the topics covered showing doctors' successes with medical ozone therapy.

Dr. John Greenburg, On the University of Heidelberg School of Medicine staff, & working w/Horst Kief presented the results of his work on the microscopical examination of whole blood (5cc's blood, 15cc's ozone) after exposure to ozone, establishing that it is safe if used within the accepted parameters, generally less than 80 mcg/ml concentration.

Dr. Michael Carpendale, San Francisco, CA VA Hospital was honored for his research work and for helping to put on this year's meeting. His talk, "Ozone, HIV & AIDS" "Ozone inactivates HIV at concentrations non toxic to blood cells. In saline .4 ug/ml. In serum 4.0 ug/ml. In blood 50 ug/ml. Ozone is an incredibly safe drug,...increases oxygen between cells increases vaso dilation and perfusion...increases cellular membrane permeability...T4 cell best marker to use." In addition, "VA hospital in Florida treated a referred patient with rectal ozone, his mother states it cured his cryptosporidium diarrhea."

Doctor Frank Shallenberger reported using IV ozone therapy via infusion pumps set at 100cc's per hour going into a pickline. He suggests freshly refilled multiple 10cc syringes instead of one large syringe so the ozone does not degrade in the syringe over time. He noted that the body's antioxidant reaction sets in within 5 to 6 days.

Doctor Wong, University of Havana head of ozone therapy in their medical research center. Using ozone on arthritis, cardiopathy, endophlebitis, etc.

The Vice President of the German Society for Ozone, Dr. Hartmut Baltin treating AIDS patients in his clinic.

The Italians are using a veterinary technique of infusing 2 liters of horse blood with 15 mcg/ml ozone and reinfusing it into the horse.

Also reporting on ozone trials at IOA were:

Occlusive lower limb arterial disease - O. Rokitansky, J. Washuttl and L. Groger - Austria
Occlusive lower limb arterial disease - R. Mattassi - Italy
Immune monitoring - H. Baltin - Germany
Arteriosclerosis - N. Zhulina, C. Kontorschikova and N. Morozova - Russia
Cardiopathology - F. Hernandez et al - Cuba
Hypoxic states - S. Peretyagin - Russia
Hypoxic impairments - C. Kontorschikova - Russia
Myocardium fractals - A. Gavrilushkin, S. Peretyagin and O. Birjukova - Russia
Chelation - M. Foster - U.S.A.
Diverse Pathology - G. Glady - France
Dermatology - S. L. Krivatkin - Russia
Staph - T. Shimoyama et. al. Japan
Sickle Cell Anemia - M. Gomez et. al. - Cuba
Ozone produced auto vaccine - J. Greenberg - Germany
Rheumatic diseases - Z. Fahmy - Germany
Catastrophic injured children - S. N. Gorbunov et. al. - Russia
Rectal Insufflation of Rats study - S. Mendez et. al. - Cuba
Genetics - E. Prieto et al - Cuba
Anaesthetized horses - P. Scrollavezza et. al. - Italy
Optic Nerve disfunction - R. Santiesteban et. al. - Cuba
Cerebro vascular accident - E. Devesa - Cuba
Senile Dementia - M.M. Rodriguez et. al. - Cuba
Malignant disease - H. Kief - Germany
Breast cancer - R. Dallaglio et. al. - Italy
Neurodermatitis - H. Kief - Germany
Digestive System - M. Noa - Cuba
Germ free lab animals - J.M. Mirabal et. al. - Cuba

Quoting Seigfried Rilling, the President of the German Medical Society for Ozone in his talk on the Germany History of European Ozone, "...Ozone only serves Humanity"

Comment: And the FDA official told a congressman there is no proof of medical applications. Why aren't the U.S. doctors a majority of this list - instead of being forced to hide their work in basements and back rooms?

1993 • Sept 2 - World premier of Canadian 1/2 hour video "Ozone and The Politics of Medicine" by Geoff Rogers and Riener Diedrau at the IOA meeting. Video subsequently shown in LA, New York, Salt Lake and other health show.

Comment: Video demonstrates through their own words, the arrogant ignorance of the establishment, and the valiant efforts of the ozone researchers and pioneers.

1993 • Sept 8 - Medizone Int'l NYC announces co-project with Italian Ministry of Health and the Italian Scientific Society for Oxygen-Ozone Therapy to

treat AIDS and Hepatitis-B patients with Medizone's thin film delivery technology. Patients will undergo a one-hour treatment on alternate days, during a twelve-week trial.

1993 • Sept 25 - Dr. Gerard V. Sunnen, M.D. writes his "Addendum To 'Ozone In Medicine'; Possible Mechanisms Of Viral Inactivation By Ozone." He details the chemical pathways by which ozone has its effectiveness.

1994 • Jan 20 - Medical Tribune - Research News - Headline: "Oxygen plus ozone mixture can inactivate HIV in vitro" article by Nathan Horowitz describes upcoming Medizone Phase 1 clinical trials at several research sites in Italy. 300 patients with HIV infection or hepatitis B will be randomized to treated or control groups and studied during three months of dosing and nine months of follow up. For 12 weeks 300 cc's of blood will be withdrawn and ozonated and returned to the patient every other day. "Dr Latino's preliminary data are very interesting," said Mark Cohen, Ph.D., a professor of medicine at Louisiana State University School of Medicine in Shreveport. "His studies show that ozone really is capable of killing HIV."

1994 • March 25 - Dallas, Texas is the site of the IBOM International Bio-Oxidative Medicine Foundation's 5th annual meeting. Phone 405/691-1452. MD's from all over the world highlighted their own work successfully using ozone and/or hydrogen peroxide and other oxidative compounds in medicine, and attending special educational workshops. Among the papers presented were:

"Spontaneity of Oxidation in Nature" Majid Ali, MD
"Ozone in Medicine" Frank Shallenberger MD
"Hydrogen Peroxide and Free Radicals" Charles H. Farr MD Ph.D.

"Complex Oxidative Compounds" George Freibott.
"Experiences in the further Treatment of AIDS, Cancer and Chemical Toxicity/Hypersensitivity Using Bio-Oxidative and Nutritional Therapies" Robert Allen MBBS (Australia)

"The Cause of All Disease from a Wholistic Perspective" Ed McCabe

"Oxidative Therapy and the Answer to AIDS" Robert Willner MD, Ph.D.

"AIDS, Immunology and Ozone" Frank Shallenberger, MD

"Experiences With Medical Ozone" Stanley W. Beyrle, N.M.D.

"Ozone May Inactivate HIV by Reducing p120-CD4 Binding Affinity, Lysing the HIV Lipid Envelope, and Oxidizing the HIV core" Oscar K. M. Hsu (Harvard)

WARNING! 1994 April WARNING! Researcher interviews EPA (Phone 800/241-1754, 800/444-7255, 800/447-6349) official in charge of efficacy data and microbial studies, Zigfridas Vaituzis, who shockingly reveals that as of this date all

government "AIDS" statistics are still only for HIV-1! Same goes for all blood bank testing! HIV-2, HIV-3 and other forms, possibly up to 10 in number (HIV-O in France) are not tested for or compiled in the statistics quoted by the government and announced over and over in the media! We are therefore told of far fewer persons having AIDS than the actual statistics reveal actually have AIDS, and the blood banks have routinely been giving out blood infected with the other forms of HIV!

When you go get a HIV test, they only look for HIV-1! Forget what the nurses at the blood banks believe and tell you. Ask them to go and physically get one of the actual HIV blood screening test kits and read to you the instructions printed on them, they are only for HIV-1. The doctor or patient must request screening beyond HIV-1!

As Of June 1, 1994, they will recognize HIV-2. Some blood banks are already testing for HIV-2.

Comment: Through political deception we are told all is well, while the stored transfusion blood remains untested and therefore unsafe, and the statistics are grossly understated! What is the real political agenda? It sounds anti-life, anti-people, doesn't it? If you were in a car accident and woke up with a blood bag going into you, don't you have a right to know that it is not HIV-2, HIV-3, etc, infected? Ozone bubbled through all stored blood would solve this problem immediately. Makes you wonder if some alien power has seized control of the inner workings of our government. They certainly do not represent me or any of my friends, or you or yours either, do they?

1994 • April - Before the above conversations with the CDC, their AIDS reference computerized National AIDS Information and Education Program - CDC National AIDS Clearinghouse databank had a synopsis of the story where Ed McCabe had testified before the NIH in 1992 about the effectiveness of ozone therapy. The story had subsequently been printed in the "Washington Post" Health section, 06/23/94, page 8, by David Brown. One week after the above conversations, all references of Mr. McCabe's testimony and the resulting Washington Post newspaper story had completely disappeared from the CDC computer around 4/7/94. Information Inc., Behesda, MD, privately owns the database.

Ozone therapy is used widely around the world to successfully combat AIDS, cancer and dozens of other serious diseases; but it's outlawed in the U.S. Strangely, "top" U.S. AIDS researchers are still "searching" for a drug to defeat AIDS. The current cost for HIV positive patients alone is more than \$10 billion per year. Over 150 top FDA officials own shares of stock in pharmaceutical and health care companies. *

2000 • "408 HIV +ve to PCR undetectable conversions, in-vivo & in-vitro." Polyatomic Apheresis Research Limited (PARL).

Quotes: Dr. Hans Nelper, an Ozone specialist from Hanover, Germany, said: "you wouldn't believe how many FDA officials, directors of the AMA and ACA, presidents of orthodox cancer institutes and their relatives come to see me as patients in Hanover. That's the fact!" The same people that outlaw proven alternative therapies in their own country are seeking these same therapies for themselves overseas."

"Cancer above all other diseases, has countless secondary causes. Almost anything can cause Cancer, but, even for Cancer, there is only ONE Prime Cause the lack of cellular Oxygen." Dr. Otto Warburg.

"How long the prevention (of Cancers) will be avoided depends on how long the forces of agnosticism will succeed in inhibiting the application of scientific advancement and knowledge in the Cancer field. In the mean time, millions of men and women must die of Cancers unnecessarily." Dr. Otto Warburg.

"Medical Science moves forward funeral by funeral." Prof. Max Planck, Physicist; contemporary of Dr. Otto Warburg.

"The link between insufficient oxygen and disease has now been firmly established." Dr. W. Spencer Way, Journal of American Associates of Physicians.

"Hypoxia, or lack of oxygen in the tissues, is the fundamental cause for all degenerative disease." Dr. Steven Levine, "Oxygen Deficiency", Renowned Molecular Biologist.

"Lack of oxygen clearly plays a role in causing cells to become cancerous." Dr. Harry Goldblatt, Journal of Experimental Medicine.

"Ozone Only Serves Humanity". Seigfried Rilling, President of the German Medical Society.

"Medical Ozone inactivates many pathogenic viruses including HIV in vitro. Our studies show that Ozone treatment is safe. There is a wealth of anecdotal experience with its use to treat a variety of infectious diseases, and abundant evidence that it is virucidal, bactericidal, fungicidal and protozoicidal". Michael T. Carpendale, M.D. & John Griffiss, M.D."

"All TRUTH Goes Through Three Stages, First, it is ridiculed, Then, it is violently opposed, Finally, it is ACCEPTED AS SELF EVIDENT." Schopenhauer.

APPLIED OZONE SYSTEMS

APPLIED OZONE SYSTEMS was formed July 7, 1993 in Grants Pass, Oregon. AOS specializes in the design, development, installation, sales, and service of air and water purification systems for homes, industry, and perishable food applications. We take great pride in providing our customers with complete satisfaction and the **"highest quality air and water systems"** at reasonable prices.

At our new Auburn location we carry a complete line of ozone generators (**UDET**OX) are available for purifying the water and Colema® boards for do-it-yourself colon cleansing in the privacy of your own home.

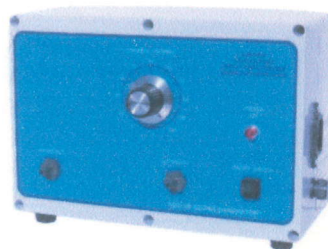


AOS markets a large variety of ozone generators for microbial and pathogen control on fresh foods in retail markets, produce warehouses, food processing plants and restaurants, and for pool and spa water applications. Applications of ozone can control, reduce and eliminate disease producing bacteria (pathogens), pesticides and herbicides, fungus, mildew, mold and virus on meats, poultry, seafood, vegetables, fruits and flowers.

Everyone deserves and has equal rights to live a healthy life, eat safe foods without the fear of death, disease, or sickness due to contamination. The rights of breathing clean air, drinking pure water, and consuming healthy foods should not be infringed upon by anyone or anything added that creates physical and harmful effects to the human body.

The AOS-1M is our most popular ozone generator for colonic water. Comes

standard with variable control, pressurized corona discharge dielectric cell, power on/off switch, oxygen regulator, hose, cord and plug.



The AOS-1MD has a corona discharge dielectric reactor cell with ozone resistant fittings and Silicone tubing. The AOS-1MD is ideal for any medical application that requires dependable and stable ozone production. Built to last for years without any maintenance.

Front control panel includes a 5 to 100 percent variable control with a six-position range selector switch that allows for hundreds of different output settings.



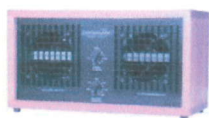
Medical ozone use and applications vary. Check with your physician as well and your local legal authority before embarking on any alternative practice.

Ozone air purifiers improve the air quality by reducing many indoor pollutants that filters alone are unable to trap. Activated Oxygen breaks down odors and other pollutants at their source. Normal oxygen O₂ is converted to O₃, which is commonly called ozone or activated oxygen breaks down odors and other contaminates.

Lightening Air Purifiers employ a special ozone generator machine with durable stainless steel materials encased in an elegant all natural wood cabinet available in cherry, oak or walnut. The LA-2SP has one ozone plate for an area up to 3,500 sq. ft. The LA-2SP is for normal indoor spaces such as home and offices.



The Lightening Air LA-4SP for home or office ozone air purification, bars, restaurants and heavily used spaces up to 5,500 sq. ft. area.



LA-31C Industrial Cleaner with a timer covers up to 8,000 sq. ft.



The PZV is one of the most affordable and versatile "all-around" ozone generators on the market. Used for purifying air or water in most home or small food applications.

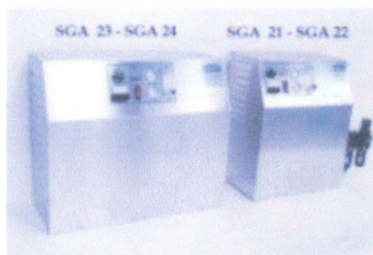


The Oxy-Mega colon cleanser helps clean the intestinal tract while releasing oxygen into the body to help kill parasites and other forms of bacteria. The Oxy-Mega activated stabilized oxygen supplement for therapeutic use has a pH balanced formula

that contains distilled water, sodium chloride from sea salt, chromium, iodine and other trace amounts of carbon, calcium, copper, lithium, iron, magnesium, potassium, phosphorus, selenium, sulfur, silicon, cobalt and zinc. One 60 ml/2 oz. bottle contains 15,000 mg of o4 or 250 mg/ml. Suggested Use: 15 drops in 8oz of water 3-4 times daily added to water or juice. You can get more information on the Oxy-Mega products at www.oxymega.com



These types of ozone generators are used on larger industrial applications.



More product information is on the web pages at www.appliedozone.com.

OZONE CONCENTRATION FACTORS IN AIR

To Convert PPM to Percent

PPM to percent, divide by 10,000 (A)

PPM by volume to parts per million by weight:

In oxygen, multiply by 1.50 (B)

In air, multiply by 1.66 (C)

Note: If over 10,000 ppm for accuracy convert first to percent and then use equations (H or I)

Milligrams per liter to ppm by weight:

In oxygen, multiply by 700 (D)

In air, multiply by 773 (E)

Note: If over 10. mg/l. for accuracy convert to percent by means of equation (F) or (G)

Grams per liter (X) to weight percent, use the following equations.

In oxygen, (F)

$$\text{Wt. \%} =$$

$$(X) \quad (100)$$

$$1.429 + (.334) (X)$$

In air, (G)

$$\text{Wt. \%} =$$

$$(X) \quad (100)$$

$$1.293 + (.397) (X)$$

Volume percent (Y) to weight percent, use the following equations:

In oxygen, (H)

$$\text{Wt. \%} =$$

$$(Y) \quad (214.4)$$

$$1.429 + (.715) (Y)$$

In air, (I)

$$\text{Wt. \%} =$$

$$(Y) \quad (214.4)$$

$$1.293 + (.851) (Y)$$

Percent of O₃ to Micrograms per Milliliter

To convert the percent of ozone concentration in comparison with the quality of oxygen in a gas stream to micrograms (ug) of ozone per milliliter (or cc) of the mixture. 1 liter of oxygen weighs 1.4 grams. Formula: Percent (%) x 1.4 gm = ug/cc.

Example:

$$0.5\% \times 1.4 \text{ gm} = 7 \text{ ug/cc}$$

$$1.0\% \times 1.4 \text{ gm} = 14 \text{ ug/cc}$$

$$2.0\% \times 1.4 \text{ gm} = 28 \text{ ug/cc}$$

$$3.0\% \times 1.4 \text{ gm} = 42 \text{ ug/cc}$$

$$4.0\% \times 1.4 \text{ gm} = 56 \text{ ug/cc}$$

$$5.0\% \times 1.4 \text{ gm} = 70 \text{ ug/cc}$$

To Determine mg O₃/hr. for a Room

1. Figure total cubic footage: L x W x H=
2. Odor Factors: Light odor factor = 0.005
Medium Odor Factor = 0.018
Heavy Odor Factor = 0.036
3. Multiply the cubic footage by the odor factor to determine the milligrams of O₃ per hour needed.

Rating of Equipment

$$\frac{X}{Y} \cdot (320) = Z_1, \text{ or } \frac{X}{Y} \cdot (0.0526) = Z_2$$

Where X - represents grams of ozone per hour produced by the equipment.

Y - cfm of air passing through unit:

320 and 0.056 are constant;

Z₁ = the ozone concentration is ppm/v.;

Z₂ = the ozone concentration is % by wt.
(RSES Factors)

Conversion for Ozone in Air

G = O₃ concentration by weight (%) in air

V/V = O₃ concentration by volume (ppm) air

C = O₃ concentration in g/m³

T = measurement temperature in Kelvin

P = measurement pressure in millibars

1013.25 mbar = standard pressure

273.3 K = standard temperature

Convert pressures to millibars

Pressure in mbar = (pressure in psi) 68.9

Convert temperature to Kelvin

Degrees K = (degrees C) + 273.3

Degrees K = $\frac{(\text{degrees F} - 32)}{1.8} + 273.3$

Convert O₃ concentration from g/m³ to % weight.

$$G = C \cdot 0.29 \frac{I}{P}$$

at standard pressure and temperature

G = C · 0.0782 example:

(12.8 g/m³ at std. conditions = 1%)

Convert O₃ concentration from g/m³ to ppm by volume

$$V/V = C \cdot 17733 \frac{I}{P}$$

At standard pressure and temperature

$$V/V = C \cdot 467 \text{ (example: } 2.14 \text{ g/m}^3 \text{ at standard conditions} = 1,000 \text{ ppm)}$$

Formula for Ozone Concentration In Air by Volume

$$1 \text{ g O}_3/\text{m}^3 \text{ air} = 467 \text{ ppm O}_3 \text{ in air (by Volume)}$$

$$1 \text{ g O}_3/\text{m}^3 = 782 \text{ ppm by weight}$$

$$1 \text{ ppm O}_3 \text{ in air (by volume)} = 2.14 \text{ O}_3/\text{m}^3 \text{ air}$$

Formula for Ozone Concentration in Air by Weight:

$$100 \text{ O}_3/\text{m}^3 \text{ air} = 7.8\% \text{ O}_3 \text{ in air (by weight)}$$

$$1\% \text{ O}_3 \text{ in air (by weight)} = 12.8 \text{ O}_3/\text{m}^3 \text{ air}$$

Formula for Ozone Concentration in Oxygen by Weight

$$100 \text{ g O}_3/\text{m}^3 \text{ O}_2 = 6.99\% \text{ O}_3 \text{ in O}_2 \text{ (by weight)}$$

$$1 \text{ g O}_3/\text{m}^3 \text{ (of O}_2) = 6.99 \text{ ppm by weight}$$

$$100 \text{ g O}_3/\text{m}^3 \text{ (of O}_2) = 6.99\% \text{ O}_3 \text{ in O}_2$$

$$1\% \text{ O}_3 \text{ in air (by weight)} = 14.3 \text{ g O}_3/\text{m}^3 \text{ O}_2$$

Concentration of Ozone in Air

The concentration of ozone in the air is mostly measured in 0.0001 Vol.% ppm, or in cm³ O₃/m³. The conversion in mg O₃/cm³ air may be done by entering 1 cm³ O₃ its weight at room temperature and atmospheric pressure of about 2.1 mg (1ppm or) = 2mg/m³.

The concentration of ozone in the room can be measured as follows:

$$C = \frac{m}{k} = \frac{m}{0.7/Z_o} \text{ (mg O}_3/\text{m}^3)$$

C = concentration of ozone

m = quality of ozone per minute

Z_o = half-life – of disintegrating of ozone in the room per minute after turning of the ozonator.

In practical terms Z_o results in 20 to 50 minutes. Since the discontinuation of the equilibrium during ozonation happens relative, usually less than 20 to 30 minutes, so one likes to ozonize only by the hour, especially due to the microbial overall effect is not residing.

Ozone Concentration in Water

$$1 \text{ g O}_3/\text{m}^3 \text{ H}_2\text{O} = 1 \text{ ppm O}_3 \text{ in H}_2\text{O (by weight)}$$

To calculate the amount of ozone required for a warehouse with a concentration of .1 ppm O₃.

$$\text{Total square feet (Ft}^2) \times 0.028 = \text{m}^3$$

$$\text{M}^3 \times 1.29 = \text{Kg}$$

$$\text{Kg} / 10,000,000 = \text{mg O}_3/\text{hr. needed}$$

$$1 \text{ ppm} / 100,000,000 = \text{mg/hr.}$$

$$.05 \text{ ppm} / 2,000,000 = \text{mg/hr.}$$

To calculate the amount of ozone required for a storage area according to Ewell is:

The unit of volume commonly used in ozone calculations is the cubic meter. 1 ppm is equal to 0.0012 grams per cubic meter or ppm x 0.0012 equals grams of ozone per cubic meter. At equilibrium, m = KC, K = 0.7/t.₅. The rate at which ozone is introduced into a room in grams/cubic meter = m. The concentration in grams/m³ = c, and t .5 is the time in minutes after the ozone is shut off for the concentration to drop to half the value which it had at the moment the supply ceased.

Room size: 100 x 50 x 12 = 60,000 cubic feet or 2000 cubic meters. Assume that a concentration of 1.5 ppm in the aisles would give 0.6 ppm adjacent to the cases and that the average concentration (C) is 1.0 ppm or 0.0012 grams per cubic meter.

(C) is 1.0 ppm or 0.0012 gram per cubic meter. Assume the half time is 30 minutes. Half time depends on the size and contents of the room. Typically, 50 minutes is for a large fresh room, 30 minutes for a large egg room, 10 minutes for a meat or cheese room and a few minutes for a large domestic cold storage room.

$$(K) = 0.7/30 = 0.023$$

$$(m) = KC \text{ gm/min./cubic meter of room volume.}$$

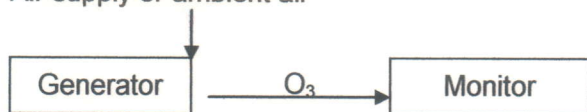
$$(m) = 0.023 \times 0.0012 = 2.7 \times 10^{-5} \text{ gm/cm}^3/\text{min.}$$

$$2.7 \times 10^{-5} \times 2000 \times 3.24 = \text{gm/hr O}_3 \text{ needed.}$$

Determining Ozone Generator Production

When all ozone flow goes to monitor

Air supply or ambient air



Convert ppm reading to g/m³
 $1 \frac{\text{g}}{\text{m}^3} = 467 \text{ ppm v/v @ } 0^\circ \text{ C}$

$1 \frac{\text{g}}{\text{m}^3} = 502 \text{ ppm v/v @ } 20^\circ \text{ C}$

Use flow meter of monitor as total ozone flow.
 Assume ambient (standard) temperature and pressure. Example:

Temperature = 20° C

Ozone monitor flow = 20 l/hr.

Concentration = 200 ppm

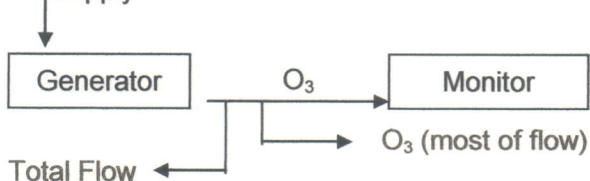
Flow x concentration = O₃ production

Total flow x concentration = O₃ production
 $\frac{200 \text{ ppm}}{502} = 0.398 \text{ g/m}^3$

$20 \frac{\text{l}}{\text{hr}} \times 0.398 \frac{\text{g}}{\text{m}^3} = \frac{\text{m}^3}{1000 \text{ l}} = 0.008 \frac{\text{g}}{\text{hr}}$

When a sidestream goes to monitor

Air Supply



1. Use total flow and correct for pressure (if necessary).
2. Convert ppm to g/m³.
3. Total flow x concentration = O₃ production.

Parts Per Million Concentration Values

The current OSHA standard for ozone is 0.1 part of ozone per million parts of air (ppm) average over an eight hour period. This is also

expressed as: 0.2 milligrams of ozone per cubic meter of air (mg/m³)

1 ppm = 0.2 mg/m³ (standard). Divide by 10 to get .1 ppm, then divide by 2 for .05 ppm.

1 ppm = 1 mg/l = 1mg/ml = 1,000 ug/liter

1 ppm = 1,000 ppb

1 ppm = 0.2 mg/35.314 cubic feet

1 ppm O₃ (volume) = 214 ug/m³ (Europe)

1 ppm O₃/m⁻³ = 467 ppm O₃ (in air by volume)

1 ppm O₃ = 2.14 mg O₃/m³ (in air by volume)

1 g/m³ O₃ in Air = 467 ppm v/v

1 g/m³ O₃ in O₂ = 510 ppm

1 ug/ml = 6.99 x 10² ppm by weight or

1 ug/ml = 4.66 x 10⁻² volume% or

1 ppm by weight = 1.43 x 10⁻³ ug/ml – 1 vol% = 21.45 ug/liter.

1 ppm = 0.0012 grams/cubic meter or

ppm x 0.0012 = grams of O₃/cubic meter.

grams/liter x 1000 = parts per million

milligrams/liter x 1 = parts per million

cm³/m³ = ppm

1% wt O₃ = 6000 ppm v/v

1% wt O₃ = 10,000 ppm w/w

PPM to PPB Examples

.12 is equal to 120 parts-per-billion.

.10 is equal to 100 parts-per-billion.

.05 is equal to 50 parts-per-billion.

.03 - .06 is equal to 30-60 parts-per-billion.

.010 - .015 is equal to 10-15 parts-per-billion.

.005 - .01 is equal to 5-10 parts-per-billion.

One part per billion is the equivalent of one drop in 12,000 gallons or one pound per 120,000 gallons of water.

Weight and Volume Measurements Conversion Factors

mcg. = microgram = 1,000,000th of a gram (weight)
mg. = milligram = 1000th of a gram (weight)
ml. = milliliter = 1000th of a liter (volume)
gm. = gram = 1000 milligrams (weight)
454 grams = 1 pound
1000 grams = 1 kilo
grams x 10⁵ = micrograms
1 g/m³ = 1 mg/l
1 g/m³ = 1 mg/l = 1 ppm ozone (weight) in water
milligrams x 0.001 = grams
1 mg = 1,000 ug
1,000 milligrams = 1 gram
1 ug/ml = 1 mg/ltr = 1 g/m³ = 1 gamma
1 vol.% = 21.45 ug/l.
1 liter of ozone weighs: 2.144 grams at 0° C.
1 liter of oxygen weighs: 1.429 grams at 0° C.
1 liter of air weighs: 1.293 grams at 0° C.
1 m³ of air weighs: 1.29 kg
1 milliliter of water weighs 1 gram
1 milliliter = 1 cu. Cm.
10 milliliters (ml.) = 1 centiliter
10 centiliters (cl.) = 1 deciliter
10 deciliters (dl.) = 1 liter
22.4 liters of air weighs 29 grams
22.4 m³ of air weighs 29 kg.

Conversion Factors

1 foot = .3048 meter
1 meter = 3.28 feet
1 m³ = 1 cubic meter
1 m³ = 1,000,000 cm³ = 1,000 liters
1,000 = 1,000 liters = 1 m³
lg/m³ = 1mg/l
Liters x 0.035147 = cubic feet
Cubic meters x 35.3147 = cubic feet
Cubic meters x 61,023 = cubic inches
Cubic cm x 0.06102 = cubic inches
Cubic feet x 0.283168 = cubic meters
Cubic feet x 1728 = cubic inches
Cubic feet x 28.32 = liters

Physical Properties of Ozone (At Standard Conditions)

Density of Ozone (O ₃)	2.14 kg/m ³
Density of Oxygen (O ₂)	1.43 kg/m ³
Density of air	1.29 kg/m ³
Density of water	1,000 kg/m ³

Standard Temperature & Pressure (STP)

Temp. = 68 f = 528 (460 + 68 = 20 C = 293.3 K
Pressure = 14.7 PSIA = 1012.83 mb

Normal Temperature & Pressure (NTP)

Temperature = 0 C = 273.3 K
Pressure = 1013.25 mb (millibars)

Molecular Weights

• Air = 29 • Oxygen = 32 • Ozone = 48

Flow Conversion Factors

Cubic feet/hr x .4719 = liters/min.
x 28.316 = liters/hr.
x 471.947 = cc/min.
x 28317 = cc/hr.
x .0166 = cu.ft./min.

Cubic feet/min x 60 = cf/hr
x 28.316 = liters/min
x 1699 = liters/hr
x 28317 = cc/min
x 1,699,011 = cc/hr

Liters/minute x 60 = liters/hr
x .035 = cf/min
x 2.1189 = cf/hr
x 1000 = cc/min
x 60,002 = cc/hr

Liters/hour x .0166 = l/min
x .00059 = cf/min
x .035 = cf/hr
x 1000 = cc/hr
x 16.667 = cc/min
x 1000 = cc/hr

CC/minute x 60 = cc/hr
x .000035 = cf/min
x .0021 = cf/hr
x .001 = l/min
x .06 = l/hr

CC/hour x .0167 = cc/min
x .0000005 = cf/min
x .00003 = cf/hr
x .000017 = l/min
x .001 = l/hr

OZONE CONCENTRATION FACTORS IN WATER

Community Well Water System

To treat 400 gals/min. If the source is assumed to be contaminated by organic compounds and has only a minimum amount of dissolved iron and manganese, then a treatment for disinfection only with a 100% surplus in case there is some metals dissolved in the water. The normal disinfection level is 0.04 ppm residual of ozone for 4 minutes. Therefore a suggested dose of 0.8 ppm of ozone should be used.

For this flow, a contact vessel of about 2,000 gallons would be required. If there is some kind of reservoir, the ozone treatment can be tied in, so when the well pumps were not working, then the water from the reservoir would be cycled through the ozonation process to keep a disinfection level in the reservoir. The total ozone required:

$$400 \times 60 \times 3.78 \times 0.8 \text{ ppm} = 72.576 \text{ grams/hr}$$

Community Surface Water System

To treat 700 gals./min. This system would require a two step ozonation process. The first step would require a preozonation at 0.5 ppm and the addition of the usual focculents such as alumina. This will cause flocculation and the water will then have to be filtered through a sand filter.

The next step would require ozonation at 2.5 ppm to degrade the organic materials and to accomplish disinfection. This process should be controlled by measuring the ozone residual and it should be at least 0.4 ppm for 4 minutes. Some additional pumps may be required and one 4,000 gallon contact tank and another 4,000 gallon tank for treatment. Formula:

$$\text{Preozonation: } 700 \times 60 \times 3.78 \times 0.5 \text{ ppm} = 80 \text{ grams/hr}$$

$$\text{Disinfection: } 700 \times 60 \times 3.78 \times 2.5 \times 1.3 = 206 \text{ grams/hr}$$

Treatment of Contaminated Surface Water

To treat a flow of 10 gallons per minute of very contaminated surface water. Some surface water contains humic substances which react with ozone. The level of the substance varies between 2 – 5 ppm. The amount of ozone required for a residual in the water of 0.4 ppm is between 3.5 and 5 ppm. The ozone required would be as follows.

$$\text{Gal./min.} \times 60 \times 3.78 \times 5 = 11.340 \text{ grams/hr}$$

Family Use

A typical family uses about 300 gallons of water daily. If a system is designed to treat 1000 gallons per day, there should be adequate spare capacity. If you assume the water usage is spread over 16 hours per day. You would have to treat 62.5 gallons/hour.

$$62.5 \text{ gal/hr} \times 3.78 \times 5.0 = \text{mg/hr}$$

Short Cut Formulas

80 gal/min = 1 lb. of O₃ with a concentration of 1 ppm. (18.9 gr/hr.)

$$40 \text{ gal/min} = 9.45 \text{ gr/hr.}$$

$$20 \text{ gal/min} = 4.7 \text{ gr/hr.}$$

$$10 \text{ gal/min} = 2.3 \text{ gr/hr.}$$

80 gal/min. with a concentration of 2 ppm. would require 2 lbs/day or 37.8 gr/hr.

40 gal/min at 2 ppm would require 1 lb/day.

$$20 \text{ gal/min} = 9.4 \text{ gr/hr.}$$

$$10 \text{ gal/min} = 4.6 \text{ gr/hr.}$$

Contact tanks should be round and constructed of stainless or polyglass. Ozone feeds into the water stream on the outlet (discharge) of recirculation pump into an injector. The ozonated water then goes into the inlet at the bottom of the tank. A fitting installed inside the tank should be at an angle to create a swirling on the inside for a longer contact time. Another method is to bubble the ozone through a diffuser located inside the contact tank. Contact tanks should be

equipped with off-gas destruct units when necessary.

Surface Waters: Need 2 to 3 ppm of ozone. As a general rule, 2 ppm of ozone is required to get .5 ppm dissolved.

Cooling Water Towers: .25 ppm of ozone.

Swimming Pools: 1 ppm of ozone.

Iron: 1 ppm, needs 1 ppm of ozone.

Manganese: 1 ppm, needs .5 ppm of ozone.

Contact Time: 4 minutes minimum for iron, manganese, or pools. Seven minutes for disinfection of bacteria or viruses.

Residence Time = gpm x minutes needed.

Conversion Factors for Pools

Maximum Ozone Output: GPM (total pool volume flow rate) x 0.227 x concentration = maximum output in grams per hour. To size an ozone generator for a 100,000 gallon pool with a six hour turnover flow rate of 278 gpm. Calculation is $278 \times 0.227 \times 0.4 = 25.24$ gr/hr.

Contact Concentration: Grams per hour / required flow rate x 4.41 = mg/l or ppm. If you have an ozone generator with an output of 14 grams per hour and a pool with a flow rate of 156 gallons per minute, you would calculate contact concentration as $14/156 \times 4.41 = 0.4$ ozone contact concentration.

Contact Tank Sizing: Total gpm flow x % side stream x reaction time = tank size in gallons. A pool with a total flow of 420 gallons per minute and a 25% side stream with a desired 2.5 minute reaction time (2-4 minutes is recommended). Calculate your tank size as follows. $420 \times 25\% \times 2.5 = 262$ gallon tank.

C/T Value: Multiply ozone contact concentration by the contact time to determine the C/T value. A pool with an ozone concentration of 0.4 and a contact time of 4 minutes. To determine the C/T value, you calculate as follows. $0.4 \times 4 = 1.6$ C/T value.

Contact Time: Gallonage of contact tank / side stream flow rate = contact time. You have an ozone system with a side stream flow rate of 100 gpm and a 250 gallon tank. To determine time: $250 / 100 = 2.5$ minute contact.

Determine GPM or Flow Rate

The flow rate in a domestic situation can easily be checked by timing how long it takes to fill a one gallon container and divide the time it takes to fill the container into 60 seconds. This will give you the flow capacity. It should be done as close as possible to the source of the water supply, pump, tank or point of entry.

To Figure Total Gallons for Spa or Pool

Length x Width x Depth x 7.481 = Total gallons

Water Conversion Factors

Gallons x 8.337 = pounds
1 US gallon = 3.785 liters = 3785 ml
1000 liters = 1 m³ = 264 US gallons
Liters x 0.035147 = cubic feet
Liters x 0.2642 = US gallons
LPS x 15.85077 = gallons per minute
LPS x 0.2641794 = gallons per second
LPM x 15.851 = gallons/hr
LPM x 0.2641794 = gallons/min
Gallons x 0.00378541 = cubic meters
Gallons x 0.1337 = cubic feet
Gallons x 231 = cubic inches
Gallons x 3.785 = liters
Gallons x 8.322 = pounds of water
Gpm x 0.227125 = m³/hr
Gpm x 8.020835 = bv/hr
Gpm x 8.021 = cu.ft/hr
Gpm x 227.118 = LPH
Gal./hr. x 6.3090 x 10⁻⁵ = m³/min.
Gal./hr. x 3.785 = LPH
Gal./hr. x .063 = LPM
Cubic meters x 264.172 = gallons
Cubic meters x 1000 = liters
Cubic meter/hour x 4.402867 = gpm
Cubic feet x 7.481 = gallons
Cubic feet x 1728 = cubic inches
Cubic feet x 28.32 = liters
Cubic feet x 0.028 = cubic meters
Cubic feet x 28320 = cubic centimeters
Cubic inches x 0.00433 = gallons
Ft.³/min. x 472 = Cm³/sec.
Ft.³/min. x 0.4719 = liters/sec.
Ft.³/hour x 7.87 = Cm³/sec.
Ft.³/hour x 28.31605 = liters/hour
Ft.³/sec. x 28.31605 = liters/sec.
Ft.³/sec. x 1698.963 = liters/min.
Ft.³/sec. x 28316.847 = Cm³/sec.
Bed volumes/hr x 0.124675 = gpm

To Figure Total Gallons for Spa or Pool

Length x Width x Depth x 7.481 = Total gallons

Liters To Gallons

Liters x 0.2642 = Gallons

Cubic Meters To Gallons

Cubic meters x 264.17205 = Gallons

To Calculate the Amount Of Ozone For A Pool Based on Dosage & Pump Run Time

Commercial 24 HRS Pump Run Time

Liters x 1.5 = mg/day ÷ 24 = mg/hr

Domestic 12 HRS Pump Run Time

Liters x 0.75 = mg/day ÷ 12 = mg/hr

Domestic 24 HRS Pump Run Time

Liters x 0.75 = mg/day ÷ 24 = mg/hr

No Chlorine 12 HRS Pump Run Time

Liters x 1.0 = mg/day ÷ 12 = mg/hr

No Chlorine 24 HRS Pump Run Time

Liters x 1.0 = mg/day ÷ 24 = mg/hr

Sizing Produce Wash Systems

Dosage x gpm x constant = ppd ozone.

Example; A hydro-cooler held 6,000 gallons which recirculated at approx. 140 gpm.

A minimum ozone to water dosage of 1.0 milligrams per liter (mg/L) is used. To size the ozone generator, the example formula is used: 1 mg/L x 140 gpm x 0.012 = 1.7 ppd, or 32 gr/hr

Sizing Waste Treatment Systems

The applied dosage of ozone in ppm will range between 5.0 – 15.0 ppm. To calculate the amount of ozone needed the following formula is used: Gal/min x 0.012 (constant) x mg/L dosage = lbs/day required.

Example: 1 gpm x 0.012 x 10 = 0.12 lbs/day required or about 2 gr/hr.

Pounds Per Day to Grams Per Hour

To convert lbs/day to gr/hr = 20 gr/hr or a more realistic figure is 19 grams per hr.

Typical Water Treatment Ozone Dosages (PPM) and Contact Time

Application	Dosage	Time
Bottled Water		
Disinfection	1.5 - 2.0	5-10 min
Potable water		
Disinfection	1.5 - 3.0	5-10 min
Turbidity reduction	0.5 - 1.5	3-10 min
Trihalomethanes -	1.5 - 3.0	5-10 min
Taste & Odor	1.0 - 5.	5-10 min
Color Removal	3.0 - 10.0	10-30 min
Ultra-pure Water		
TOC Reduction	1.0 - 3.0	sec to min
Pipe Sanitization	1.0 - 3.0	5-10 min
Waste Water	5.0 - 15.0	15-30 min
Cooling Towers	0.1 - 0.4	sec to min
Produce Wash	0.5 - 1.0	

Maximum ozone concentration in water varies directly by concentration of the gas in air and inversely by temperature. Example 1.5% feed gas (by weight) will have a maximum concentration of about 11 ppm (mg/L) in water at 5 degrees C and 6.4 ppm at 20 degrees C. Doubling the concentrations of ozone in the feed gas will double the concentration in water.

Ozone Dosage Requirements for Common Well Water Contaminants

Contaminant	mg O ₃ Required
Iron (Fe ²⁺)	0.14 mg
Manganese (MN ²⁺)	0.5 mg
Hydrogen Sulfide (H ₂ S)	3.0 mg
Tannins	0.1 mg

Generator Sizing Equations

$$\frac{\text{Lb O}_3}{\text{day}} = \text{flow (mgd)} \times 8.34 \frac{\text{lb}}{\text{gal}} \times \text{ppm O}_3$$

$$\frac{\text{Lb O}_3}{\text{day}} = \text{flow (gpm)} \times 0.012 \times \text{ppm O}_3$$

$$\text{Note 1: } 0.012 = \frac{8.3453 \text{ lb}}{\text{Gallon (water)}} \times \frac{1440 \text{ min}}{1 \text{ day}} \times \frac{1 \text{ part}}{\text{million}}$$

$$\text{Note 2: ppm O}_3 = \text{theoretical applied dosage}$$

Generator Feed Gas Equations

General Equation

$$\text{SCFM (gen)} = \frac{\text{lb O}_3/\text{day} \times 100\%}{\text{density feed gas} \times \text{min/day} \times \% \text{ wt } \% \text{ O}_3}$$

Air Feed

$$\text{SCFM (air)} = \frac{\text{lb O}_3/\text{day} \times 100\%}{\text{lb O}_3/\text{day}} = 0.93$$
$$0.074923 \text{ lb/ft}^3 \times 1440 \text{ min/day} \times \% \text{ wt } \% \text{ O}_3 \text{ concentration}$$

Note 1: Dryer and filter purge loss not included in calculation.

Note 2: Air feed must be minimum -60° F (51° C) dew point.

Oxygen Feed

$$\text{SCFM} = \frac{\text{lb O}_3/\text{day} \times 100\%}{\text{lb O}_3/\text{day}} = 0.84$$
$$0.082644 \text{ lb/ft}^3 \times 1440 \text{ min/day} \times \% \text{ wt } \% \text{ O}_3 \text{ concentration}$$

Output of Small Ozone Generators

Ozone output = (a constant) X (air flow thru the generator) X (measured concentration)

For small generators this can be expressed as:

$$\text{Output (g/hour)} = K \times (\text{flow in cfm}) \times (\text{measured ppm (vol)}) = \text{cfm} \times .0283 \text{ m}^3/\text{ft}^3 \times 60 \text{ min/hr} \times \text{ppm (vol)}/467 \text{ ppm/g/m}^3$$

$$\text{Output (g/hr)} = .00364 \times \text{cfm} \times \text{ppm} = .128 \times \text{m}^3/\text{min} \times \text{ppm}$$

Important Ozone Relationships in Air

Ozone half-life in air is typically about 15 minutes in open areas (can be hours in enclosed areas) and increases with lower temperature and lower humidity.

Ozone is about 50% heavier than air and has a low vapor pressure, so it tends to sink to the floor and does not disperse if there is no air circulation.

Water Treatment Terms

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed

in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration. MCLs are enforceable standards.

Maximum Contaminant Level Goal (MCLG) -

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.

Maximum Residual Disinfectant Level (MRDL)

- The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) -

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Units are in milligrams per liter (mg/L) unless otherwise noted. Milligrams per liter are equivalent to parts per million.

For each contaminant, EPA set a health goal, or Maximum Contaminant Level Goal (MCLG). This is the level at which a person could drink two liters of water containing the contaminant every day for 70 years without suffering any ill effects. This goal is not a legal limit with which water systems must comply; it is based solely on human health. For known cancer-causing agents (carcinogens), EPA set the health goal at zero, under the assumption that any exposure to the chemical could present a cancer risk.

The rules also set a legal limit, or Maximum Contaminant Level (MCL), for each contaminant. EPA sets legal limits as close to the health goal as possible, keeping in mind the technical and financial barriers that exist. Except for contaminants regulated as carcinogens, most legal limits and health goals are the same. Even when they are less strict

than the health goals, the legal limits provide substantial public health protection.

The contaminants regulated in these rules pose long-term, or chronic, health risks. Some can accumulate in the liver or kidneys and interfere with their functions. Others could affect the nervous system if ingested over a lifetime at levels consistently above the legal limit (MCL). Several of these contaminants have health goals (MCLGs) of zero because EPA believes that they cause cancer and assumes that any amount of exposure, no matter how small, poses some risk of cancer. Other contaminants present health risks only at levels above their legal limits.

Microorganisms *Cryptosporidium*, *Giardia lamblia*, Heterotrophic plate count, *Legionella*, Total Coliforms (including fecal coliform and *E. Coli*), Turbidity, and Viruses (enteric).

Radionuclides include Alpha particles, Beta particles and photon emitters, and Radium 226 and Radium 228 combined.

(TDS) Total dissolved solids are inorganics that include elemental metals and chemical substances that do not contain any hydrocarbons or compounds of carbon structure. Some cause discoloration, hardness, staining, scaling, turbidity, or bad taste and odor. Antimony, Arsenic, Asbestos, Barium, Beryllium, Cadmium, Chromium, Copper, Cyanide, Fluoride, Lead, Mercury (inorganic), Nitrate, Nitrite, Selenium, and Thallium.

(VOCs) Volatile organic compounds that industries use in the manufacture of rubber, pesticides, deodorants, solvents, plastics, and other chemicals. The rule requires water systems to monitor and, if levels exceed legal limits, take corrective action to ensure that consumers receive water that does not contain harmful levels of the chemicals.

Other Terms & Abbreviations Used:

AMW apparent molecular weight
AOC assimilable organic carbon
AOPs advanced oxidation processes
atm atmosphere, 101 kPa, 14.696psi, 760mm of Hg
A angstrom, one ten-billionth of a meter,
BAC biological activated carbon
BAT best available technology
BDOC biodegradable dissolved organic carbon
BOD biological oxygen demand

BOM biodegradable organic matter
COD chemical oxygen demand
CPE cytopathological effect
C t concentration in mg x Minutes / L, or Cxt
C is the concentration of dissolved disinfectant, in mg/L
t is the nominal contact time, in minutes
CUR carbon usage rate
DBP disinfection by-products, MCL of 0.060mg/L proposed
D/DBP disinfectants/DBP, rule
DO dissolved oxygen
DOC dissolved organic carbon
DOM dissolved organic matter, humic & nonhumic
EBCT empty bed contact time
GAC granular activated carbon
gpm gallons per minute
GOX gaseous oxygen
gph grams per hour, g/h, g/hr
HAA haloacetic acids
HPC heterotrophic plate count
IC inorganic carbon
ie example
kg kilogram
kPa pressure, psi x 6.895 or atm x 101.325
LOX liquid oxygen
Lpm liters per minute, L/min.
MF mF, microfiltration 0.05-0.1µm or greater pore size
Mg milligrams, 1/1000 of a gram, 1.0x10-3g
mg/L milligrams per liter, ppm
mg/SL milligrams per standard liter
mgd MGD, million gallons per day
MTC mass transfer coefficient
MW molecular weight
N Newton
NF nF, nano filtration, ~0.0008 to ~0.009µm
nm nano meters, one billionth of a meter, 1.0x10-9m, 10-4
NOM natural organic matter
NTU nephelometric turbidity units
NTP normal temperature and pressure, 0 C or 273 K and 1 atm, 1013mb, 14.696psi or 760 mm Hg
PAC powdered activated carbon
PFU plaque forming units
ppm parts per million, mg/L
ppmv parts per million by volume
ppt parts per thousand
psig psi, pounds per square inch
PTA packed tower aeration
%v percent by volume
%w percent by weight
Pt-Co color units in U.S., or mgPt-Co/L in Europe
RO reverse osmosis, 5-15A
SCFM - scfm or standard cubic feet per minute, American standard is usually 20 C or 68 F temperature and 1013 mb pressure.
SDWA safe drinking water act
SMCL secondary maximum contaminant level
SOCs synthetic organic chemicals
STP standard temperature and pressure, 1 atm and 68
SWTR surface water treatment rule
TC total carbon
THM trihalometanes, MCL of 0.10mg/L to 0.080mg/L, proposed
THMFP trihalomethane formation potential
TMDL total maximum daily load
TOC total organic carbon
TON threshold odor number
TOX total organic halides
TOXFP total organic halide formation potential
TU turbidity unit
UF uF, ultrafiltration, ~15A to ~0.1µm
UV ultraviolet light
UV-254 UV absorbance at 254 nm
µg micro gram, one millionth of a gram, 1/1000 mg, 1.0x10-6g
µm micro meter, micron, one millionth of a meter, 1.0x10-6

DRINKING WATER TREATMENT LEVELS USING OZONE

Several approximate treatment levels are listed, but are dependent on temperature, pH, facilities and etc. Where YES is in a column, the above recommended treatment is normally more than adequate. Where the SPEED is left blank, there is no reliable data.

C t concentration in mg x Minutes / L, or Cxt

C is the concentration of dissolved disinfectant, in mg/L (1mg/l = 1 ppm O₃ = 1 gO₃/m³ water (by weight)

t is the nominal contact time, in minutes.

LOG 1 =	90.0 % - kill factor	LOG 2 =	99.0
LOG 3 =	99.9	LOG 4 =	99.99
LOG 5 =	99.999%	LOG 6 =	99.9999%

Pathogen or Organism	Concentration mgO ₃ /L	Time Min.	C t mg min/L	Log Reduction
Algae--(blue-green)recommend--	0.30	5.0	1.5	
Bacteria--all---recommend--	0.10	1.0	0.1	4+
Aeromonas & Actinomycetes	yes			
Bacillus, all	yes			
Campylobacters	yes			
Clostridium botulinum & others	yes			
Escherichia coli (E.coli)	0.04	1.0	0.04	4+
" coliphage MS2	0.20	0.5	0.1	4+
Flavobacterium	yes			
Helicobacter (pylori)	yes			
Heterotrophic Bacteria-HPC	0.20	0.5	0.1	3
Legionella pneumophila	yes			
Micrococcus, all	yes			
Mycobacterium tuberculosis, leprae	0.01	6.0	0.06	4
Pseudomonas aeruginosa, fluorescens	0.01	1.0	0.01	~4
Salmonella, all	0.01	1.0	0.01	~4
Shigella shigellosis, dysentery +	yes			
Staphylococcus sp, albus, aureus +	0.01	1.0	0.01	4
Streptococcus, all	0.01	2.0	0.02	~4+
Vibrio: alginolyticus, anguillarum	yes			
cholerae, comma,	yes			
parahemolyticus	yes			
Yersinia enterocolitica	yes			
Fungi-Molds-Yeasts-recommend	0.30	5.0	1.5	4+
Mold Spores	0.03	30 min		
Nematodes--all-recommend	1.00	5.0	5.0	4+
Hook worm & etc.	0.50			
Protozoa--all-recommend	1.5	5.0	7.5	~4
Acanthamoeba & Naegleria	0.2	0.5	0.1	2>4
Amoebae Trophozoites cysts	0.4	4.0	1.6	>2
Cryptosporidium -recommend-	1.5	5.0	7.5	~4+
Cyclospora	yes			
Entamoeba (histolytica)	yes			
Giardia lamblia -recommend	0.8	5.0	4.0	4+
Pathogen or Organism	Concentration	Time	C t	Log

	mgO3/L	Min.	mg min/L	Reduction
Giardia muris	0.50	5.0	2.5	3+
Microsporidium	yes			
N. gruberi	0.50	5.0	2.5	3+
Trematodes-all-recommend-	1.00	5.0	5.0	4+
Flat worms, flukes & etc.	0.30			
Virus--all--recommend	0.40	4.0	1.6	4+
Adenovirus, 7A	0.30	3.0	0.9	4
Astrovirus	yes			
Calicivirus	yes			
Echovirus 5, 12 & 29	0.40	4.0	1.6	4
Encephalomyocarditis	yes			
Enterovirus, over 35 types	0.30	4.0	1.2	4
coxsachie, B3 & B5	0.60	1.0	0.6	4
poliovirus, 1, 2 & 3	0.30	4.0	1.2	4
Hepatitis, A, E & HAV	yes		0.2	2
non-A & non-B	yes			
Myxovirus influenza	yes			
Norwalk	yes			
Picobirnavirus	yes			
Reovirus, 3 types	yes			
Rotavirus, 3 types	yes -		0.2	4

Substance or Molecule	Broken Down To	mgO3/mg	Speed
Aluminum			rapid
Ammonia to Nitrate, $\text{NH}_3 \rightarrow \text{NO}_2 \rightarrow \text{NO}_3$, (free > pH9)(need DO)		4.0	slow
Ammonia $\rightarrow \text{N} + \text{H}_2\text{O}$			fair
Aromatic Compounds $\rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{O}_2$			fair
Aliphatic Compounds $\rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{O}_2$			fair
Antimony			
Arsenic			rapid
Barium			slow
Benzene			rapid
Beryllium			
Boron			
Bromine, can go to bromate			fair
Cadmium			slow
Calcium hardness, already fully oxidized and soluble			----
Carbonic Acid $\rightarrow \text{CO}_2$			rapid
Chlorine: chloramine, chlorine dioxide, chlorite,			fair
hypochlorite, hypochlorous acid, zinc chloride			fair
Chromium alone			slow
Cobalt			rapid
Copper			rapid
Cyanide $\rightarrow \text{Cyanate} \rightarrow \text{N} + \text{H}_2\text{O}$		3.1	rapid
Flocculation, misc.			rapid
Fluoride			slow
Formaldehyde $\rightarrow \text{H}_2\text{CO}_3 + \text{CO}_2 + \text{H}_2\text{O}$			rapid
Formic Acid $\rightarrow \text{CO}_2 + \text{H}_2\text{O}$			rapid
Ethylene $\rightarrow \text{CO}_2 + \text{H}_2\text{O}$			fair
Hydrogen Sulfide $\text{S}^{2-} + 4\text{O}_3 = \text{SO}_4^{2-} + 4\text{O}_2$		2.2-3.6 mg/L to oxidize 1mg/L S2	
Iron, Fe siderite $\text{FeCO}_3 \rightarrow \text{Fe}(\text{OH})_3$		0.43	rapid
Substance or Molecule	Broken Down To	mgO3/mg	Speed

Ferrous Iron to Ferric Hydroxide		fair
Lead		fair
Magnesium, Mg		slow
" hardness, already fully oxidized & soluble	----	
Manganese, Mn		fair
rhodochrosite, $\text{MnCO}_3 \rightarrow \text{MnO}_3$	0.88	fair
Manganese Dioxide to Permanganate, will go pink/excess	2.20	slow
Mercury, with pH & etc.		fair
Methane $\rightarrow \text{CO}_2 + \text{H}_2\text{O}$		fair
Molybdenum		
Nickel		slow
Nitrate, already fully oxidized		----
Nitrite to Nitrate, $\text{NO}_2 \rightarrow \text{NO}_3$	1.04	fast
Organic Acids, $\rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{O}_2$		rapid
PCBs		slow
Selenium		
Silver		slow
Sodium		
Strontium		
Styrene		fast
Sulfate, already fully oxidized		----
Sulfide to Sulfate, $\text{S} \rightarrow \text{SO}_3 \rightarrow \text{SO}_4$	6.0	fast
Sulphur Compounds, $\rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{SO}_3 + \text{O}_2$		rapid
Thallium		
Toluene		fast
Trichloroethylene, $\rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{HCl}$		rapid
Vanadium		
White phosphorous		
Xylene		fast
Zinc		slow
COLOR TOC	per mg of Carbon	1 \rightarrow 3
DOC	per mg of Carbon	1 \rightarrow 3
Natural Organic Matter,	per mg TOC / lower MW Carbon	\rightarrow 4+
Synthetic Organic Chemicals, SOC's, some need AOPs		rapid
Coagulation - misc	0.5 \rightarrow 1.5	rapid
Precipitation - misc	0.5 \rightarrow 2.0	fast

The following are some common uses of ozone: 1. Algicide - very effective, most if not all. 2. Amoebocide - extremely effective, kills all known. 3. Aquaculture aid - many uses 4. Bactericide - extremely effective, kills all known. 5. BOD & COD enhancement - quite effective, as this IS real live OXYGEN. 6. Coagulant - quite effective. 7. Contaminant remover - very selective. 8. Decolorizer - usually effective, organic & inorganic, simple & complex, mineral & carbon. 9. Deodorizer - very effective, most are removed. 10. Detoxifier - quite specific; some quick, others slowly, some not at all. 11. Disinfectant - extremely effective, most if not all biota. 12. Dissolved solids - fairly effective, inorganic and organic. 13. Flocculant aid - quite effective, fairly specific. 14. Fungicide - very effective, all known. 15. Hardness - slightly effective with some specific changes. 16. Metals - very effectively on some, manganese and iron. 17. Oxygenator - extremely effective, particularly wells. 18. Particulates - quite effective, inorganic and organic. 19. Pesticide - very effective; kills worms, flukes, fish, snails, eggs, larvae, etc. 20. Precipitant - quite effective, extremely useful. 21. Precursor reduction - very effective, ie. THMs. 22. Softness - somewhat effective, assists and improves specifically. 23. Taste - very effective, removes or enhances most. 24. Turbidity - quite effective, prepares inorganics & organics for filtration. 25. Viricide - extremely effective, kills all known viruses. 26. Waste & effluent - quite effective, excellent in a wide range of uses. Information source from OZONE IN DRINKING WATER TREATMENT a brief overview by Jim Eagleton of the EPA in Seattle Washington.

OZONE EFFECTS ON SPECIFIC BACTERIA, VIRUSES AND MOLDS

Bacteria are microscopically small, single-cell creatures having a primitive structure. The bacteria body is sealed by a relatively solid-cell membrane. Ozone interferes with the metabolism of bacterium-cells, most likely through inhibiting and blocking the operation of the enzymatic control system. A sufficient amount of ozone breaks through the cell membrane, and this leads to the destruction of the bacteria.

Viruses are small, independent particles, built of crystals and macromolecules, Unlike bacteria, they multiply only within the host cell. They transform protein of the host cell into proteins of their own. Ozone destroys viruses by diffusing through the protein coat into the nucleic acid core, resulting in damage of the viral RNA. At higher concentrations, ozone destroys the capsid, or exterior protein shell by oxidation so DNA (deoxyribonucleic acid), or RNA (ribonucleic acid) structures of the microorganism are affected.

1-mg/l = 1-PPM

<u>Pathogen</u>	<u>%Destruction</u>	<u>Dosage</u>	<u>Time</u>
Aspergillus Niger (Black Mount)	Destroyed	1.5 to 2 mg/l	
Bacillus Bacteria	Destroyed	0.2 m/l	within 30 seconds
Bacillus Anthracis	Ozone susceptible		
Bacillus cereus	99% destruction	0.12 mg/l	in water after 5-min
B. cereus (spores)	99% destruction	2.3 mg/l	in water after 5-min
Bacillus subtilis	90% reduction	0.10-PPM	33 minutes
Bacteriophage f2	99.99% destruction	0.41 mg/l	10-seconds in water
Botrytis cinerea		3.8 mg/l	2 minutes
Candida Bacteria	Ozone susceptible		
Clavibacter michiganense	99.99% destruction	1.1 mg/l	5 minutes
Cladosporium	90% reduction	0.10-PPM	12.1 minutes
Clostridium Bacteria	Ozone susceptible		
Clostridium Botulinum Spores		0.4 to 0.5 mg/l threshold value	
Coxsackie Virus A9	95% destruction	0.035 mg/l	10-seconds in water
Coxsackie Virus B5	99.99% destruction	0.4 mg/l	2.5-minutes sludge effluent
Diphtheria Pathogen	Destroyed	1.5 to 2 mg/l	
Eberth Bacillus (Typhus abdomanalis).	Destroyed	1.5 to 2 mg/l	
Echo Virus 29: (most sensitive)	99.999% killed	1 mg/l of ozone,	contact time of 1 minute
Enteric virus	95% destruction	4.1 mg/l	29 minutes in raw wastewater
<u>Escherichia Coli Bacteria</u> (from feces)	Destroyed	0.2 mg/l	within 30 seconds in air
E-coli (in clean water)	99.99% destruction	0.25 mg/l	1.6 minutes
E-coli (in wastewater)	99.9% destruction	2.2 mg/l	19 minutes
Encephalomyocarditis Virus	Destroyed to zero	0.1 to 0.8 mg/l.	less than 30 seconds
Endamoebic Cysts Bacteria	Ozone susceptible		
Enterovirus Virus	zero level	0.1 to 0.8 mg/l.	less than 30 seconds
Fusarium oxysporum f.sp. lycopersici		1.1 mg/l	10 minutes
Fusarium oxysporum f.sp. melonogea	99.99 %	1.1 mg/l	20 minutes
GDVII Virus	zero level in with	0.1 to 0.8 mg/l.	less than 30 seconds
Hepatitis A virus	99.5% reduction	0.25 mg/l	2-seconds phosphate buffer
Herpes Virus	Destroyed to zero	0.1 to 0.8 mg/l	less than 30 seconds
Influenza Virus		0.4 to 0.5 mg/l threshold value	
Klebs-Löffler Bacillus	Destroyed	1.5 to 2 mg/l	
Legionella pneumophila	99.99% destruction	0.32 mg/l	20 minutes in distilled water
Luminescent Basidiomycetes (no melanin pigment)	Destroyed	100-PPM	in 10 minutes

<u>Pathogen</u>	<u>%Destruction</u>	<u>Dosage</u>	<u>Time</u>
Mucor piriformis		3.8 mg/l	2 minutes
Mycobacterium avium	99.9%	CT value of 0.17 in water	
<u>(scientifically reviewed document)</u>			
Mycobacterium fortuitum	90% destruction	0.25 mg/l	1.6 minutes in water
Penicillium Bacteria	Ozone susceptible		
Phytophthora parasitica		3.8 mg/l	2 minutes
Poliomyelitis Virus	99.99%	0.3 to 0.4 mg/l	3-4 minutes
Poliovirus type 1	99.5% destruction	0.25 mg/l	1.6 minutes in water
Proteus Bacteria	Very susceptible		
Pseudomonas Bacteria	Very susceptible		
Rhabdovirus virus	Destroyed to zero	0.1 to 0.8 mg/l	less than 30 seconds
Salmonella Bacteria	Very susceptible		
Salmonella typhimurium	99.99% destruction	0.25 mg/l	1.67 minutes in water
Schistosoma Bacteria	Very susceptible		
Staph epidermidis	90% reduction	0.1-ppm	1.7 min
<u>Staphylococci</u>	Destroyed	1.5 to 2.0 mg/l	
Stomatitis Virus	Destroyed to zero	0.1 to 0.8 mg/l	less than 30 seconds
Streptococcus Bacteria	Destroyed	0.2 mg/l	within 30 seconds
Verticillium dahliae	99.99 % destruction	1.1 mg/l	20 minutes
Vesicular Virus	Destroyed to zero	0.1 to 0.8 mg/l	less than 30 seconds
Virbrio Cholera Bacteria	Very susceptible		
Vicia Faba progeny	Ozone causes chromosome aberration and its effect is twice that observed by the action of X-rays		
Information source from Scott Postma of Ozone Solutions, Inc.			

MEDICAL OZONE THERAPY PROTOCOL

Units and Measurements for calculating medical ozone quantity and concentrations:

The ozone concentration is given in:

1 ug/ml = 1 mg/ltr = 1 g/m³ = 1 gamma.

In exceptional cases, in parts per million or volume %, when the following applies:

1 ug/ml = 6.99×10^2 ppm by weight or

1 ug/ml = 4.66×10^2 volume% or

1 ppm by weight = 1.43×10^{-3} ug/ml

1 vol% = 21.45 ug/liter.

The ozone dose is given in ug or the nearest unit above this for the corresponding period of treatment, whereby the following applies:

1 ug = 10^{-3} mg = 10^{-6} g

1 g = 10^3 mg = 10^3 ug.

The ozone dose at total quantity of ozone administered is calculated from the concentration and the volume used, (c x V).

Intramuscular Injection Example: Assume a total ozone quantity of 240 ug is to be applied.

1. Select a total ozone quality of 240 ug/ml and fill a 10 ml syringe:

24 ug/ml x 10 ml = 240 ug.

2. Select a concentration of 12 ug/ml and fill a 20 ml syringe:

12 ug/ml x 20 ml = 240 ug.

Example for Major Autohemotherapy in which an ozone quantity of 1,600 ug is to be administered:

1. Select a concentration of 16 ug/ml and, of this take a volume of 100 ml (16 ug/ml x 100 ml = 1,600 ug).

2. Select a concentration of 33 ug/ml and, of this take a volume of 100 ml (33 ug/ml x 50 ml = 1,650 ug).

A trained medical professional should preform these applications.

Rectal Insufflation Applications

There are various ways or methods to introduce ozone into the colon rectually.

1. A syringe can be filled with the measured amount of ozone in cc of volume and injected rectually through a catheter.
2. A special ozone resistant plastic bag can be filled to the desired volume say from 100 to 300 ml and forced through a catheter into the rectum.
3. The ozone can flow directly from the ozone generator through a catheter at a certain flow rate in liters per minute with the desired concentration of ozone.

When the volume is given for a syringe or bag in cc or ml the amount is the same.

10 cc is equal to 10 ml.

Higher concentrations of ozone from 45 to 74 ug/ml will have an hemostatically action that will help stop bleeding while the lower concentrations enhance circulation properties.

When the volume is given in ml for filling a bag you can use the liters per minute setting on the oxygen regulator.

Examples: 500 ml is ½ LPM flow rate for 1 minute.

250 ml = ½ LPM for 30 seconds or ¼ LPM for 1 minute.

It is better to start with low concentration of ozone, volume, or flows and increase gradually. Some may require a humidifier bottle to bubble the ozone in for absorption, dryness or excess burning. Allow 5 to 10 minutes warm-up to reach the desired ug/ml or the saturation point of ozone in the water.

Colon Related Conditions

Condition	Volume	ug/ml [gamma]
Colibacillosis	300 – 400 ml	10 – 25 ug/ml
Atonic intestinal conditions		10 to 20 ug/ml

Spastic intestinal conditions 40 ug/ml
 Constipation 200 – 500 ml 61 ug/ml
 Irritable colon 200 up 500 ml 12 ug/ml
 Proctitis 200 - 500 ml 27 - 61ug/ml

Ulcerous colitis 50 – 100 ml Start at 37 and reduce to 12 ug/ml and slowly increase volume from 200 ml to 300 and up to 500 ml. Cases of bleeding start with daily insufflations with 50 to 100 ml at 75 ug/ml. When bleeding stops decrease from 37 down to 12 ug/ml while increasing volume from 200 to 500 ml.

Vesicular fistulae 400 ml 25 ug/ml

Bagging or Cupping Gas Applications

In cases of burns or bad infections it is advised to start with high O3 concentrations and as healing progresses work your way down to the lower concentrations. If you have a sensitivity to the ozone start with the lower concentrations below 40 ug/ml. moisten the skin first with warm ozonated water. If eczema occurs after the 2nd or 3rd treatment the concentration may be too high.

Condition	Minutes	Start ug/ml
Burns	20	50-60 10-20
Fungus	20	50 – 10
Gangrene	20	27
Ulcers	20	75 - 61 – 54 – 37
Wound cleanse	20	80 – 30 – 10 - 20

Intra-Arterial Injections

Start low with a concentration of 7 ug/ml and increase gradually up to 33 ug/ml. same with volume (5 ml to 20 ml) and dosage (35 ug to 660 ug) via the femoral artery.

For joint conditions like arthritis, arthrosis, inflammatory, or rheumatism.

Joints – Small joints like fingers and toes the O3 quantity is 20-40 gamma/ml.
 Medium sized wrist, elbows, shoulder or ankle quantity is 80-100 gamma/ml.
 Large size joints like hip and knee quantity is 200-300 gamma/ml.

Intra-Articular Joint Injections

Small joints (fingers) 20 to 20 ug
 Medium (wrist, shoulder) 80 to 100 ug
 Large (knee, hip) 200 to 300 ug

Intra-Muscular Injections

This method is used to treat allergies, carcinomas, and a high range of inflammatory diseases. Should be administrated slowly.

Treatment	Volume	ug/ml
1	10	7
2	10	11.5
3	10	16.5
4	10	23
5	10	27

Condition	Volume	ug/ml
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Cancer 10 ml 24 ug/ml = 240 ug/day
 Carcinomas 10 ml 24 ug/ml = 240 ug/day

Major Autohemotherapy

The technique for major autohemotherapy is 50 to 100 ml of blood is enriched with the required amount of ozone under 40 ug/ml and then reinfused back into the body at a rate of 60 – 90 drops per minute with an infusion time of 15 minutes. The dosage is between 500 ug to 3000 ug depending on condition or symptoms.

Minor Autohemotherapy

About 10 ml of blood is withdrawn and gently mixed with the desired amount of ozone for 20 seconds and reinjected back into the patient intra-muscularly.

Urinary and Bladder Disease

Condition	Volume	ug/ml
Cystitis	10 ml	27 ug/ml into bladder

Source of Information from The Use of Ozone in Medicine by Renate Viebahn.

Direct Intravenous Injections

Some have replaced this therapy with major autohemotherapy in Europe because of a few accidents from misuse. Some feel because doctors can make more money by using the less effective method of autohemotherapy.

It is important to consider body weight and size of the person when performing intravenous injections. One should start with a low ozone concentration and low ml or cc volume (10 cc syringe) with an infusion of about 1 to 2 cc per minute. Too much of a volume may absorb into the lungs causing burning and coughing.

For a persons first time always start at the 10 cc and increase the volume upward 5 to 10 cc till you find there tolerance level. At the first sign of a chest or throat tickle you stop the injection to prevent coughing.

Volume cc or ml	ug/ml	Times per week
10 to 50	27 -65	1 to 2

Direct IV Injection Protocol by DR. William Turska, ND

Hook up the oxygen tank and regulator to the ozone generator. Open the valve on the tank and open the regulator to deliver 1/2 liter/minute. Turn on the ozone generator and set the desired concentration of ozone (say 27 ug/ml). Allow five minutes of running to stabilize. The patient should be lying down during the treatment. Swab injection site with H₂O₂ and pump up pressure cuff to enlarge vein. Fill the 10 cc syringe from the ozone generator. Press the plunger and expel the ozone to purge any air. Refill the syringe and invert upward so the ozone will not run out and purge any excess air again. Insert the 25g butterfly needle into the vein and release the cuff. SLOWLY press the plunger and inject ozone at a rate of about 1-2 cc/minute. Watch entry site for puffiness. This means you are not in the vein. If you run your fingers over this area, you may hear a crackling sound. Do not worry this is harmless. Have the patient inhale through their nose and exhale through their mouth during injection. If you feel resistance against the plunger, pause for a moment, and then resume. The small needle will not allow

very fast injection. Tell the patient to inform you at the first sign of a chest or throat tickle or any feeling in the shoulder/chest junction, because this is the signal that they have had enough and stop immediately. If there is no reaction, inject another 30 cc until this signal is felt. Some larger patients may take 100 cc or smaller ones only 20 cc or less. Withdraw the syringe and cover the injection site with a cotton swab. Shut off the oxygen tank. Some patients will cough after injection as the ozone off gasses in the lungs. This is harmless, but can be annoying. If the patient coughs for more than 30 minutes after the injection have them breathe some pure oxygen. Some will administer 5000 mg Vitamin C orally to stop the reaction. Do not use ascorbic acid because the ozone will react to it causing bloating or excessive gas. Inject once per day for a week, minimum. After that point, rectal insufflations may be sufficient. In certain cases, injection may be necessary for many weeks. Switch veins regularly. If the veins are hard to find, use the portal vein (accessed rectally).

Note: Direct intravenous injection: into the portal (rectal) vein for cancer (especially liver cancer) and hepatitis.

Direct tumor injection (such as breast tumor): 1-10 injections as required; needle aspiration; liquefaction increases as the concentration of ozone increases; sometimes the installation of a continuous drain is required, sometimes just a poultice.

Major Autohemotherapy Protocol

Equipment needed: 60 cc glass syringe No. 25 butterfly needles with 3-9" connecting tubing Heparin sodium without preservatives: 1000 USP units per cc for each syringe of blood; or sodium citrate 5-100 cc plastic syringe with No. 25, 1" needles; for saline solution Silk tape to hold Butterfly needle at the antecubital area of the arm Rubber tourniquet for upper arm or blood pressure cup.

Procedure: Tie off the upper arm with the rubber tourniquet or use the cuff attach 5-10 cc syringe with normal saline to the Butterfly needle and insert into the most visible vein in the antecubital fossa inject 2-3 cc of saline to see that the needle is well into the vein secure

the Butterfly needle with silk tape withdraw 1.0 cc of Heparin sodium into the 60 cc syringe turn on the ozone generator with oxygen only to purge the system turn on ozone generator to produce ozone insert tip of syringe into outlet of ozone generator and draw in 30 cc of ozone Put a No. 25 needle on the syringe insert the Butterfly needle into the vein and open the tourniquet to the saline syringe and attach the 60 cc syringe with ozone in it. Retie the tourniquet and then slowly fill the syringe to make the blood mix with the ozone. The blood will turn bright red. Untie the tourniquet and then slowly inject the blood over 5 minutes remove the 60 cc syringe from the tubing to the Butterfly needle and re-attach the 5-10 cc syringe of saline inject 5 cc of saline to wash the blood back through the needle; if desired, repeat twice with further injections of Heparin and ozone. Remove butterfly needle and apply cotton ball to injection site.

Note: The potency of any medicine is greatly increased when taken in conjunction with ozone therapy, eg. Aspirin 100 times; chemotherapy 10 times.

Ozonated Saline Drips (Parenteral Ozone)

Some doctors who administer ozonated saline IV drips may each have their own protocol with a different receipt of ingredients added to the saline solution, which may be different from the Russian protocol below.

Intravenous Infusion of Ozonated Physiological Saline

Ozonated physiological saline is produced by conveying ozone-oxygen mixture through a standard bottle with 200 or 400 ml of sterile physiological 0,9% sodium chloride solution up to saturation with ozone and then infused intravenously to the patient

This procedure can be performed in two variations - after interrupting bubbling with ozone for the time of intravenous infusion of solution and by infusing solution during continual bubbling with ozone.

In both the cases, before infusion saline should be previously bubbled with ozone up to saturation (saturation - mark of 100% of

dissolved ozone. Saturation of solution with ozone concentration in gas mixture 400 - 2000 mcg/L can be achieved for 10-15 min at flow rate 1 L/min and for 15-20 at flow rate 0,5 L/min. Further bubbling results in an insignificant increase in the amount of ozone dissolved in the physiological saline (formation of additional active species of oxygen) that can be disregarded.

Calculation of the Dose

Considering that concentration of ozone dissolved in the physiological saline is approx. 20% of the given ozone concentration in gas mixture i.e. dissolution coefficient is 0,2, that means that for example at ozone concentration in gas mixture 1000 mcg/L in 1 L of physiological saline the following amount of ozone will be dissolved: $0,2 \times 1000 = 200$ mcg O₃ (calculation error not more than 10%).

In case of infusing an ozonated physiological saline by continuous bubbling, saturation of saline remains practically constant all the time of procedure. The dose of ozone infused to the patient is calculated as follows:

Dose (mcg) = $0,2 \times \text{concentration O}_3 \text{ (mcg/L)} \times \text{volume of saline (L)}$

Example, at ozone concentration in gas mixture 1500 mcg/L and volume of saline bubbled with ozone 400 ml the dose of ozone infused the patient during the procedure = $0,2 \times 1500 \times 0,4 = 120$ mcg O₃.

During the procedure after interrupting bubbling with ozone for the time of intravenous infusion of ozone it is important to know that decomposition of ozone after stopping bubbling is described by complex exponential function, the half-life of ozone is approx. 30 minutes.

The total dose of ozone infused to the patient within treatment time of 30 min is 67% of the dose calculated for the procedure by continuous bubbling (calculation error not more than 10%):

Dose (mcg) = $0,67 \times 0,2 \times \text{concentration O}_3 \text{ (mcg/L)} \times \text{volume of saline (L)}$

Example, at ozone concentration in gas mixture 1500 mcg/L and volume of saline bubbled with ozone the dose of ozone infused to the patient during the procedure = $0,67 \times 0,2 \times 1500 \times 0,4 = 80,4$ mcg/ O3.

References: 1. Boyarinov G.A. et al. Dissolution of Ozone in Physiological Saline. Proceeding of the 3d All-Russian scientific-practical conference "Ozone & Methods of Efferent Therapy in Medicine" - Nizhny Novgorod, 1998, p. 6-9

2. Boyarinov G.A. et al. Decomposition of Ozone in Physiological Saline. Proceeding of the 3d All-Russian scientific-practical conference "Ozone & Methods of Efferent therapy in Medicine" - Nizhny Novgorod, 1998, p. 9-11. Source of this information is from: www.medozons.ru/eng/products/fizrastvor_metod.html

Making Ozonated Olive Oil

You can use just about any kind of ozone generator for making small amounts like a few ounces but we recommend using one with oxygen from a bottle or oxygen generator for a higher-grade medical grade olive oil. The other types that use air take too long to ozonate the oil and air has contaminates.

The main thing you need to be aware of is when the olive oil starts to become saturated with the ozone it will become foamy and can bubble over the side of the jar. You can purchase humidifier bottles or make your own from a glass or plastic jar with a screw cap to bubble larger amounts of oil. The taller and smaller in diameter is better because the bubbles have a longer distance to travel to the surface.

Drill two 1/4 holes for the 1/4 OD tubing to go through and use epoxy to glue the tube around the cap that unscrews. One tube goes to the bottom with the bubbler attached. The 1/4 ID hose can be used as connectors to slip over the 1/4 OD tubing. The stone bubbler should produce the smallest bubbles possible. If the bubbler starts to plug up you can wash in hot water to clean. The other 1/4 OD vent tube only goes in a couple of inches into the jar with about 18" coming out the top of the cap. The end is placed into an empty jar to catch the

foamy olive oil as it rises to the top and goes out the vent tube.

As the ozone generator is running there will be some heat generated in the corona discharge cell that is transferred to the oil, which raises its temperature. This is called an exothermic reaction with the olive oil. The heat generated makes the ozone dissipate quicker in the olive oil and slows the process.

To avoid this the olive oil container can be placed into another larger container filled with ice around the olive oil to keep it cool. The other container will need a hole drilled at the bottom to drain the water as the ice melts. When the oil starts to thicken it is saturated with as much as it can hold. You then will fill your smaller containers, add a few drops of essential oils for better smell and refrigerate.

The larger the ozone generator the shorter it takes to ozonate. For larger productions of olive you would need at least 20g/hr to produce about 2 liters/day (2.11 quarts).

Rectal Insufflations Flow Notes!

Maximum flow rate for rectal insufflations should never exceed:

1 minute at 1/2 liter per minute (500 cc/min).
2 minutes at 1/4 liter per minute (250 cc/min).
4 minutes at 1/8 liter per minute (125 cc/min).
8 minutes at 1/16 liter per minute (62 cc/min).
16 minutes at 1/32 liter /minute (31 cc/min).

All medical ozone applications use bottled oxygen with a pediatric style regulator or flow meter.

There are many different versions for medical ozone treatment or protocols used. Everyone you ask or when looking on the Internet you will see different flow rates and ozone concentrations used for each application. Every doctor will each have their own method of what works best for them. Some believe this is getting out of hand and that there should be a safe standard set for everyone to follow. The following was obtained from various sources. When In Doubt Use Less!

Ozone Therapy Protocols (Adults)

Application	ug/ml	Flow	Minutes	Seconds	Times /Day	Week
Body Bag	20 - 30	½ lpm	30 shut off and absorb another 30 min			1 - 3
Cupping	10 - 80+	¼ - ½ lpm	3 to 5		1	as needed
Ear Insufflation	10 - 30	¼ lpm	1 to 3		1 - 2	2 to 3
Limb Bagging	40 - 80+	¼ - ½ lpm	10 to 20			every other day
Olive Oil	20 - 25	½ lpm	bubble till foamy			
Rectal Insufflation	15 - 30	¼ - ½ lpm		30 to 60	1 - 3	as tolerated
Vaginal Insufflation	10 - 25	½ lpm	1 min		1 - 3	as tolerated
Ozonated Water:						
Colonics, Enemas	40 - 60	½ lpm	30 per 5 gal		1 daily	as needed
Dental - Wounds	24	½ lpm	20			as needed
Drinking	10 - 24	½ lpm	5 to 10			as tolerated

Hyperbaric: 10 ug/cc ozone at a pressure of 45' of water - -30-35 psi.

Lumbar disc herniations: Ozone in a concentration of 10 to 40 micrograms per milliliter directly through the skin in the Para vertebral muscles or in the disc with X ray magnification.

Nasal Inhalation: 10 - 20 ¼ - ½ lpm 15 1 - 2 as tolerated
O3 is bubbled through 2" olive oil in a humidifier type bottle and breathed via mask or nasal cannula.

Saline IV Drip: 35 - 40 ½ lpm constant 1 to 2
500 ml of sterile saline is constantly ozonated during the IV period. Saline will saturate around 25 to 30 mg/ml. Use glass for the saline mixture instead of plastic bags.

Steam Sauna: Set temperature at 90 to 110 degrees F and introduce ozone gas at 30 to 50 ug/ml and treat for 15 to 30 minutes every other day.

Protocol Notes:

1. Rectal insufflations can be done for longer times by using two catheters (one long / one short). The second or shorter one would act as a relief or vent to prevent over pressure and damage to the colon. The most important thing to remember is the colon has to be clean of debris so the ozone can be retained and absorbed into the blood stream. Otherwise there will not be any benefits. Cleaning the colon first doing colonic irrigation and taking an oxygenated magnesium oxide colon cleanser like the Oxy-Mega will clean the intestinal tract for better results. Tropical Sunrise dietary supplement will also be beneficial.

2. When doing ear insufflations allow the gas to escape slightly as not to build up pressure on the eardrum that may cause damage.

3. Size and weight of the person should be considered for concentration dosage, flow rates and especially the length of time.

4. It is essential to provide your body with the necessary supplements of beta-carotene, copper, manganese, vitamins A, C and E, selenium, molybdenum, zinc and N-acetyl-cystine to protect healthy cells from over oxidation during ozone treatments.

EUROPA OZONE PROTOCOLS FOR PATIENT HOME USE

Dietary requirement for 7 days prior to starting: antioxidant tissue loading diet and supplements:

Bowel of blue, black, red fruits such as blackberries, raspberries, cranberries, blueberries, at least 6 oz. every morning and evening. Patients with glucose issues stick to a.m. only and squirt with Cranberry Seed Oil or Olive Oil or whipping cream to slow down the glucose/insulin spike. Supplements: Integrative Medicals Co-Q 10 chewable, Cranberry Seed Oil Caps (high in E & tocotrienols), L-Ascorbic, Bioflavonoids, Quercetin, etc. Green Drinks such as wheat grass juice shots, 2 oz. 2x/day.

Method	Indications	Concentration	Time	Treatments/Day
Bladder Insufflation	Cystitis(bladder)	5-15 mg/ml. *	30-90 sec.	2-3x/day ABM
Rectal Insufflation	Liver Problems	15-25 mg/ml. *	30-90 sec.	2-4x/day ABM
Rectal Insufflation	Colitis/IBD	5-15 mg./ml.	15-30 sec.	2x/day ABM
Rectal Insufflation	Ulcerative Colitis	5-15 mg./ml. ~	30-120 sec.	2-3x ABM
Rectal Insufflation	General Health Main.	15-30 mg./ml.	60-90 sec. ea.	2x. ABM
Rectal Insufflation	Immune Stimulation	35-45 mg/ml.	30-120 sec. ea.	2-3x/day ABM
Local Bag/DMSO	Fissures, Fistulas	15-35 mg/ml.	60-90 min. ea.	3x/day, 3wks
Vaginal Insufflation	Candida/Yeast	10-25 mg/ml.	30-45 sec. ea.	2-3x/day
Topical Bag/Cup	Ulcers/Burns, limbs	60-120 mg/ml	5-15 min.	3-5x/day
Topical Bag/Cup	Ulcers/Burns	15 mg./ml new tissue	30 minutes ea.	3-5x/day
Pressurized Bags	Limb & Open Wound	40-120 mg/ml. ~	45-90min. ea.	2-4x/day
Bag w/DMSO top	Viral/Bact. Infect.	40+ mg/ml.	60-90 min. ea.	4-6x/day
Ozonated Dist. Water	Gastric Upset	40+mg/ml	30-60min.	Drink 1-2x/day 16oz.
Ozone Dist. Water	General Health & Dental	40+mg/ml		8 oz.
Ear Insufflation	Sinus Infect/Brain/Eye	15-30mg/ml. (hold breath) until hot + 10 sec./ear		2-3x/day/ear

Notes: 1. ABM = after bowel movement. 2. ~ = lower as healing progresses. 3. * = titrated, measured amount in cc or ml.

The general rule of thumb for rectal and oral is to continue on this protocol until improvement is seen. Colon size and shape varies w/individuals and has different degrees of toxicity, etc. Adjust to personal need. Detox or Herximer reactions can be expected in many cases and will give general flu like symptoms, headaches, skin rashes, etc. as unwelcome guests are destroyed & escorted out. Hot Epsom Salt Baths with 1/2 pack per bath is recommended. Just Persist! Rectal Insufflations will cause you initially to have colonic spasms. Doing an enema will help lessen this response. If the cramps are severe, cut back and start at lower concentrations and less time. Unless otherwise instructed by the doctor, follow the above schedule. Be sure to let your machine purge for 20 seconds, and always use moisture on your skin when doing bag treatments. Moisture is not necessary for rectal/vaginal applications as have their own moisture.

The principle of ozone concentration is this: oxygen (O₂) + electrical field = ozone. smell is no indicator of strength. The slower the oxygen flow (therefore the longer the oxygen is exposed to the electrical field) the stronger the concentration. So, the lower the flow rate (liter per min.) the higher the ozone to oxygen ratio. Frequencies & temperature affect strength.

Note: be sure to open a window and turn on a fan when running your machine to prevent inhaling irritating levels of ozone. Also, the cooler your room is and the machine itself, the better your results because ozone strength is temperature dependant. If your machine has no cooling fan installed, point a small one over a bowl of ice and blow toward the motor area to keep it cool when doing bag treatments.

Information Source from *EUROPA INSTITUTE OF INTEGRATED MEDICINE*

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Veterinary Use of Intravenous Ozone and other Ozone Applications

Originally written by Citizen's Council for Truth in Medicine, Washington, DC

Part I - Viral (Rickettsial and Chlamydial) Diseases (VRCDs)

Ozone is very effective in acute and chronic viral diseases as a virucidal agent in reversing positive antibody tests and in improving the general health of the animals.

Ozone is the treatment of choice of Equine Infectious Enema (EIA, Swamp fever) and promptly reverses the clinical symptoms and a positive Coggins test.

Ozone is equally effective against Equine Ehrlichiosis and Potomac Horse Fever, caused by the rickettsial agents *Ehrlichia equi* and *E. risticii* respectively, as well as against Equine Encephalomyelitis (EE) including Eastern (EEE), Western (WEE), Venezuelan (VEE) and other togaviral and flaviviral EE, Equine Viral Arteritis, African Horse Sickness (AHS), Equine Herpesvirus I (EHV-1) infection, Equine Viral Rhinopneumonitis and Myeloencephalopathy, Equine Influenza and other VRCDs of horses and other animals including cattle, (e.g. chlamydial abortion from *Chlamydia psittaci*, et al.), cats, dogs, sheep, goats, domestic birds and various zoo animals.

Part II - Respiratory Diseases of Horses

Ozone is effective against respiratory viral infections (RVIs) (see part I) such as RVIs caused by EHV-1 (rhinopneumonitis), equine arteritis virus, rhinovirus, influenza as well as adenovirus pneumonia with combined immunodeficiency in Arabian foals.

Ozone is also effective against viral respiratory infections with secondary bacterial infection (see part III) that produces mucopurulent nasal discharge, exacerbates the cough, and may lead to lung abscessation, pneumonia or pleurisy. For ozone treatment of COPD (heaves), see part IV.

Ozone is the treatment of choice for Exercise-Induced Pulmonary Hemorrhage (EIPH, Epistaxis, "Bleeder"), especially in States and Countries that do not allow furosemide (LasixR). In most cases ozone reverses the bronchitis, neovascularization and fibrosis, and through a homeopathic mechanism, the other contributory factors of EIPH in "bleeders".

Part III - Bacterial Diseases

Ozone is very effective for acute and chronic bacterial diseases, including those that do not respond well to antibiotics such as Glanders (*Pseudomonas mallei*); Septicemia in foals (e.g. from *E. coli*, *Klebsiella* spp., *Actinobacillus* spp.); Leptospirosis (*Leptospira interrogans*); Listeriosis (*Listeria monocytogenes*); Contagious Equine Metritis (CEM from *Taylorella equigenitalis*); retained placenta with consecutive metritis, septicemia and laminitis; Tularemia (*Francisella tularensis*); Clostridial diseases e.g. Tetanus Enterotoxemia (*Cl. perfringens* infection); Malignant Edema (*Cl. septicum*); Botulism and Infectious Necrotic Hepatitis (*Cl. novyi*); Lyme Disease (*Borrelia burgdorferi*); Actinobacillosis (e.g. *A. equuli* in horses); Anthrax; Melioidosis hematogenous septic polyarthrititis with primary Brucellosis (*Brucella melitensis*, *B. abortus*, *B. suis*, *B. canis*, *B. ovis*, *B. neotomae*) and others, especially in valuable race horses and zoo animals.

Part IV - Fungal Diseases

Ozone is effective against systemic Actinomycosis and Candidiasis, Chromomycosis, North American Blastomycosis, Histoplasmosis, Aspergillosis and is a valuable adjunct in Chronic Obstructive Pulmonary Disease (COPD, heaves) of horses.

In the treatment of heaves, ozone relieves acute "asthmatic" attacks and the paroxysmal cough and effectively reverses the allergic component from inhalation of molds, dust and other air pollution as well as the triggering respiratory infection.

Part V - Leukemias, Lymphomas and other Malignancies

Ozone is an effective adjunct to high-pH therapy and other treatment methods of the Life Science Universal (LSU) modalities for these conditions.

Ozone is a valuable adjunct for the treatment of Equine Sarcoids (generally in younger horses) and Squamous Cell Carcinoma (most frequently in older horses).

Ozone is particularly effective against any blood and malignant disease caused by viruses and bacteria such as Bovine Leukosis, Canine Malignant Lymphomas, Feline Lymphosarcoma, Feline Leukemia and lymphoproliferative disorders in turkeys, chickens and zoo animals.

Part VI - Rectal and Other Typical Applications of Ozone

Rectal ozone insufflations are a powerful adjunct to the treatment of both infectious and noninfectious diseases of the digestive tract. Ozone is effective in reducing intestinal parasites (helminths), viruses and rickettsiae (see part I, e.g. Rotavirus and Ehrlichia in horses), bacteria (see Part III, e.g. enterotoxigenic *E. coli*, *Salmonella* spp., *Rhodococcus* (*Corynebacterium equi* in horses), protozoa and fungi (see Part IV, e.g. *Eimeria* spp. and *Aspergillus fumigatus* in horses) and algae (*Prototheca* spp.). Ozone is effective in diarrhea and inflammatory bowel disease of horses.

Vaginal ozone insufflations are effective against vaginal Candidiasis (see Part IV, Vaginitis, Equine Coital Exanthema (EHV-3), Contagious Equine Metritis (see Part III).

Intramammary ozone application instead of antibiotics is effective for mastitis in large animals, e.g. mastitis in mares caused by *Streptococcus zooepidemicus*, *S. equi*, *S. equisimilis*, *S. agalactiae* and *S. viridans*.

Intra-articular ozone is effective for Septic Arthritis.

Topical ozone is effective for dermatomycosis, osteomyelitis and infected wounds, fistulae (e.g. fistulous withers and poll evil, i.e. inflammation of supraspinous and supra-atlantal bursae caused equine and bovine udder diseases).

Ozone is most valuable for Cattle Embryo Transfer Procedures.

Part VI - Dosage Recommendations.

A). Intravenous Application of Ozone for the Indications Listed in Parts I-V Above: To minimize potential inflammatory reactions and discomfort of the animals, inject IM orgotein prior to any IV O₃ application. For best effectiveness and to minimize venous irritation use the largest available vein for IV O₃ applications and/or different locations for each IV injection.

In almost all animals, IV O₃ will produce a homeopathic-type "healing crises" (HHC). This HHC may temporarily increase symptoms of the present illness or produce symptoms of old unresolved conditions. An HHC is excellent proof of the effectiveness of IV O₃.

1). Equine Infectious Anemia (Swamp Fever): Twelve IV applications on consecutive days of 0.5 milligrams of ozone per kilogram (0.5 mg O₃/kg) then recheck Coggins test. If the Coggins test is still positive 4 weeks after the initial treatment series, repeat this series. In about 80% of the cases, the Coggins test becomes negative after one series.

2). Exercise-Induced Pulmonary Hemorrhage (EIPH, Epistaxis, "Bleeder"): Twelve IV applications on consecutive days of 0.5 mg O₃/kg combined with EDTA chelation at an EDTA dosage of 50 mg/kg.

3). Most Viral, Rickettsial, Chlamydial, Bacterial and Fungal Diseases:

Acute: 4 IV applications on consecutive days with 0.5 mg O₃/kg. If symptoms have not subsided completely, the treatment may be continued up to 12 days.

Subacute: 6 to 8 applications on consecutive days of 0.5 mg O₃/kg. Repeat after a treatment-free interval of 2 weeks if symptoms have not completely subsided.

Chronic: {Such as Chronic Obstructive Pulmonary Disease (COPD, heaves)} 12 IV applications on consecutive days with 0.5 mg O₃/kg. If symptoms persist after 4 weeks, repeat with 8 IV applications on consecutive days with 0.5 mg O₃/kg. This 8-day regimen may be repeated every 6 weeks until symptoms have subsided completely or no further improvement is noted after O₃ administration. All other precautions with COPD, such as strict avoidance of dusty and moldy feed or air pollution, should obviously also be taken.

4). Leukemias, Lymphomas, Sarcoids and Other Cancers: 8-12 IV applications on consecutive days with 0.5 mg O₃/kg combined with the high-pH cancer treatment regimen pioneered by Life Science Universal.

B). Rectal Application of Ozone: Use approximately one liter ozone per 50 kilogram (1.0L O₃/50 kg) at a concentration of 70 microgram per milliliter (70µg/mL) and repeat procedure after 30 minutes. If significant discomfort is experienced by the animal, a smaller dosage may be required. Repeat up to 2x daily (b.i.d.) until the outcome is achieved.

C). Vaginal Application of Ozone: Use approximately 1.0L O₃/50kg at 70µ/mL concentration and repeat procedure after 20 minutes. If significant discomfort is experienced by the animal, a smaller dosage may be required. Repeat up to b.i.d. until the desired outcome is achieved.

D). Intramammary Application of Ozone: Use 30, 60 up to 120mL or more, as tolerated at a concentration of 120µg/mL and repeat every 10 minutes up to a total of six times. Repeat up to b.i.d. until the desired outcome is achieved.

E). Intra/Peri-Articular Application of Ozone: Use 10 to 60 mL or more, depending on the joint, at a concentration of 70 to 120µg/mL, and apply intra-articularly and also into the periarticular soft tissues, and set multiple periarticular intracutaneous wheals ("quaddels").

F). Topical Application of Ozone: This may be done with a catheter or in some cases with a bag. For fistula or osteomyelitis treatments, use a concentration of 120µg/mL and apply as large a volume as required 12 to 15 times with a catheter. Repeat up to b.i.d. until the desired result is achieved. For dermatomycoses and wound cleaning, use 70 to 120µg/mL, and to enhance wound granulation, use 15 to 30µg for a period of 20 to 40 minutes. Repeat up to b.i.d. until the desired result is achieved.

G). Cattle Embryo Transfer Procedure and Ozone: Ozone insures sterility for all procedures used in conjunction with cattle embryo transfer (CET) including artificial insemination, embryo recovery, handling, freezing and transfer. A step-by-step guide for the use of ozone for CET is available and is based on John L. Curtis' book, Cattle Embryo Transfer Procedure, Academic Press, 1991.

H). Ozonated Water (O₃ x H₂O): Ozonated water has obvious multiple beneficial applications in veterinary medicine and surgery.

Recommendations in terms of dosages, concentrations, volumes and flow rates outlined in Part VI are extremely high. We suggest starting with more conservative approach.

A). IV application of Ozone: 0.05miligrams/kg => 50µg/kg (per treatment) Concentration of ozone gas not exceeding 65µg/mL [gamma]

B). Rectal Application of Ozone: 100ml ozone per 50 kilogram (0.1L O₃/50 kg) concentration 30 - 35µg/mL.

C). Vaginal Application of Ozone: 100ml ozone per 50 kilogram (0.1L O₃/50 kg) concentration 30 - 35µg/mL [gamma].

D). Intramammary Application of Ozone: 30, 60 up to 120mL or more, as tolerated concentration of 70µg/mL

E). Intra/Peri-Articular Application of Ozone: Use 10 to 60 mL or more, depending on the joint, at a concentration of 70 to 90µg/mL, and apply intra-articularly and also into the periarticular soft tissues, and set multiple periarticular intracutaneous wheals ("quaddels").

F). Topical Application of Ozone: This may be done with a catheter or in some cases with a bag. For fistula or osteomyelitis treatments, use a concentration of 90µg/mL and apply as large a volume as required 12 to 15 times with a catheter. Repeat up to b.i.d. until the desired result is achieved. For dermatomycoses and wound cleaning, use 70 to 90µg/mL, and to enhance wound granulation, use 15 to 30µg for a period of 20 to 40 minutes. Repeat up to b.i.d. until the desired result is achieved.

G). Cattle Embryo Transfer Procedure and Ozone: Ozone insures sterility for all procedures used in conjunction with cattle embryo transfer (CET) including artificial insemination, embryo recovery, handling, freezing and transfer. A step-by-step guide for the use of ozone for CET is available and is based on John L. Curtis' book, Cattle Embryo Transfer Procedure, Academic Press, 1991.

H). Ozonated Water (O₃ x H₂O) Ozonated water has obvious multiple beneficial applications in veterinary medicine and surgery.

Source of information compiled by Den Rasplicka from Ozone Services

Raising Room Oxygen Levels

To raise the oxygen level in a room you must choose a level to which you wish to raise the concentrations. Raising above 23%, the fire department may be concerned.

The calculation for a 10' x 10' x 8' room, which is 800 cubic feet, to raise the oxygen concentration by 2% from 21% to 23% would be the same as making 2% of the room about 100% oxygen. If the equipment generates 90%-95% oxygen, the amount is about the same.

For an 800 cubic foot room, 2% works out to 16 cubic feet per hour of oxygen needed. So if air infiltration, oxygen consumption and the effect of the HVAC system is ignored, an oxygen generator producing about 23 scfh could raise the room oxygen to 23% within an hour if the oxygen generator is placed outside the room and the oxygen pumped into the room.

However, it is important to note that there will be a number of effects going on to slow the increase in oxygen concentration. The primary factors would be opening a window or door, or the HVAC coming on to warm or cool the room. The air conditioning or heater may move hundreds of CFM, or cubic feet per minute, which is a factor of 60 over cubic feet per hour. Another effect is that even if the room is relatively well sealed and the HVAC doesn't come on, it will become net positive pressure relative to outside the room, due to the introduction of oxygen. This may also slow the rise in concentration, because some of the oxygen will leak out with the regular air.

It may take longer to raise the concentration than anticipated. However, if the unit is running most of the time, or if it is commanded on and off by some sort of wall-mounted oxygen analyzer, then it may turn on if the concentration is below 22%, or turn off if the concentration is above 23%. The monitor may cost almost as much or more than the oxygen concentrator.

Note! Large installations can get very expensive.

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ABOUT THE AUTHOR

In 1991, Chuck retired after 25 years from working in air conditioning and market refrigeration, and moved to Oregon from Northern California. He was among those with a low immune system and seemed to catch everything that came along. At least once a year he would get a cold or flu that lasted for 2 to 3 months. During one of these times of sickness, a friend asked if he wanted to get well, and if he had an open mind. The answer was yes. He proceeded to tell Chuck about ozone and hydrogen peroxide. For years, Chuck had always thought there was a simple cure for disease and that it was probably right in front of his nose. He felt those who were doing research were ignoring the truth because they were blinded from all those dollars received for research.

As Chuck was being educated about ozone, the light glowed brightly in his mind as he thought; this could solve all the world's health problems. He was mainly thinking of food applications in supermarkets and all the lives it could save because of contamination and food pathogens. It became an obsession to learn and obtain as much information as he could get to prove this was not a figment of his imagination, and that his ideas would work. The information began to pile up, but his bubble soon popped after learning this was not only his idea. Others had used ozone in the past for the same purpose. Ozone was used for awhile and seemed to fade away, its medical benefits were known only to a few. After testing his ideas and experiencing the benefits of ozone, he formed Applied Ozone Systems to further his dreams on getting ozone approved for food use and to educate others of this powerful yet simple answer.

Ozone helped his health for awhile until his colon became so lined with excess waste because of his lifestyle and bad eating habits. During the time of his ill health he had been reacting to almost everything he was eating. One of the symptoms he experienced was a rash on the hands that wept pus from blisters. His hands would dry out, crack and bleed. Fatigue was setting in with aching muscles and bones. Naps became a daily routine. Abscesses formed under his teeth that drained toxins into his throat and at times caused one side of his jaw to become swollen. Another symptom was earaches. In addition, it was hard to tie his shoelaces because of extreme stomach bloating. He truly felt he was on death row with not much time left, but he was determined to find out how to make things work, and not only stay alive, but become healthy. Chuck started taking almost every supplement in hopes of improving, but that was just taking too long. He was tired of feeling the way he was and wanted to get well. He was lucky to have a close friend to nurture him during those trying times and will forever be grateful for her efforts.

It took Chuck about 6 months to consider colon cleansing after being told about it. He held back so long because he had never been one who could fast, which he had been told he would need to do. He was already weak in the knees and decided that if he was going to do this he was going to do it his way. He had the ozone equipment, made a colonic board, and experimented trying everything to the extreme. During the first part of colon cleansing it seemed to Chuck that everything but the kitchen sink was coming out of his body. If you can think or name it, it seemed to be gushing out in very large amounts. Chuck probably would not be here today if he had not followed through with colon cleansing. He learned a lot about alternative health methods and the necessity of nutritional supplements during this time.

Trying to get ozone approved for all perishable foods through the USDA and the FDA was an altogether different and stressful experience. His quest was not in vein, because he created an interest. Others followed through and succeeded in their efforts to get approval in food processing. In March of 1997, he returned to Auburn, CA. to be closer to his family.

Chuck has devoted a great amount of time and energy to educate others about ozone, and has always managed to make ends meet. The money spent may never be recovered but if one life is saved because of his efforts, it will be well worth the expense. His future goals are to help others establish colon-cleansing clinics where they live and too eventually get insurance companies to cover its cost. This could save thousands of lives and save the insurance companies' millions of dollars.

TESTIMONIALS

April 8, 1998

I purchased my ozone generator in July 1997 and it has helped me with so many things. I wanted to get more oxygen into my body and the ozone generator was the way I felt would be best for me. I have been using my generator to help my mother who had been diagnosed with cerebral atrophy. My family and I were very upset and we did not know exactly what to do. We had noticed that she was forgetting things lately and we decided to watch her more closely. She also had a cyst on her wrist and after only two ozone treatments this disappeared. Amazing what ozone can do!!

Sincerely,
M. Robinson

December 11, 1999

I am writing this letter to thank you for all your help and support regarding my ozone needs. I think I now own every type and size available and would never want to go one day without any one of them. I feel that these machines are truly the most important health related items I have ever purchased and wish that I could have been able to find them years before I did.

I truly believe that due to my multiple sclerosis, multiple chemical sensitivity and fibromyalgia, I would not have survived the toxic environment I was in at the time I purchased my first ozone machines. The ozone began eliminating the toxic off gassing immediately. Although my health improved almost immediately, it was the improvement that I saw in my dog that impressed me the most. His mental confusion (that he had developed shortly after we moved into the new place) improved within the first week. I also started bathing him in ozonated water, his skin completely cleared up, and no new problems have ever come back. This is amazing since the vet had him on special medicines and shampoo for a year before this with no success.

I soaked my right hand in warm ozonated water to see if it would relieve the stiffness. After two treatments of 15 minutes each, my hand I was able to use the mouse on my computer for the first time for more than 10 minutes without having to stop from pain. The problem has never returned and that was 4 years ago. The list of things that I have used the water for is far too long for this letter, but it ranges from drinking it when I had food poisoning to soaking my fruit and vegetables in it to kill anything on them as well as having them last longer.

After just using the air machines for two months, I began to notice that my chemical sensitivity to things had decreased, my mental state had improved, and my fatigue was less. As amazing as this all is, it was the first time I had an ozonated colonic that I was the most shocked. I was having a very painful day with my fibromyalgia and you talked me into getting a colonic. I did not expect more than some slight relief from the pain and not before a few hours. Twenty minutes after I started the ozonated colonic ALL OF MY PAIN WAS GONE, over my entire body! I was so shocked because I had been doing colon cleansing for years (I thought) and had even had plain water colonics with no success.

These machines have given me a new freedom that I had not had in a long time due to my poor health. My health has improved so much since I began using the many forms of ozone that I want everyone to use it. I can't thank you enough for all of your help.

Sincerely,
D. King

Sept. 26, 1999

I have experienced chronic digestive problems all of my adult life. In the last two years I started feeling worse with symptoms of stomach bloating, cramping, skin rashes, headaches, coated mouth, tooth abscesses, cavities, muscle tightness, fatigue and depression. I have tried many supplements, diets and therapies...each would temporarily help yet the symptoms would return.

I decided to investigate coloma board colonics using hydrogen peroxide and ozone to see if it would help. After just one treatment I felt cleaner, my eyesight improved, bloating was relieved, there was a sense of relief, hope and wellness. In addition, the tightness in my breathing was relieved, the pain in my lower back, kidneys and liver were gone. Upon awaking the next morning, I felt great...I was clear, energetic and hadn't felt better in years.

I immediately called for a second appointment to continue treatment. I experienced a major release of bulk and old matter-simultaneously and spontaneously the vertebrae in my neck and middle back "popped" into place (these are chronic conditions that I see a chiropractor for weekly). The next morning I was mentally clear, my hearing improved, I could move my neck freely, had no aches or pains and I had a sense of hope and well being. In addition the bloating in my gut was reduced to half its size and I was able to wear a pair of pants that I haven't been able to wear for a year.

I called for a third appointment and I'm on my way now...I wonder what awaits me.

Stan Padilla

April 21, 2000

Chuck, I just wanted to answer your question on ozone testimonials regarding Parkinson's. Basil Wainwright had Parkinson's Disease in 1992 and he himself has self treated himself using his own inventions and innovations and cleared himself of all symptoms in 1994, which has never recurred since.

I can bear witness to the fact that Basil presently displays no symptoms or typical characteristics, which are commonly associated to Parkinson's, Alzheimer's and the Like.

Jason E. Chernel
Managing Director & Head of International Affairs
PA International Group of Companies

May 20, 2002

When I first heard about colonics, I thought this has got to be for the out there kind of person. (People who are seriously into whatever is out there that might make their bodies run better). Okay, so I was a little interested about what colonic, (or the other name I learned for colonics, ozone therapy) was all about. I read a booklet about colonics, as well as talking with several people who had been doing colonics for some time. I also read through parts of a book called The Breath of Life. By the time I was done with my little research trek, I was ready, willing and excited to give this whole thing a try.

The main thing that turned me loose on ozone therapy was the many claims about the overall health benefits of colonics! I am a very healthy person already, but it was clear that I could greatly benefit from having a colonic added to my life, especially because I did have this problem with allergies. I have suffered with allergies that affect my eyes. I have had these allergies in my eyes for about 15 years. Colonics are suppose to drastically reduce your problems with allergies. The allergies are simply toxins. A colonic is all about removing the toxins. It did not matter to me that Madonna has been doing this for many years. I was more hooked because of the claims of very improved health

benefits for the quality of your life and that cleansing the colon helps in the absorption of nutrients. Which means all the good food that I eat will have an even better effect on the quality of my life. It also will deal with your bad breath, because you are removing toxins.

I have had four now, and I tell you the truth! The allergies I have battled with are pretty much gone. I no longer have the red stinky eyes because of the make up I wear. As far as how I feel after having a colonic, well, I love the way I feel; light, full of energy and clean. I love the feeling of really cleansing without having to do a cleansing fast.

I know the first time you hear about a colonic you may simply ignore the whole thing. (Too embarrassing or something). Get over that one! Once you do one, if you are like me, you will be hooked for life. I will be having one at a minimum of once a month.

Hope this is helpful to anyone out there who is just wondering if normal everyday people get into this stuff. Absolutely YES! It really is a wonderful thing for your bodies.

Margaret S.

May, 2002

In October 1999, I was diagnosed with Inflammatory Breast Cancer. IBC is a very rare and extremely bad cancer. I am very happy to say today that I am cancer free. I believe the only reason I am here today is because of ozone and God of course. On a regular basis, I insert oxygen and do colonics as often as possible. Dietary supplements have also taken part in my recovery. A combination of all these has been a blessing from above. I Thank God!

Jude P

October 15, 2002

I have struggled with candida / chronic fatigue syndrome for 19 years. I began seriously committing myself to healing about years ago, no longer willing to accept less than ideal health. I have tried many different kinds of treatment with varying degrees of success, and recently began using oxygen based therapies.

Although I was resistant to doing a ozone colonic because I had heard negative comments about its effectiveness (always from people who had never had one), and I didn't like the intrusive nature of the treatment. Nevertheless, I plunged ahead and decided to do it again. It was not as unpleasant as I had imagined, and I can report some impressive healing from its use. Five hours after the first colonic I suddenly began having bowel movements, which lasted for the next 2 hours. I was passing clots of blood and mucus, the signs of a diseased digestive tract.

Additional colonics resulted in passing large softball sized clumps of candida. Symptoms that I have struggled with for 19 years have almost disappeared. I used to not tolerate any cold or raw foods and would feel as if my stomach was ice cold, now I do not have a problem at all. I used to react with allergies to almost any food I ate, now the food allergies are diminishing as my gut heals. I sleep better and have more energy. I still have a way to go but I am committed to using the ozone colonics as I know that I have stumbled on a truly effective weapon against the power of disease. Health and Healing, Jess

2-12-03

Dear Family and friends,

Attached is my live blood cell analysis before and after taking oxygen supplementation.

I feel like a new person, looking forward to every new day to live and not just exist. The August 2002 analysis was taken on a day when I was really feeling sick; low blood sugar, undigested protein, low potassium, high sodium, low oxygen in cells, headache. Was tested for food allergies and Candida in the blood stream tested positive for both. Allergic to 23 different foods. I started on the Hydroxyen shortly after this and began gradually feeling better 40% in just a few months. The second analysis taken after 5 months Hydroxyen and 2 weeks ozone my blood cells are more fully oxygenated and feel more alive and I can feel a high that I have never felt before. I also have changed my diet since November to more raw foods. Less fruit, more vegetable and less carbohydrates.

In my search for more information on oxygen therapy, and liquid food supplementation God led me to Kate D. who introduced me to an educated and experienced mother named Kathy whose daughter, Rebecca had Lyme's disease 4 years ago. The doctors tried to give her stronger doses of antibiotics with no redeeming results. She was bed ridden and in a wheelchair when after just a couple of days on ozone given rectally in a clean colon for 1 minute she was up and walking around. After a total of 6 weeks on ozone for 1 minute a day she is totally free of Lyme's disease.

The friend of Kathy had a machine he purchased for several thousand of dollars. Since then she has found a more reasonable machine just as effective for a fraction of the cost. I purchased one of these machines. I used it for 2 weeks before the attached latest cell analysis and it made me more flooded with oxygen, along with home colonics with oxygenated water and rectal inserting the ozone. The liquid food supplement has benefited me too.

I met a dear old friend of mine, at the Desert Industries while donating some time helping there, Thelma M. 80 years old had a fungal lung infection and the doctors tried to treat her for a whole year but with no success. She found out through a friend about a doctor here in CA nearby who did oxygen therapy. After the third treatment of taking this therapy she was over the lung infection. They took a live blood cell analysis and it confirmed the fungus in the bloodstream. So after serving the Lord, on my way out he sent another witness to me to verify that I was on the right path. This sister in the gospel is well respected in the community. Her husband is a patriarch in our church.

I have been on the ozone for 1 month now and will continue to use oxygen therapy because of it's benefits. I use it to purify my drinking water, fruits, vegetables, I use it to clean out the pores of my skin, even to clean the air in my house.

After 2 days doing the ozone and colonics the pain in between my shoulders went away. Less tense and I have a general feeling of well being.

Love you all, Rebecca

**AIDS – The Double-Faced Syndrome.
Testimonial by Fyabupi Simeon Mbobe of Malawi.**

Tears kept flowing down my cheeks on that doomsday. Hundreds of people gathered at my house, most of them doing nothing, a few mourning and a few making plans, yes, plans for the burial of my departed wife Margaret. Worse still my son was in the hospital, his mouth and entire food canal infested with open sores making it hard to eat anything. My daughter was already dead. She died a slow and painful death nearly 7 months before. I was sickly and getting worse every day. All the processions & income we had made from the day we got married had been distributed to doctors and drug companies in an attempt to save our lives, alas, I was losing the battle left, right & center. "My son, you have to be strong," my mother said while holding me and weeping, "sorry I can't help you,

but lift up your voice to God, He is your only hope left."

The death sentence had been passed. The doctors said I had a few more months to suffer, yes, to be in pain and misery before I would die. 'AIDS', they said 'has no cure and it is estimated that there will be no cure in the next ten years.'

Suddenly I came under heavy attack; there was noise in my head, arguments and confusion. I tried to be calm, and then a voice said to me "How can a good God allow you to be tortured this much?" I shook my head hoping it was just my thoughts; "God doesn't love you and you are going to die any time now!" The voice was clear, persuasive and convincingly hurting. I believed it for the first time. How on earth could a good God whose servant I was allow all this to happen to me? Had he lost his power and control over His own Creation?" As I continued thinking about these things I remembered Job in the Bible. Then a scripture flashed into my mind "Though he slay me yet I will trust Him." I made up my mind to die believing in God rather than doubt Him. I refused to yield to Satan. Somehow I believed that I would be delivered from this death trap, - but how?

About three weeks after Mag's departure I received a fax from a Canadian Christian couple who were friends of mine which told me they believed there was a cure for AIDS. They gave me an address and a phone number for a Mr. Basil Wainwright in Nairobi, Kenya. They also brought me an air ticket to visit this doctor who was the only one hope I had left.

When I arrived in Nairobi on November 12th, 1996, I was already symptomatic, suffering from a host of AIDS related illnesses. I related my story to the doctor Stone (for this was what he was being called) - a kind and very loving gentleman. Just by talking with him, you already felt that you were on your way to good health. He is a man of such apparent scientific understanding, as I had never met in my life. A man whom everyone should love to be associated with in his field and profession. Without going into great details I had immediate blood tests done at Masaba Hospital (which once again confirmed my HIV status). The next day I started my treatments. In less than 4 weeks all the symptoms of my various ailments which had tortured me for over one and a half years disappeared - no more diarrhea, chronic lethargy and tiredness, coughs etc. I was back in good health. My blood results showed PCR undetectable!

I could hardly hold my tears of joy and thanks giving to God for his unchanging love for mankind. Once again I said to myself God has proved Himself that He alone is God and nothing is impossible for Him, especially to those who trust in His name. I was now ready to spread the good news. Alas, I had no idea what kind of resistance I was going to meet from the medical fraternity.

I wrote letters and articles about my experience as an HIV/AIDS victim and how Polyatomic Oxygen Therapy Technologies as developed by Basil Earle Wainwright had set me free from AIDS. I visited various hospitals, talked to doctors and patients and even spoke in AIDS seminars. By the middle of 1997 other former HIV/AIDS patients who had been successfully treated by Dr Stone's technologies joined me in spreading the news. To our great surprise and disappointment, we came under attack from the Medical Board and the Minister of Health. Soon it became a war of words whereby Dr. Stone was being attacked at every level. They even went further in a sustained and unprecedented vicious character assassination smear campaign in the Media to malign this man and his 'miracle' technologies.

"We are not interested in the personality of Dr. Stone" I kept saying during our attempts to draw attention to us, the patients who had been saved. "All we are asking is that the Ministry conducts an open, transparent scientific prove or disprove Study and thoroughly and conscientiously investigate the Claims of Polyatomic Oxygen Therapy."

It was not that simple for the Medical Board to accept this honest challenge. WHY? Well, today, four years later we know that some people in the Medical World have a vested interest in treating but not curing the sick at the expense of people's lives and untold suffering.

The Socio-economic impact

I started my family life in 1993. In just two and a half years, my wife and I became comparatively prosperous in our poultry business in Malawi. We had bought a house, a car and indeed enjoyed

various amenities of a middle class family in Malawian society.

What started like a simple fever in our daughter's body ended up being one of the most devastating blows in our short family history. For the next three months, our one and a half-year daughter's health continued to deteriorate. We spent large sums of money trying to save her life from the vice like grip of death. Meanwhile my wife started experiencing poor health, which meant that the baby she was carrying was in a similar state. I became confused. Most of the time we had to leave the management of our business to our employees and relatives who not only did not have the expertise and experience which we had earned but also helped themselves to our already ailing business. By the time my wife and children had passed away, I was a very sickly man who now owed various companies and individuals vast sums of money. I was destitute. I could hardly afford the prescribed drugs because the drugs and medical attention had already robbed us of our life savings.

As if this was not enough I lost most of my friends. The society I knew and had grown up in distanced themselves from me. I looked for a word of encouragement from someone, anyone I knew, but none came. Even my own Church had failed me. 'The Living Waters' Church probably did me more harm than good during this time. No one (except a very few friends) seemed to really care about me. I was depressed and dejected.

"Oh God, why did you make this virus called HIV? Please forgive the Earth and save us, - revive us anew" I beseeched. This was my daily cry and prayer.

As I am writing this testimonial today it pains me to realize that all the suffering, economic and social depression I have gone through in my Life was caused by my fellow man who genetically engineered the HIV virus in laboratories in the far away United States of America. I feel those Americans involved in the production of this satanic virus owe me the lives of my beloved ones and that they are responsible for my economic losses & chaos in my life. For this I beg my God to find the Christian 'forgiveness' within us desperate poor affected and infected Black people in Africa since we must forgive to balance an otherwise unreasonable anger and hatred forever fermenting and brewing deep inside our souls.

AIDS is real and millions of people are dying, the vast majority of them us poor Africans who had nothing to do with the Creation of this Blind Killer. It is for this reason that I stand behind everyone fighting against the White economic and social re-colonization of Africa which is propelled by the insatiable hunger, greed and quest for Africa's riches. Humanitarians of the likes of Basil Wainwright are indispensable to the very existence of hundreds of millions of affected and infected HIV/AIDS sufferers, irrespective of their race or creed.

Having said this I hold no bitter feelings or grudges against any race or creed. I have found 'my' peace with my Maker a long time ago. I would even sit down at the same table with the men who created this vile virus, shake their hands and hug them; for in showing mutual love and compassion is our eventual redemption. However these people must remember "You confess your sins to God" or absolution will be denied. How those involved in the creation of lethal retroviruses can hold any 'faith and God' truly in their hearts I do not know - and probably never will.

For those interested in my blood results, they are free to view them as well as research my medical case history in greater detail. They can reach me through Polyatomic Apheresis Research Limited in Nairobi, Kenya.

God Bless,
Fyabupi Simeon Mbobe

THE BREATH OF LIFE

Some lifestyles put us at a higher risk and our body gets OLD before its time. Contamination of the air, water, and the food we eat throws the body out-of-balance. This weakens the immune system and health problems occur over time. When the health alarm sounds and it's ignored, serious health problems may soon follow. **DEATH** is usually the final consequence to our actions.

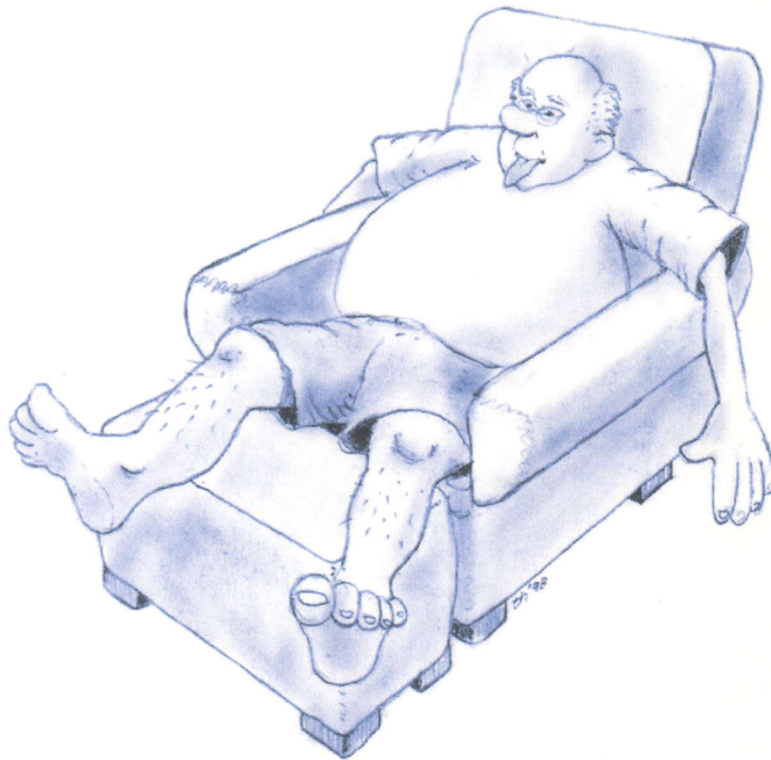
Your knowledge of the daily risk factors and how to avoid them
may someday save your life!

This book is an introduction to whole body detoxification utilizing OZONE to its' fullest potential. The methods described help rid the body of related disorders of the colon that lead to disease and old age. For the body to heal itself naturally, the first step toward better health is cleaning the whole digestive tract. Colon Cleansing allows for better absorption of nutrients into the blood. This is essential in beginning the healing process and achieving maximum immunity. Nutritional supplements are essential for maintaining balance and vibrant health.

Are You Feeling Old Before Your Time?

Health Alarm Signs:

- Digestive Problems
- Muscular Pains
- Constipation
- Candidiasis
- Depression
- Bad Breath
- Back Pain
- Parasites
- Diarrhea
- Bloating
- Irritable
- Fatigue
- Nausea
- Allergies
- Joint Pain
- Headaches
- Memory Loss
- Stomach Pain
- Skin Problems
- Coated Tongue
- Loss of Appetite
- Weight Problems
- Menstrual Problems
- Obnoxious Body Odor



"The Toxic Colon Blues"