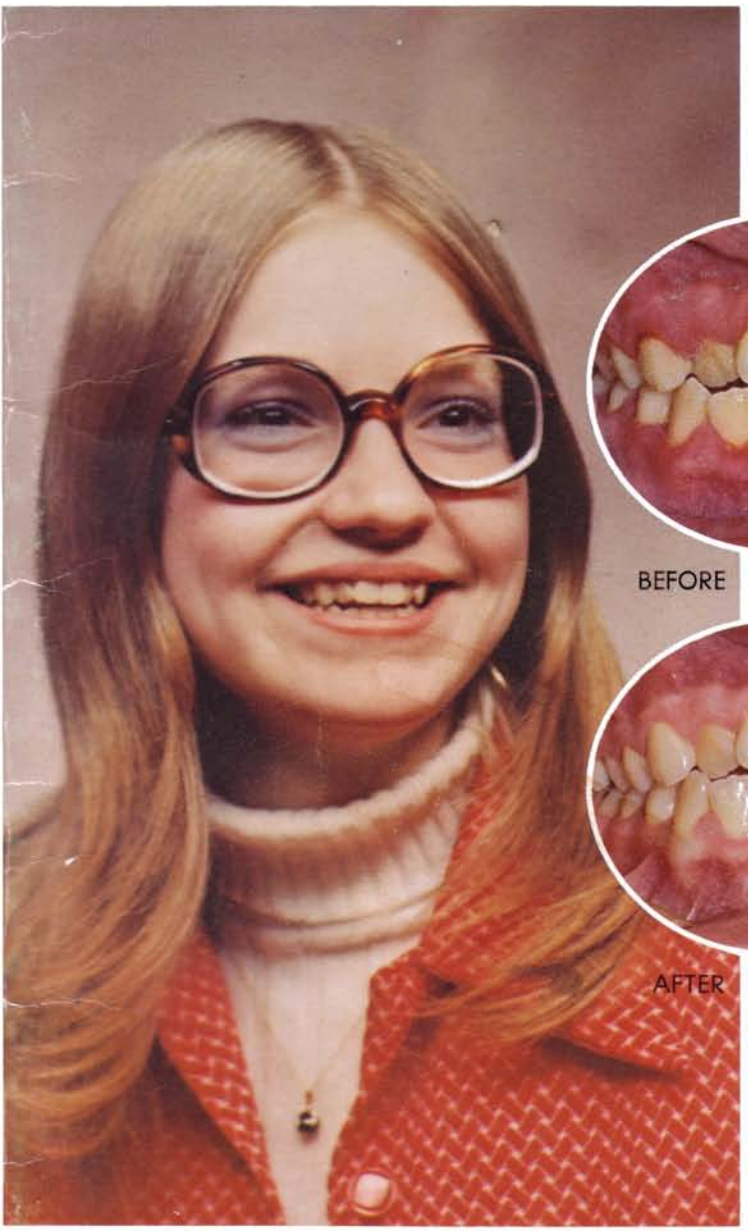
ACQUIRING AND MAINTAINING ORAL HEALTH



Through
THE BLOTTING PROCEDURE
and total mouth hygiene

Joseph E. Phillips, D.D.S., M.S.

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THROUGH

THE BLOTTING PROCEDURE AND TOTAL MOUTH HYGIENE

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FOREWORD

Never in the history of dentistry has there been so much interest shown pertaining to the health of the mouth. Despite numerous hygiene methods for the maintenance of the mouth and teeth, the prevalence of periodontal (gum) disease increases. The method that will be explained in this manual is simultaneously new, improved, and time-tested. It has been effectively used, yet gone unnoticed by most people for over thirty years. Those who have been fortunate enough to employ this unique mouth care program have enjoyed excellent oral health. They have had no dental caries (decayed teeth) and have had no gingival (gum) disease.

This manual is intended as an instructional text to be used by both the dentist and his patient. Therefore, it is written in everyday terms, employing analogies used in general conversation. The procedure explained in this manual is known as the **blotting technique**, and it is used in conjunction with the concept of **total mouth hygiene.** To become proficient at this technique, the individual should work with the dentist. The dentist must first learn this method well and employ it for his own mouth health before he can teach it to his patients. Since teaching is a form of giving, one must own something before it can be given away. Anyone who has mastered this mouth care method and has become convinced of its value, can then become a teacher. The job of teaching others is much simplified by this manual.

ACKNOWLEDGMENTS

I wish to thank my many friends for helping me assemble the material for this manual. Those deserving special mention are: Dr. Dirk W. Gootjes, Waukesha, Wisconsin, who was the first periodontist to encourage me in this venture and who has helped refine this material for publication; Dr. John H. Duffy, a Madison, Wisconsin periodontist, for his contributions and help in searching out vital statistics and for his willingness to loan me his photos showing failure following periodontal surgery where the blotting technique was not used; Dr. Raymond T. Stewart, Department of Periodontology, Loma Linda University, who through his ability in motivating people has helped me enlarge the scope of teaching this mouth care method from a one to one approach in the office, to mass education classes with hundreds of participants; Dr. Frank M. Wentz, Assistant Dean, University of Nebraska, Dr. Harbans L. Bhatia, Dr. Henry H. Takei, Department of Periodontology, University of California Los Angeles, who have given me needed encouragement to teach oral health maintenance, and Dr. Gustav W. Rapp, Professor of Biochemistry Loyola University School of Dentistry, who helped me gain a valuable biochemical background.

I also wish to express my gratitude to the dental graduate school faculty of Marquette University; Dr. Delbert P. Nachazel, who so graciously shared his unlimited knowledge of periodontal therapy and occlusion, Dr. Donald E. Van Scotter and Dr. John S. Pfeifer for instructing me in surgical skills and the background of properly evaluating and diagnosing periodontal disease.

Last, but not least, I wish to thank my wife and six children, who in our 24 years of maintaining a household, have never had dental cavities, calculus or bleeding gums, (even though their ancestors were plagued with all three problems) thus proving the effectiveness of the Blotting Technique and total mouth hygiene.

TABLE OF CONTENTS

Figure 1. Healthy gums, product of a clean mouth.

Figure 2. "Gingivitis" bleeding gums.

Figure 3. (Periodontitis) pyorrhea non-bleeding gum disease.

Figure 4. Extent of periodontal disease shown by periodontal probes.

PREVALENCE OF GUM DISEASE

Recent surveys indicate that nine out of ten Americans above the age of thirteen have periodontal disease. This includes afflictions to the gum and the bone that supports the teeth. Such diseases are generally known as gingivitis, bleeding gums, trench mouth, Vincent's Disease, pyorrhea, or periodontitis. The illustrations and photographs on page 18 depict different stages of involvement to gums which are diseased.

By viewing the pictures and diagrams, the reader can follow the steps from a young healthy mouth and arrive at either Fig. 69 or 71, depending upon how he or she takes care of the mouth. Under usual care, ninety-five percent of the population will eventually lose most or all of their teeth due to periodontal disease. The kind of mouth health a person enjoys during his lifetime is directly dependent upon his knowledge of oral cleanliness and the care he exercises in putting what he learns into practice.

Surveys conducted in the Armed Forces show an alarming prevalence of gingival disease. A study of twelve-year-old school children revealed that fifty percent of the students had evidence of gum disease. A further check of children of primary grades, one through six, produced the same results when they were asked whether they experienced gingival bleeding during tooth-brushing at one time or another.

Nearly everyone has at some time had the problem of bleeding gums. Many lay people, and even dental and medical personnel, speak of this as a normal phenomenon, as indeed it is. The term "normal," however, is misleading. Normal in this sense would mean: occurring in most people. It does not in any way signify health, as many people interpret the term. If someone had a similar periodic bleeding condition occurring from the eye, ear, or any other organ, he would show considerable alarm. Rarely is a person alarmed about slight bleeding of the gums.

SYMPTOMS OF GUM DISEASE

It is commonly believed that X-ray films, expensive instruments, and highly technical personnel are needed to detect periodontal disease. In reality, nearly everyone can diagnose or at least suspect that he has a problem. The first sign that the condition is beginning is evidenced by bleeding of the gums during toothbrushing. This may or may not be accompanied by pain. Whenever one finds that he has bleeding of the gums, he can be quite certain that the disease is beginning. The bleeding may also occur without the typical red visible signs and in this case go unnoticed. The bleeding may be an invisible serum (a form of weeping tissue fluid). This can be suspected if there is a formation of calculus (the white or yellowish-brown crusted material that forms around the necks of the teeth). If either one of these signs is present, gum disease is more than likely to exist. These early signs may disappear, making the mouth appear to have regained its health. However, it is usually only false security, for the disease has gone deeper into the underlying tissue; and the fibrous surface tissue now appears healthy. An intermediate visible sign that may or may not occur is the recession (gradual breakdown) of the gum tissue. It becomes apparent as the root portion of the tooth becomes visible. Five to twenty-five years may elapse while the mouth is in this stage.

New signs now appear that signify that the disease is quite advanced. These signs become visible in the form of the teeth suddenly drifting apart and spaces being created between them.

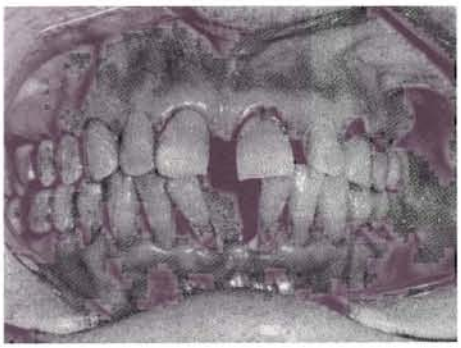


Figure 5. Spaces between teeth, result of periodontal disease.

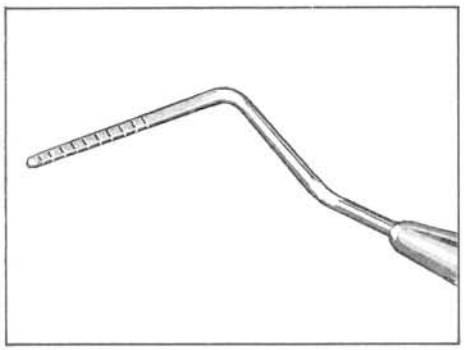


Figure 6. Periodontal probe.

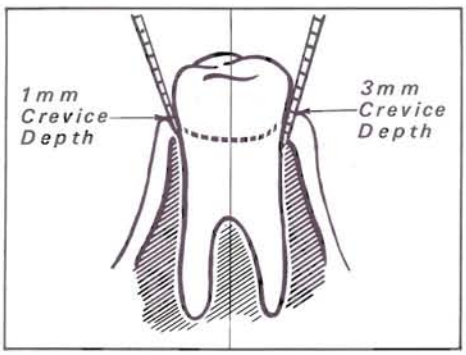


Figure 7. Diagram comparing health and gingivitis.

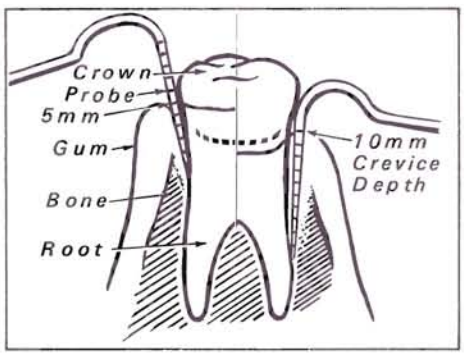


Figure 8. Diagram comparing early and advanced periodontitis.

This may happen quite gradually and at the onset be unnoticeable. The teeth may even feel very firm to the touch. Another sign that may indicate presence of disease is the loosening of some or all of the teeth. The last and final sign is the formation of abscesses in the gum around the teeth where no visible decay or breakdown of tooth structure is evident.

It is usually possible to cure the mouth in all but the last stage of the disease. However, the sooner the treatment is begun, the greater the amount of success. The more advanced the condition becomes, the greater is the possibility of surgical intervention.

Remember that everyone can keep his teeth a lifetime. The author has only seen one mouth where the teeth could not be saved. So no matter how bad one may think his case to be, it may surprise him what a periodontist (a dentist specializing in gum disease treatment) can do to make and help one keep the mouth healthy.

It must be made clear that no dentist can save your teeth without your help and that dental diseases can better be avoided than cured.

DIAGNOSIS

In order to make any diagnosis, it is important to be familiar with the symptoms. For the sake of review, the symptoms are repeated:

1. Bleeding of the gums when tooth-brushing or eating.
2. Excessive formation of calculus (also called tartar).
3. Drifting or shifting of teeth, causing spaces to form.
4. Loosening of teeth.
5. Swelling or abscess formation.

If any of these signs appear, it is important that one consult his dentist so that the disease may be diagnosed and treated accordingly before it produces loss of the supporting bone (bone that holds the tooth in place). It is important that a proper evaluation is made. The dentist uses an instrument to measure the depth of the crevice (the space between the gum and the tooth), thus assessing the degree of disease involvement. This instrument is known as a periodontal probe and is marked off into one millimeter increments. It is inserted into the gingival crevice. If the disease is diagnosed in the early stages, before there is a significant depth of crevice (also called gingival or periodontal pockets), proper mouth hygiene will usually be sufficient to heal the mouth. If the depth of the periodontal pocket is less than four millimeters, proper mouth hygiene, followed by scaling, can usually reverse the disease process and reduce the depth to a healthy limit. If this type of mouth hygiene is continued, health can be maintained. The ideal crevice depth would be one millimeter or less. If the depth of the crevice is four or more millimeters, gingival surgery may be necessary. If radiographs are not available, it is advisable to have them taken so that each tooth root and the bone support can be visualized. The radiographs are also important in evaluating the shape of the root and for diagnosing the presence of cysts and abscesses. In this case, the dentist may refer the patient to a periodontist.

Figure 9. Edentulous mouth unable to wear lower denture.

Figure 10. Periodontally destroyed mouth with disease present, before blotting.

Figure 11. Figure 10 after 2 weeks of blotting.

Figure 12. Figure 10 after 6 weeks of blotting, plus scaling.

If periodontal disease is found, it is important that the patient be given the proper information so that he may make the best decision. The mouth should not be left untreated until all of the teeth are lost by becoming loose; too much of the supporting bone is destroyed in the meantime. It is important that this bone be conserved as it plays a vital part in keeping one's teeth. Too often, individuals will let the mouth run down and become periodontally damaged because they plan to have artificial dentures. This is a mistake because then it may be very difficult to fit the mouth with dentures because of lack of enough bone to keep the dentures in place. Therefore, if the individual has made the decision to have his teeth removed, he should do it immediately rather than wait until the final stage of the disease. This statement is not made to encourage people to lose their teeth, but rather to stress the importance of conserving the bone. Since no one can foretell what difficulty he may have in wearing dentures, a hasty decision to lose one's teeth should not be made. There are many instances where people who were sure that their teeth were beyond saving, have been pleasantly surprised to find that they could keep their teeth many years, in many instances a lifetime. This can only be accomplished if the disease is eliminated and the individual learns to maintain oral health.

ETIOLOGY (CAUSES OF GUM DISEASE)

Since gum disease is so common, nearly everyone is sure to experience its symptoms. Many reasons are given for its cause. One of the most common is that calculus (the hard stone-like deposits that form on the teeth) causes periodontal disease. This reasoning comes from the fact that whenever gum disease is present, the crusted deposits on the teeth are nearly always found. Though this deposit has received the blame for causing pyorrhea, today we know that it is the result of the disease being there and not the cause. The following example will demonstrate how this erroneous conclusion can be made. If, while driving along the highway in spring after the snow has melted away, one observed dead animals lying in the fields or along the road with crows picking on each carcass, one could draw the conclusion that crows kill animals. It can quickly be shown that such reasoning is wrong. The same erroneous reasoning might lead to the conclusion that the calcium deposits on the teeth cause gum disease. The weight of evidence supports the concept that diseased gums with the presence of large amounts of calculus can be healed without removing the deposit. We know that these calcium deposits are there as a result of gum disease and are not the cause of it. The sharp spines of calculus may modify the disease and accelerate its progress, but calculus is not its initial cause. Mouth bacteria (germs) are also erroneously blamed for producing gum disease. This mistaken belief could move a person to try to destroy mouth bacteria (germs), which would be the wrong thing to do since only a small percentage of the bacteria present in the mouth are disease-producing. The greatest number are health-producing. Man has done untold damage by tampering with ecology, and the mouth is only a small example. The indiscriminate use of mouthwashes has been accompanied by an increase of gum disease.

The initial and real cause of gum disease is the white material known as materia alba or plaque, found along the necks of the

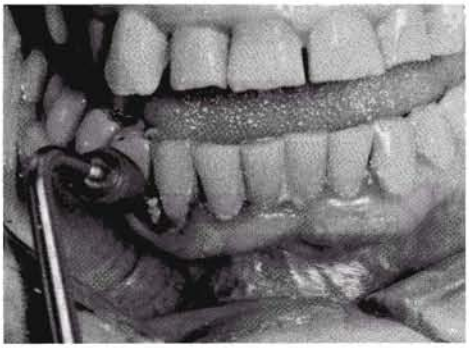


Figure 13. Indicator showing plaque in crevice of unclean mouth.

Figure 14. Teeth appear clean as checked by staining, however, visible gingivitis indicates poor oral hygiene.

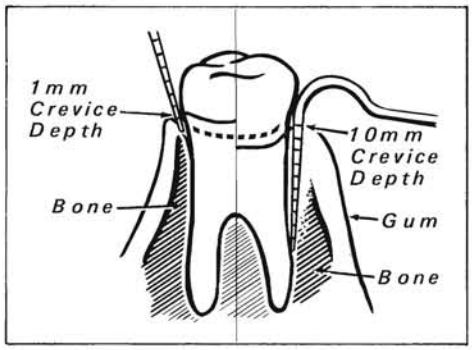


Figure 15. Diagram comparing healthy gums and periodontally diseased gums.

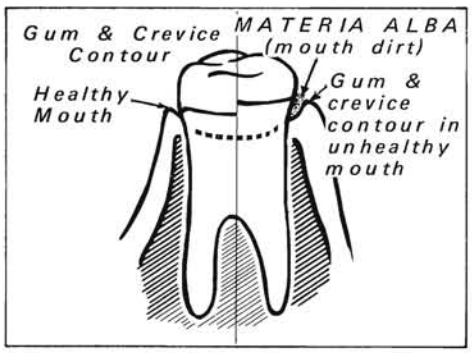


Figure 16. Diagram comparing clean crevice to mouth dirt filled crevice.

teeth and in the gingival crevice. The presence of the material can easily be demonstrated by running a rubber-tipped disclosing instrument along this area. One will easily see the white material, most aptly described as "mouth dirt," coming out of the crevice in a snowplow fashion. This rubber-tipped instrument should not be used to clean the crevice but only for detection purposes, for it would be injurious to the mouth. Another method used to reveal the dirt is the disclosing tablet, which stains the white material and makes it visible. However, one of the shortcomings of the staining technique is that it does not demonstrate the dirt under the free margin of the gum (gingival crevice). This hidden material is the primary cause of the inflammation; without it, gum disease is rarely present. When this material is removed and kept out of the area, healing begins immediately in virtually every case.

It is widely believed that this plaque is food debris left in the mouth. This assumption is false. The eating of most foods does not dirty the mouth as believed; eating does much to clean it. Research done at a state prison brought this to light. In this research, inmates were divided into groups according to how many times a day they brushed their teeth. Each of these groups was then divided into two sections. Section A was allowed to eat three full nutritious meals daily. Section B was given the equivalent nutrition by injection into the bloodstream. At the onset, every individual's mouth was cleaned by a dentist. The calculus was scraped off and the teeth thoroughly polished. The object was to determine if the mouth would get dirty when no food was consumed. Everyone was examined periodically. The surprising discovery from the experiment was that the section that did not eat had by far the dirtiest mouths. As the research went on into the third and fourth weeks, nearly everyone in Section B (those that did not eat their food) developed periodontal disease. In Section A, less evidence of change was seen between the men who brushed their teeth and those who did not. It was evident that eating solid food has as great an influence on mouth cleanliness as ordinary tooth-brushing.

Over the years, many things have been blamed for producing gum disease. Today we know that plaque (mouth dirt) is probably the most common cause while many of the previously blamed "causes" only aggravate the condition. One of the most important aggravating factors is occlusal disharmony (the fitting or misfitting of the lower teeth in relation to the upper). This has nothing to do with malocclusion (crooked teeth). It is very possible that teeth with malocclusion can still have good occlusal harmony. Other influencing factors are missing teeth, systemic diseases, and iatrogenic factors (overhanging fillings, crowns, partial dentures and poorly constructed bridges). While these are often blamed for causing periodontal disease, they only magnify the condition.

WHY PLAQUE AND HOW TO PREVENT IT

The plaque or mouth dirt found in the crevice between the tooth and the gum is not only formed there but is swept into this groove by the rubbing action of the cheek or by tooth-brushing. In order to understand how the material is formed, one must consider the microanatomy of the mouth tissue (the life cycle of the individual skin cell) and the biochemical changes which the cells undergo.

The following diagram will help to explain the formation and the destructive action of materia alba, the material responsible for the initiation of periodontal disease.

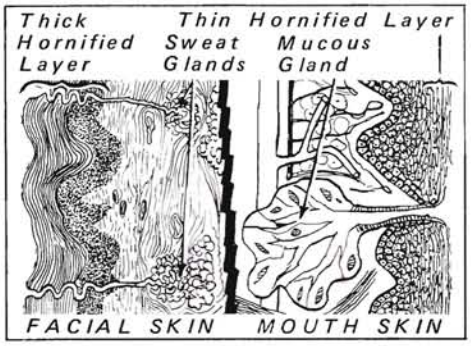


Figure 17. Microscopic diagram comparing facial skin to mouth skin.

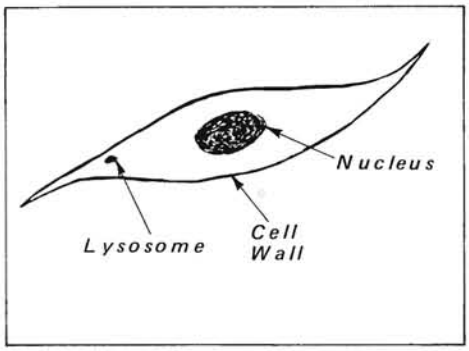


Figure 18. Epithelial cell.

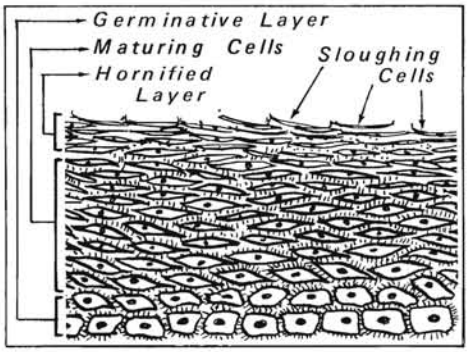


Figure 19. Diagram depicting skin growth and cell sloughing.

Figure 20. Gingivitis.

There is a similarity of skin on the inside of the cheek and the skin on the outside of the cheek; both have the same scientific name, stratified squamous epithelium. Stratified means that the cells grow in layers. The same term is used by geologists to describe the strata or layers of rock. Squamous gives the description of the individual cell. Squama means scale-like. The tissue is formed by the growth of these scale-like cells in layers. Epithelium is a general name for all skin of the body.

After one understands the microanatomy of the skin, he must still delve into the complexity of the individual cell; it is there that the secret of gum disease is found.
In studying the diagram of the cell, one can see a little capsule (lysosome) that contains special enzymes. These lysosomes are found in every living cell. When a cell dies, the capsule wall breaks down, releasing the hydrolyzing enzymes, thus bringing about the self-digestion of the tissue.

There are a number of instances in which man takes advantage of this phenomenon. For example, the action of these enzymes is utilized when quarters of meat are hung up in a cooler to age and tenderize; such a procedure is only to allow time for the enzymes to be released from the tissue and break down the fibers. A similar thing happens when a piece of round steak is pounded with a wooden mallet. The individual cells are smashed, releasing enzymes which tenderize the meat. It is, therefore, important to eliminate the dead skin on the surface before the cells break down. The enzymes found in cells of the skin hydrolyze (dissolve) the skin itself. The old saying, "One bad apple will spoil a barrelful," gives us an insight into what can happen. Decaying skin has this action on healthy gum tissue.

In caring for the surface skin of the body, one removes the dead cells in many ways. The rubbing action of clothing or the use of a washcloth and a towel help remove the dead cells. There is a surprising amount of skin loss in this way. A cell which starts growing today would normally be lost within approximately a month. The skin cells grow from the germinative (quick or growth) layer and are pushed upward toward the surface. As they approach the surface, they slowly die. The dead cells should be removed for the sake of health. The general health of the body and age determine how fast the skin is sloughed off. As an individual ages, the skin cycle increases. This may explain why skin diseases and even malignancies such as skin cancer are more prevalent in the aged. A simple home experiment showing the effect of dead skin upon the surface tissue can be conducted by placing a wide band of adhesive tape around a finger and leaving it there for three to four weeks. The tape will keep the dead skin from shedding. When the tape is removed, the surface skin will have turned into a white paste-like material, similar to that found in the mouth. The odds are that the skin underneath will be so damaged that bleeding may be experienced. A simulated condition of gum disease will be apparent along the area where the fingernail is embedded. If, after removing the tape, one will carefully clean the dead skin away, the area will heal without any other treatment.

It has been stated previously that the mouth dirt is responsible for gum disease. To understand how it damages the gum, one must become familiar with the hydrolyzing action of enzymes. A good everyday analogy would be to study how meat tenderizer softens or tenderizes meat. After all, people do speak of tender or soft bleeding gums.

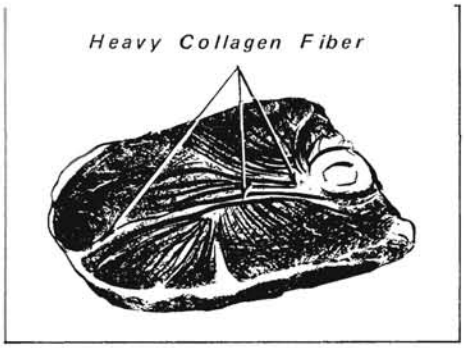


Figure 21. Diagram of tough steak with collagen fiber.

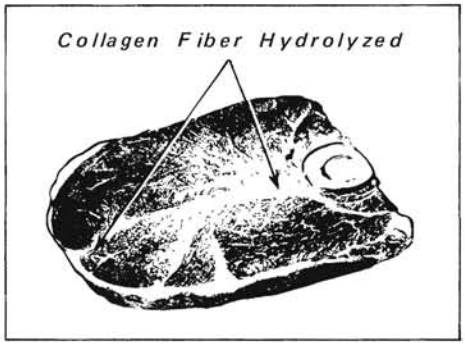


Figure 22. Diagram depicting fibers dissolved by hydrolyzing (meat tenderizer).

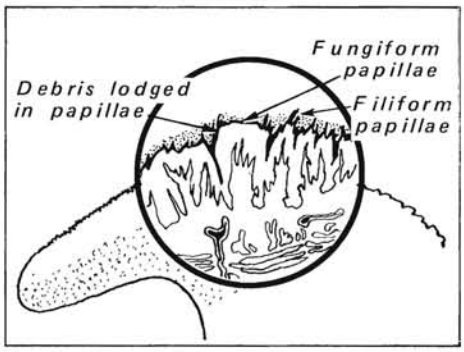


Figure 23. Diagram of tongue surface.

"Those who neglect the cleanliness of their mouth are at least amateurs of life and they will perceive by the reading of this treatise how the teeth serve for the re-establishment of health and how important it is to take special care."

Pierre Fauchard 1728
2nd Edition, 1746, p. 183

Figure 24. Quotation from Dr. Pierre Fauchard's book.

A steak is tough because of the abundance of strong collagen fibers that are present in the tissue. This is further evidenced when heat is applied and the meat curls. If, before cooking, meat tenderizer is applied, it hydrolyzes or dissolves these fibers and the meat becomes tender. Another way that tenderizing can be accomplished is by aging. This is done by allowing the meat to hang in a cool place. During this time, the lysosomes break and release the hydrolyzing enzymes. To prove that this enzyme action exists, fresh animal tissue has been sealed in a sterile container (no bacteria present). When this was placed in an incubator, the meat was broken down without any bacterial action. This gives one an insight as to the action of the enzymes in the lysosomes.

It should be understood that chemical meat tenderizers are specific to red meat and are not responsible for gingival disease. However, the enzymes from lysosomes in the dead skin cell are very detrimental to gum tissue.

Special effort is needed to remove the dead skin from the mouth. While the cleansing effect of detergent foods helps to accomplish this, it is not sufficient. The foods of the modern diet are far less detergent than those eaten in the past. Because the by-products of the decayed skin in the mouth are causative factors in the production of gum disease, every effort should be made to remove that decayed skin. This can be done by taking the periodontal health brush and lightly rubbing the surface to gather the dead cells. This should be done on the surfaces of the inside and outside gums, the hard palate (roof of the mouth), floor of the mouth and the cheeks. The tongue must also be cleaned thoroughly. Because the anatomy of the tongue is like the surface of a rug, there is an enormous amount of skin that decays and is retained with food debris.
At the back part of the tongue, an island of discolored decaying material is visible. This should be removed, if not solely for health reasons, to improve the quality of one's breath. How can one's breath be pleasant when it passes over this pile of decaying tissue and debris?

It has long been known that uncleanliness is a great influencing factor in the production of disease. Medicine has long ago discovered that body hygiene is necessary to maintain general health; dentistry is just waking up to this fact. For years, teachers of dental health have insisted that everyone should keep his mouth clean by brushing his teeth after each meal. This could be compared to keeping one's body clean by washing only the hands and face. After all, the teeth comprise less than ten percent of the total mouth surface; therefore, if one would brush his teeth as clean as possible, the total mouth would remain ninety percent dirty. It could be said that this is hardly worth the effort. The only way that the mouth can be kept clean is by total mouth hygiene. This is accomplished by cleaning the teeth, gingival crevices, gums, inside cheek surfaces, hard and soft palate (roof of the mouth), tongue, and throat.

If all of these areas are cleaned adequately twice a day, mouth diseases such as gingivitis (gum disease), periodontitis (pyorrhea), tooth decay, and halitosis (bad breath) disappear in practically every instance. The control of the mouth diseases can only be accomplished by using the blotting technique (the way of cleaning the gingival crevices) in conjunction with total mouth hygiene. This technique will be discussed in full, later in this manual.

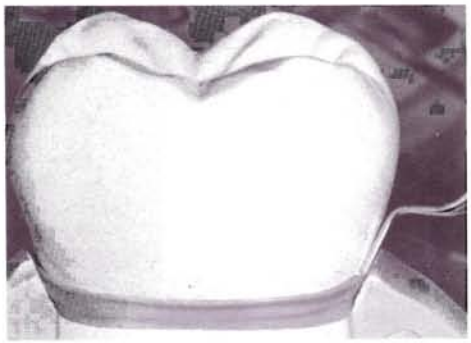


Figure 25. Tight rubber band on model depicting healthy gingiva.

Figure 26. Photo of healthy mouth.

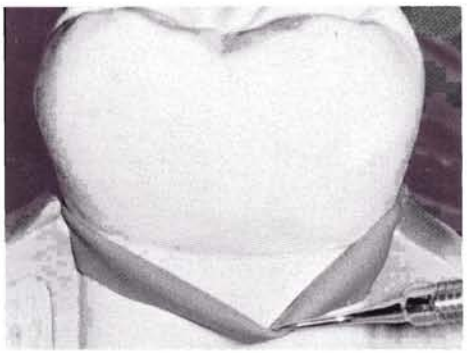


Figure 27. Loose rubber band on model depicting diseased gingiva.

Figure 28. Loose gingiva seen in gingivitis.

WHY DOES MOUTH DIRT DAMAGE THE GUM?

To understand the mechanics of gum disease, one should study the anatomy of the bone-tooth-gum unit. The tooth is attached to the bony skeleton and is itself even harder than the bone. It protrudes into the mouth by breaking the soft protective tissue and is continually exposed to infection. Nature has given this area a defense mechanism known as the elastic or dynamic cuff. This cuff is so self-adapting that it can seal the outside environment around the tooth so that bacteria cannot enter and destroy the organic attachment (growth of gum to tooth). Products in the plaque do, however, attack this defense mechanism and nullify the protection. To give a clearer picture, the diagram shows the bands of fiber surrounding the tooth to produce this cuff. Gingival tissue is very highly laced with these tough collagen and elastic-like fibers. The enzymes found in the mouth dirt dissolve these fibers in the gums. This reduces the elastic quality of the cuff around the neck of the tooth and makes it flaccid. Since the gum around the neck of the tooth is not attached to the tooth at that point but is turned to form a cuff, there is adequate room for storage of the material. The cuff is highly elastic and in health should be so tight that even bacteria cannot get beneath it.

If the enzymes are allowed to stay in the cuff area, the elasticity of the cuff gradually diminishes; and the bacteria slip past the gingival crevice. There they find tissue and blood for food and an incubator of ideal temperature and undisturbed environment in which to grow. Once the first line of defense is passed, the bacteria by their production of endotoxins and exotoxins (poison produced by the bacteria, that dissolve the attachment fibers) destroy the fibers from gum to tooth. The by-product of bacterial growth in tissue is disease. Consequently, it would be very convenient to blame bacteria for gum disease. The bacteria are there only because the "door is open" and food is available. One could create an analogous situation by leaving food on the table and the door in the house open. Then, if a neighbor's dog came in and destroyed the food, the dog would receive the blame. The true blame should rest upon the individual who left the door open.

This simple comparison is used because the bacteria in the mouth can be considered the "watchdog" of health. The bulk of the bacteria in the mouth are health-producing. When they are destroyed, fungus and molds increase, causing a condition far worse than previously existed. This can be recognized in the oral cavity of patients who are taking antibiotics in liquid form rather than in capsules or coated pills. The ecology of the mouth is changed and environmental diseases are produced. The antibiotics destroy the oral bacteria, leaving the molds and fungus-type growths to multiply and produce disease. The only way that health can be restored in such a mouth is to bring the bacteria back into normal balance. Thus, the bacteria in the mouth are the "watchdogs" of the health of the oral cavity. Only a small percentage of the bacteria found in the mouth are disease-forming. Most of the bacteria are health-forming. Why then would anyone want to use anything in the mouth that would tend to destroy the normal bacteria found in the area?

Figure 29. Gums that appear healthy.

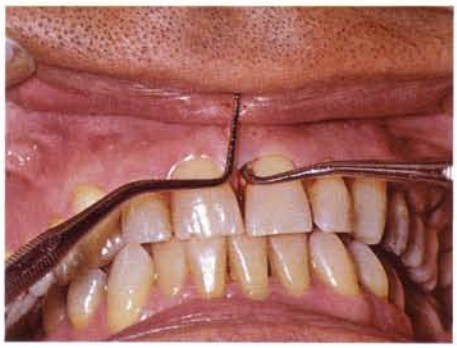


Figure 30. Evidence of disease shown by periodontal probe.

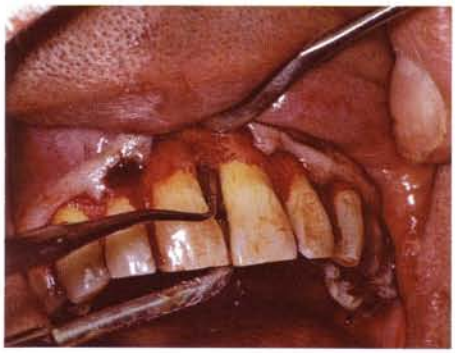


Figure 31. Gum surgically opened to show disease process.

Figure 32. Figure 29 after treatment.

It is interesting to note how the forestry department's idea of sterilizing the soil before seeding trees backfired. They had the belief that if trees were seeded in sterile soil, the seedlings would go free of disease; but, instead, when disease-producing bacteria found their way into the seedbeds, there were no good bacteria to counterbalance their growth.

The surest and safest way to have health is to encourage beneficial bacteria to keep the disease-forming bacteria in control. A clean mouth encourages the growth of the health-producing bacteria and, at the same time, limits their activity so that the bacteria cannot go under the crevice where they are not wanted. When experiments were done to count the number of bacteria in the mouth, it was found that the cleaner the mouth, the greater the number of beneficial bacteria present. In many cases, the clean mouth had nearly ten times more bacteria than the dirty one. As one biologist explained, such a condition existed because a greater number of different strains could live in the clean environment, while fewer could exist when the mouth was unclean.

VARIOUS TREATMENTS FOR GUM DISEASES

Any method of treatment which fails to eliminate the initial cause of gum disease will be unsuccessful. Periodic scaling of the calculus from the teeth is one of the methods used. This is really a temporary or symptomatic treatment, in that the swelling and bleeding are diminished because of the removal of the surface irritant. The formation of the calculus continues. In a short time, the calculus is formed again as the diseased condition progresses. Scaling the calculus from the teeth is important and should be done, but it will not cure the diseased gum condition. The author believes that the calculus should not be scaled off until the mouth is first made healthy and the individual is made aware of his ability to bring about health. In this procedure there is also less chance of forcing the bacteria into the bloodstream. Quite apart from the health problem, the operator can do a better job of scaling in a mouth when the foul odor has been eliminated and the visibility is not obstructed by bleeding gums.

Another common method of treatment is the injection of drugs into the gingival crevice or the application of a balm or ointment to the surfaces of the gum. These treatments temporarily reduce the swelling, making the disease condition appear to improve. This treatment, however, is not used by most modern-day practitioners.

Rinsing the mouth with the oxygenating mouth rinses (hydrogen peroxide or sodium perborate compounds) is often recommended. These substances relieve the symptoms by replenishing the oxygen in the gum tissue. Such rinses may temporarily change the purple gums to pink by supplying oxygen to the local tissue. Instead of this treatment, it would be more practical to treat the gums so as to produce lasting health by restoring the circulation and oxygenating the gum with blood. In healthy gum tissue, the circulation of blood is so good that there is no stagnation of blood to form the blue color of the tissues. In reality, all the mouth rinse treatment does is to improve the surface appearance of the gum. The progress of the disease remains unhampered. In many instances, the signs and symptoms are covered and the disease can go on unnoticed. This treatment gives one false security of having health.

Figure 33. Necrotizing gingivitis. (trench mouth)

Figure 34. Figure 33 following 3 weeks of blotting.

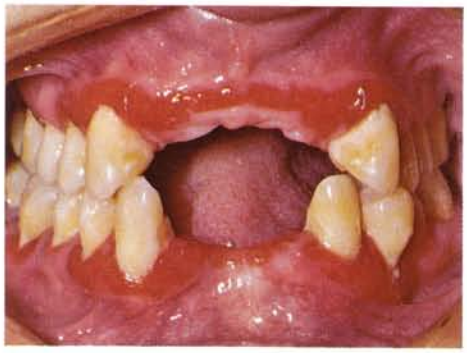


Figure 35. Evidence of blood dyscrasias (disease) seen on gums.

Figure 36. Periodontal abscess, sometimes produced by irrigating devices.

Application of escharotic or caustic chemicals (chromic acid and silver nitrate) to the gums has often been used in the treatment of acute necrotizing ulcerative gingivitis (commonly known as trench mouth, Vincent's Disease, or ANUG). These treatments have been responsible for the loss of many teeth. It could be said that some people have saved their teeth in spite of the wrong treatments.

Intramuscular injections or oral ingestion of antibiotics (penicillin, achromycin, etc.) are sometimes prescribed by the physician to achieve temporary relief from mouth disease. This is especially common in the treatment of ANUG, trench mouth). The antibiotics merely relieve the acute, painful symptoms and a slow-acting, chronic disease ensues which gives little or no discomfort until it becomes very advanced and the teeth begin to loosen; then the person is told it is too late to save his teeth because he has pyorrhea.

Another treatment commonly recommended is the healing of infected gum tissue by massage. This is done by manipulating the affected area so that the infectious materials can be made to circulate through the bloodstream and away from the site of the infection. Massaging an abscess in any other part of the body would not be considered a good idea because this would force the bacteria to circulate in the bloodstream. Under normal conditions, the body would destroy these bacteria in a matter of minutes. However, if the resistance (ability to fight disease) were low and these bacteria happened to stop in the region of the heart or brain, damage to either of these vital organs could occur; yet many people do not hesitate to massage infected gums. Massaging tissue improves circulation of the blood and builds up the tone of the tissue; but massage should be limited to healthy tissue, not to infected, swollen, diseased areas.

Dietary supplements of vitamins and minerals are used in the therapy of healing gum tissue because in severe deficiency disease, the gum becomes inflamed and bleeds easily. An example would be scurvy or pellagra, prevalent among the sailors on Columbus's ships; or rickets, found among the children of early settlers. There are not many dentists or physicians practicing in the United States today who have witnessed any one of these diseases. Unfortunately, many people still believe that vitamins and minerals can heal anything. If the lack of either vitamins or minerals were the cause of gum disease, many other organs of the body would also be involved. Certainly, vitamin deficiencies do exist and vitamins and minerals are important to good health; but to suggest that the deficiency disease is limited to the mouth would be presumptuous.

The panacea of germ-killing mouthwashes is also highly advertised for the maintenance of oral health. So far, even in view of all the money spent on these products, their use cannot be justified. This evaluation would also include lozenges and sprays used for the same purpose. Hot saline rinse or just a hot water rinse is very beneficial in the healing of the mouth and is a very good adjunct to treatment. The complete topic of mouthwashes will be taken up later.

Use of irrigating devices, which originated in France and England several hundred years ago, was revived with much fanfare in the last decade and has added more confusion to the treatment of gum diseases. Such irrigating devices pump the bacteria deeper into the gum crevice. This transforms the early stage of gum disease, usually recognized by bleeding, into the slow, chronic-acting secondary stage with no obvious symptoms. Though some good can be derived by using the irrigating device correctly,

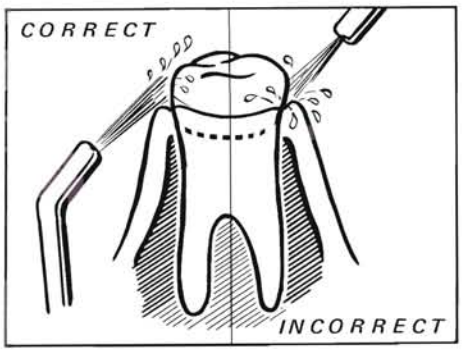


Figure 37. Correct & incorrect way of directing irrigating device.

Figure 38. Gingivitis before surgery. (Photo courtesy Dr. Duffy)

Figure 39. Figure 38 one month after surgery (healthy).

Figure 40. Figure 38 one year after surgery; blotting was not used.

much more damage can be produced by its misuse. Here again, as in massage, the jet of water sprayed into the crevice, forces the bacteria into the bloodstream. If the dentist takes the time to show the patient how **not** to direct the spray jet into the crevice, then at least no damage is done. However, there is evidence that far more harm than good is done by indiscriminate use of the device. The pressure of water sprayed into the crevice forces the bacteria into the tissue and, thus, into the blood vessels. Experiments conducted have shown that transient bacteremia (bacteria temporarily found in the bloodstream) often occurs following the use of high pressure oral spray devices. It is believed that the water pressure also removes the mucopolysaccharides (liquid protein) that help to seal the gum to the tooth surface.

A very common and most widely-used treatment for alleviating gum disease is tooth-brushing. This is done either with or without a treatment paste. Tooth-brushing, as such, has merit; but rarely, if ever, will it cure the diseases of the gums. Tooth-brushing will adequately remove the materia alba as long as the mouth is completely healthy. However, once the gum is swollen and the crevice deepened, tooth-brushing cannot clean it. In fact, tooth-brushing only helps to fill it.

Gum disease is also treated by grinding the surface of the teeth so that the harmful effect of one or two teeth contacting prematurely (contacting before all teeth come together) is eliminated. Though it has been shown that an improper match of upper and lower teeth (occlusal disharmony) can contribute toward periodontal disease, this disharmony will not in itself produce gum disease. The incidence of periodontal disease may be reduced by avoiding trauma (tissue damage) due to a poor match of upper and lower teeth; but in mouths where the disease is already present, occlusal adjustment (removal of the discrepancy) alone will only slow down the progress of disease.

Another impressive method of attempting to cure gum disease is burning the gums off with a high frequency, a high temperature, or an extremely low temperature device. This removes and destroys the diseased tissue rapidly and makes room for the disease cycle to begin all over again.

The most sophisticated cure which has been developed in the last forty years, and highly refined in the last ten, is the surgical cure of periodontal disease. Though the need for surgery is indicated in the treatment of some periodontal disease, the only useful purpose it accomplishes is that the periodontist with his skills attempts to correct any defects which have been produced by the disease. He does not in any way heal the mouth or prevent the disease from recurring by surgery alone. What the periodontist attempts to do is reconstruct the gum so that there is less chance of debris accumulation. If the gum could not stay healthy with the original contour (shape of tissue), it is highly doubtful whether a periodontist can improve the gum sufficiently to avoid disease. This does not in any way indicate opposition to surgical correction, but it strongly suggests that surgery must be accompanied with some good preventive treatment. If there is any phase of healing that can be attributed to this surgical procedure, it may be said that some of the diseased tissue is removed. However, like all of the other treatments listed so far, it is at best symptomatic or reconstructive. In short, surgical intervention eliminates the result, not the cause, of periodontal disease.

There are four basic procedures of periodontal surgery. The first is known as a gingivectomy and is merely the cutting away

Figure 41. Mouth immediately after Gingivectomy.

Figure 42. Figure 41 one year later, with blotting.

Figure 43. External measurement of bone damage (periodontal pockets).

Figure 44. Flap surgery to expose osseous (bone) damage (Figure 43).

of the infected gum tissue. A rule of thumb diagnosis could be that any mouth that requires the gingivectomy can most likely be treated by good mouth hygiene. The second type of surgery known as open-flap surgery is done by reflecting the soft gingival tissue so that the deep infection can be eliminated. The third and most advanced is the grafting of either the gum tissue or the supporting bone to eliminate defects caused by the disease. The prerequisite for all of these is good oral hygiene (via the blotting technique and total mouth hygiene). A fourth method of gingival surgery and possibly the oldest is the scraping of the tooth surface and the linings of the gum inside the gingival crevice. This method of treatment had been very ineffective until recently when Dr. Wentz of the University of Nebraska coupled it with good oral hygiene. Bone grafting has been attempted for many years. However, because of inadequate oral hygiene procedures, bone grafting has not always been successful. Too often, the procedure is done in the environment of disease. Bone grafting should be attempted only in areas where the effect of disease has been eliminated and good blood circulation has been restored.

How can anyone expect to have a bone graft succeed in an area of disease and blood stagnation? The author believes that no bone should be wasted; but in order to save bone, it is necessary to teach the patient how to take care of his mouth in a manner that will make it possible to save the bone. Most periodontists or dentists who treat periodontal disease will agree that none of the previous treatments in themselves could be considered a cure. The cure (return of health) is the result of the removal of plaque that forms on the teeth and in the gingival crevice. If the removal of local irritants does not bring about an improvement in the periodontal condition, it is possible that systemic diseases are present. In these cases, the lack of improvement under this procedure can help the doctor to suspect more severe problems. Occasionally, leukemia (a malignant blood disease) is first suspected because the mouth does not respond to good oral hygiene.

HOW CAN MATERIA ALBA, MOUTH DIRT OR PLAQUE BE REMOVED?

(THE BLOTTING TECHNIQUE)

In a healthy mouth where the free margin (turned under portion) of the gum is shaped thin and is knife-edged (well adapted to the tooth) and no sign of disease is present, brushing will do an adequate job of cleansing and preventing disease.
Therefore, the author's recommended method of cleansing is not directed toward those rare individuals with healthy gums; nor is it designed for the person who wants false teeth. The following method is directed toward individuals that have evidence of gum disease, as diagnosed by occasional bleeding of gums during brushing, formation of calcium deposits around the necks of the teeth, receding of gums, swollen, purple discoloration of the gum tissue; or any of the typical signs of gum disease found in nine out of ten American adults (page 18). These are people who can be shown how to heal their mouth during the early stages of the disease or help to get the mouth healthy for surgical correction. The cleansing method will also maintain the gum health after the treatment.

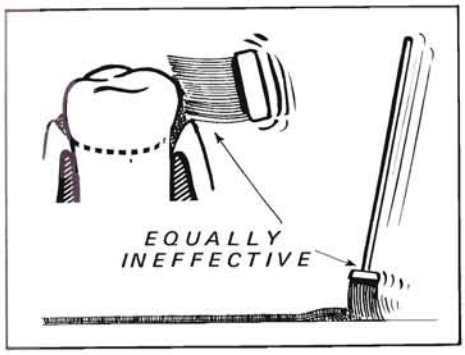


Figure 45. Demonstrating inability of brush to lift dirt out of crevices.

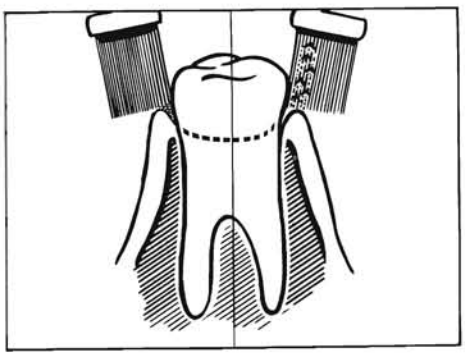


Figure 46. Demonstrating how blotting cleans out crevice.

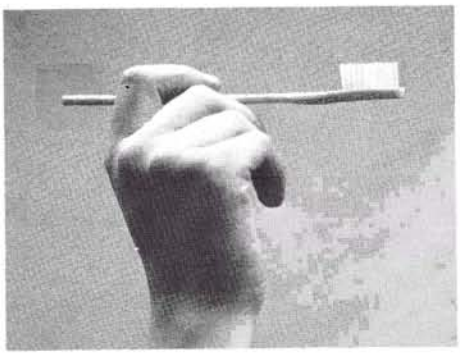


Figure 47. Pen grasp position used in blotting.

Figure 48. Brush placement for blotting crevice (anterior teeth)

In either case, the act of brushing sweeps the debris into the crevice, similar to what would be accomplished by trying to sweep dirt from the floor onto a rug. It is very difficult to brush soft material out of the crescent shape of the crevice.

To best remove the materia alba from the crevice, one must simulate the same blotting method used by the painting artist. If an artist is painting a picture and he finds that he has too much paint on a spot, he cannot remove it by brushing; for the act of brushing only disperses the paint from the brush. Houses and skyscrapers can be painted in this manner. However, if he sets a dry brush on the painted area, and dabs or taps the brush up and down but does not slide in a brushing fashion, the paint will be absorbed into a clean dry brush. This is done through capillary action. One way to do this experimentally is to take two polished sticks, place them together, and rub them lightly while one end is in the water. The water will climb up between two surfaces. Blotting utilizes this principle of capillary action. In total mouth hygiene, the blotting technique of mouth care utilizes this same principle. A brush with maximum absorptive or blotting power is used; otherwise, the proper action will not be accomplished. In the experimental work, the Periodontal Health Brush T.M. or the Oral Blotting Brush T.M. has been used. These brushes appear similar to other toothbrushes except that the densely-grouped soft Tynex bristles have proven to have far more blotting action than either the regular nylon or natural bristles.

Figure 49. Photo of Periodontal Health Brush.

These brushes are available in drugstores. In order to develop the blotting technique to its fullest and derive the maximum good, one must prepare himself both mentally and physically. Mentally, one must think "blotting." If one convinces himself of this, his chance of success is much improved. The next point to observe is the proper way of holding the brush. The brush should be held in the hand in what is considered a pen grasp, as if one were going to use it for a pencil, the same way one would hold a spoon or a fork. If it is done correctly, the position is very relaxing. One's elbow will be at his side. When one is brushing his teeth, the elbow is up high; and the arm tires easily in that position.

To visualize the brush placement, we will divide the mouth into the upper and lower teeth, then group the cleaning areas into anterior (front) teeth and posterior (back) teeth. We will also have separate placements for the labial (cheek and lip) side and the lingual (tongue) side. The diagrams will help visualize the brush settings. The one special point to remember is that when one is cleaning the crevices of the lower teeth, the bristles of the brush are pointing toward the floor. When one is cleaning the crevices of the upper teeth, the bristles are pointed toward the ceiling. The edge of the bristles should be set so that one row of bristles fills in the crevice between the tooth and the gum. The brush is then dabbed or tapped up and down, much as an artist would dab the excess paint on his painting. In other words, the brush handle does not rock back and forth nor do the bristles move from side to side. The movement is strictly vertical.

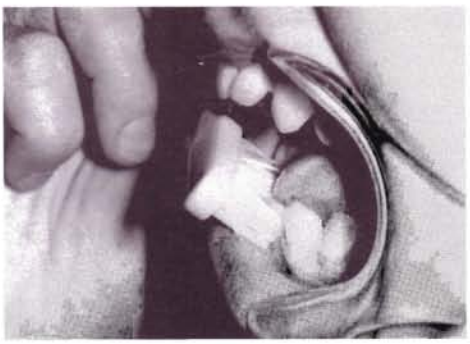


Figure 50. Using tongue to check brush position.

Figure 51. Blotting lower molar teeth.

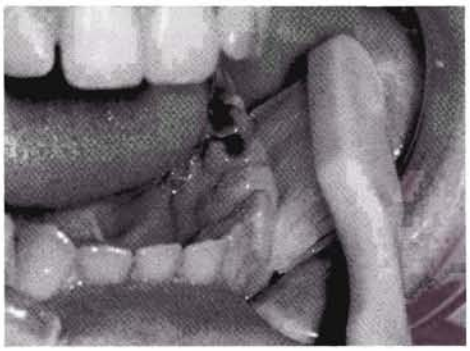


Figure 52. Blotting lower bicuspids.

Figure 53. Blotting lingual of lower anteriors.

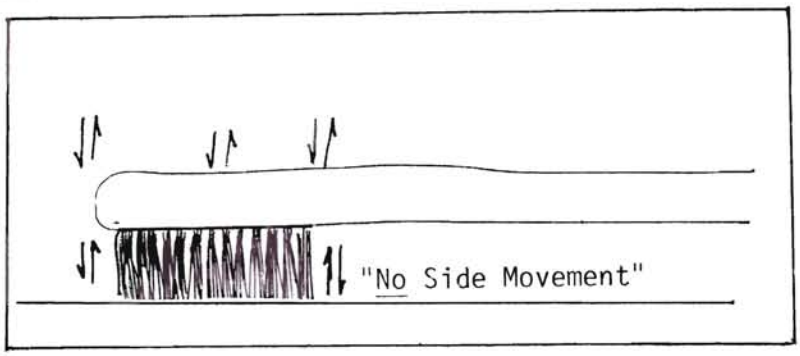


Figure 54. Diagram simulating blotting technique.

One way to detect error between brushing and blotting is that during the blotting action, little or no brushing sound is heard. The diagram (Figure 54) should help to clarify the procedure.

The importance of holding the blotting brush handle in a pen grasp position and the establishment of the proper frame of mind cannot be taken too lightly. Students of mouth health will sometimes say, "Unless I think blotting while doing this, I gradually revert to brushing." No dentifrice such as toothpaste should be used while blotting because the toothpaste would choke the blotting action of the brush. Brushing with toothpaste should never be done unless it is followed by blotting.

When one first begins this exercise, the placing of the bristles can be visualized by looking in the mirror. When the proper position is achieved, the tongue should be used to guide the accuracy of the brush placement. This is done by placing the tongue against the inner surface of the teeth to make sure that the bristles do not extend over the biting surface.

Once one has mastered the proper placement and the blotting action on the lower front teeth, he may progress to other areas of the mouth. There should be no hurry to change from one area to another because the longer the blotting action is done in a given area, the more completely will the white substance be blotted out.

After completing the outside surfaces, one can proceed in a similar manner to the inside surfaces. When the mandibular arch (lower jaw) is completed one may proceed to the maxillary arch (upper jaw). After one has blotted one or two areas, the brush should be checked for mouth dirt under a bright light. One will note that the ends of the bristles are saturated with the white material. This is not easily seen since the brush bristles are also white. If any bleeding occurs during this procedure, one should not become alarmed; this will decrease rapidly with each cleaning. A small amount of bleeding will help demonstrate more clearly the blotting action. The brush should be cleaned periodically during the blotting procedure. For a beginner, this is most easily accomplished by running the brush under tap water and drying the brush by striking the handle a sharp blow against the wash basin.

The blotting action and the cleaning of the brush are repeated until the crevices around all the teeth are clean. One should not go any further with this cleaning method until this part of the procedure has been thoroughly learned and practiced. It takes time to perfect this cleaning method.

At this point, if the gum begins to feel tender or sore, it is because too much downward pressure has been applied. If this occurs, the amount of pressure on the gum should be reduced; but blotting should not be stopped. The pressure can be intensified moderately as the gums become healthy.

Figure 55. Blotting upper anteriors.

Figure 56. Blotting upper bicuspids.

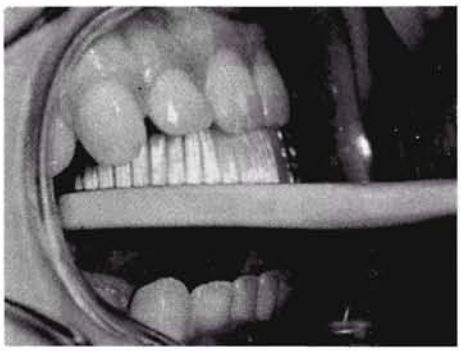


Figure 57. Blotting lingual of upper anteriors.

Finally negligence and lack of care in keeping them clean is the most common cause of all the diseases which destroy the teeth.

Fauchard 1728

Figure 58. a. A lesson from Dr. Pierre Fauchard on mouth cleanliness.

To accomplish mouth cleanliness of a degree for restoration and maintenance of health, blotting should be done three times daily. This does not replace the cosmetic effect of tooth-brushing; therefore, one should continue to brush the teeth once daily with a polishing dentifrice. Since the main purpose of using dentifrice is for cosmetics (polishing the teeth), toothpaste should be used sparingly. Far more polishing effect is gained with less polish. The best time for polishing the teeth is in the morning so as to get maximum cosmetic value. It is best to do the brushing before blotting so that the material that is brushed into the crevice can be removed immediately. One must remember that no dentifrice is used during the blotting procedure as it would clog the absorbing power of the brush.

No mention has been made of cleaning the interproximal spaces (spaces between the teeth). To avoid confusion, we will discuss the cleaning of the teeth and the interproximal spaces later because the position of the brush would conflict with the cleaning of the crevices.

THE INTANGIBLE INGREDIENT TO SUCCESS

The blotting technique may be new to most people. The things that it can accomplish may seem to be more than one can accept. A person should not become alarmed over this. Many an individual who has attended my lectures has later confessed that when he first began using the blotting method, he had some reservations in believing that it would give him a healthy mouth and would enable him to keep his teeth a lifetime. After blotting a few weeks, many have made such a typical remark as, "I'm really surprised that it really works."

A very important ingredient is believing that it will work. If one does not believe it will work for him, he will not give it the effort needed to learn to do it properly. The first step to doing anything is to believe it can be accomplished.

If the individual is one of those people who has to see for himself, pictures used in our class lectures show the degrees of success acquired.

Anyone who has read this far and practiced this method carefully and still does not believe that it will work, might better give this manual to someone else. There are some well-made dentures for those who just will never be convinced that they can keep their teeth. Those who are having trouble with the technique should know that believing and practice are important to success.

b. An oral education health class applying Dr. Fauchard's ideas through the Blotting Technique and total mouth hygiene.

To further convince the reader of these instructions that mouth dirt is responsible for diseases of the gums, whether the disease be simple gingivitis, acute trench mouth, or advanced chronic periodontal disease (pyorrhea), pictures are included showing some of the many people who have attended classes in total mouth hygiene. The pictures depict the mouth as it was before classes and as it appeared after classes where people learned the blotting technique. No medication or instrumentation (scaling or cleaning) was used until the mouth was healthy. In fact, what is shown is how the individuals healed their own mouths; for if one can heal his mouth by his own doing, he certainly can keep it healthy. The first eleven pictures progressively show what happens to the mouth, starting at age twelve. Occupations and educational levels of these people are mentioned, not to point a finger at anyone, but to show that gum disease, due to mouth dirt, is seen as much in the wealthy as in the poverty group and in the educated as much as the uneducated. There is no stigma attached to gum disease.

The purpose of the colored photographs is to reemphasize that periodontal disease knows no boundaries but with proper mouth care, even the worst mouth can be rehabilitated. In our lecture classes, no one has had a mouth whose teeth could not be saved. Therefore, nearly anyone who wishes may save his teeth, regardless of their present periodontal condition.

Besides educating people to understand mouth disease, this information, hopefully, convinces each individual that his teeth are savable. This concept is important; for only through being convinced that it will work, will the person give total mouth hygiene and the blotting technique the needed effort.

If the mouth care now being employed is giving one the type of mouth health he desires, that is, free of cavities, calculus formation, bleeding, or receding gums, and free of mouth odor, there is no need to change mouth care methods. However, if one is not getting these results, he should study this method diligently; for this method properly applied has not failed to work for any person unless he had a severe blood disease. The many adjuncts to mouth cleanliness are not to be discouraged if they give success to the user. Anyone can be taught good mouth hygiene. It is upsetting to see clinicians show photographs of mouths that are badly broken down and dirty and then say, "Here is a person who may as well have all of his teeth pulled and get dentures, for he will not learn hygiene anyway." It is very rare that a person can be found who does not want to keep his teeth. It is rather that the person has given up and feels that the oral health methods he is practicing are futile. When they can be shown good effective care, nearly all people will desire to keep their teeth.

In the first figure, a twelve-year-old girl with a beautiful mouth is pictured. This healthy mouth does not come by accident. It has developed because she has given effort to employing the blotting technique and total mouth hygiene. What could have happened had she not practiced good oral hygiene can be seen in the following pictures. The people seen in the first thirteen slides are representatives of poor families and wealthy families as well as uneducated families and educated families. Merchants, farmers, migrant workers, lawyers, laborers, teachers, doctors, millionaires, factory workers, parents, and grandparents are among those included.

Figure 59.

Figure 60.

Figure 61.

Figure 62.

Figure 63.

Figure 64.

Figure 65.

Figure 66.

Figure 67.

Figure 68.

Figure 69.

Figure 70.

Figure 59 shows the twelve-year-old girl who practices the blotting technique to keep a clean healthy mouth. Figure 60 shows a fourteen-year-old farm girl who, because she has not kept her mouth clean, is experiencing simple gingivitis (gum disease) and halitosis (bad breath). One can see that the gum around the lower front teeth is swollen and inflamed. If one were to brush or just press this gum with the fingers, it would bleed. She brushes her teeth, but brushing is only a cosmetic care. It does not keep the mouth clean enough to stay healthy. Figure 61 is of a twenty-two-year-old store manager who has a severe gingival problem and is developing early periodontal disease. The periodontal disease can be recognized by the purple coloring on the gum along the mandibular lateral and central (the first and second tooth on his lower right side). Figure 62 shows another twenty-two-year-old, a factory worker who has already lost his four anterior teeth; and the disease on the lower gum is progressing rapidly. In this condition, the bone has been destroyed by the infection; and there is no support for the soft gum tissue. Figure 63 pictures the mouth of a millionaire, a president of a corporation. He brushes his teeth diligently and sees his dentist regularly. The toll taken by periodontal disease is apparent. The teeth have lost a great deal of bone support and are drifting apart. Spaces are beginning to form between the teeth. Figure 64 is of a physician whose mouth exhibits rather advanced periodontal disease. Materia alba (white material) is visible along the gingival crevice. Figure 65 shows a young insurance salesman who is a dental cripple rapidly heading toward dentures. Figure 66 is the mouth of a person employed in dentistry. Even though it is not visible, this mouth exhibits an extreme periodontal disease that has all but destroyed the supporting tissue of the teeth. All the beautiful inlays and bridges are of no value without healthy gums. These inlays and bridges will go to waste unless the individual learns to take care of his mouth. No amount of dental work can save teeth if one does not keep his mouth clean. Figure 67 is the mouth of a police chief. This is an example of brushing and yet neglect because the mouth is unclean. Over-brushing has worn the gums and teeth away, yet mouth dirt has destroyed the gums through periodontal disease. Evident are the tartar and breakdown of tissue which are common in periodontally-diseased mouths.

Figure 68 is of a young housewife who gave up. Tooth brushing for her was a losing battle. It is easy to say that she did not care about her teeth, but a closer analysis of the mouth will reveal that she did spend money for bridges and restorations. At one time she must have cared about her teeth; but because of the constant deterioration of mouth health, she finally gave up. Finally, in Figure 69, there is a mouth where, due to mouth disease, the teeth are gone; and a complete dental cripple results. Here it is seen that the mouth is still unclean. The individual is very unhappy because he cannot wear his lower denture. There is no way out of this sad predicament, but there was a time when he still had teeth. Let it be repeated, "We have not seen a set of teeth in so bad a condition that the teeth could not be saved. Anyone can save his teeth if he so desires and follows the proper care and treatment." In order to wear dentures, one has to keep the mouth clean; otherwise, the gums break down and the teeth lose their fit. Starting early in life to take care of the mouth can help one enjoy the fruits of a healthy mouth. Perri, in Figure 70, reminds everyone that "Happiness is a clean mouth."

Figure 71.

Figure 72.

Figure 73.

Figure 74.

Figure 75.

Figure 76.

Figure 77.

Figure 78.

Figure 79.

Figure 80.

Figure 81.

Figure 82.

Figure 71 features a mouth that is well taken care of by a lady sixty-eight years old who still has all her teeth. She brushes her teeth once daily and cleans her mouth regularly. Figure 72 is of a fifty-six-year-old lineman working for a power company. The man has maintained a healthy mouth both as far as teeth and the gums. What type of mouth one will have at this age will depend upon the type of cleanliness employed.

The following figures depict a number of people of various ages and show the progress of mouth health after the individuals attended our hygiene classes. Figure 73 represents a young lad who had brushed his teeth not more than an hour and a half before the photograph was taken. Close examination of the photograph will reveal the materia alba (plaque) that is encroaching onto the teeth where it carries out a destructive process of fermenting sugar into acid which breaks down the enamel. Where it exists under the tissue, redness and bleeding, signs of gingival disease are evident. Figure 74 shows the same mouth after the young fellow learned how to blot his teeth and the crevices. Now he enjoys a healthy, clean mouth with no further breakdown of teeth as far as dental caries (cavities) are concerned, and no more gingival disease. Figure 75 is of a boy in first grade who was diagnosed as having pyogenic granuloma. This was diagnosed through biopsy, and the patient was sent to have surgery. Instead of undergoing surgery, the boy was enrolled in classes to learn how to take care of his mouth. Within two weeks, as seen in Figure 76, the condition had healed considerably. Figure 77 shows his mouth just four weeks later after he first was shown the blotting technique. There was no need for surgery and little need for prophylaxis (professional cleaning of the teeth) once the child learned how to keep his mouth clean. The diseased condition disappeared. A ten-year-old girl who was sent home from a dental office because her dentist told her that she did not brush her teeth enough, is shown in Figure 78. After repeatedly suggesting she brush her teeth more often, the dentist finally told her to leave his office permanently. This was definitely a failure on the part of the dentist. She claimed that she brushed but her mouth got so sore that she could not brush anymore. The rubber tip which is used to make the materia alba more visible is seen in Figure 79, plowing through the crevice and removing the white material. This rubber tip should never be used for cleaning the crevice as it pulls the gum away. After two weeks of blotting, Figure 80 shows the mouth has healed considerably. No scaling or removing of calculus was done as individuals must become aware that through their own efforts the mouth is made healthy. Anyone who is able to heal his mouth can easily keep it healthy for as long as he desires. Figure 81 shows a young boy who suffered from epileptic seizures and takes the drug dilantin sodium, which as a side effect produces hyperplasia (growth of the gums). Once he is taught how to take care of his mouth, this condition will revert itself. If very diligent care is taken, the condition will go to the point where the gums completely recede to health. Perri again steps in with his reminder in Figure 82.

Figure 83.

Figure 84.

Figure 85.

Figure 86.

Figure 87.

Figure 88.

Figure 89.

Figure 90.

Figure 91.

Figure 92.

Figure 93.

Figure 94.

In Figure 83, an individual on dilantin has worked on his mouth diligently and the gums have receded considerably; however, for expediency, a gingivectomy was performed. This surgical procedure removes all the excess tissue. Even if the mouth is treated by surgery, the benefits are greater from the hygiene, for the hygiene makes the surgery easier and the healing more rapid and complete. Figure 84 shows a gingivectomy just completed. Gingivectomies should never have to be done more than once on dilantin patients because if the patient is taught how to care for the mouth properly, the gums will tend to remain normal. If proper mouth care is instituted early enough, surgery should never be needed. Figure 85 shows a mouth a year after surgery. The gingival hyperplasia or growth of the gingiva has not returned. Figure 86 shows the mouth of a 15 year old high school sophomore with an extremely painful mouth, bad breath and a low frenum attachment. It is believed that the frenum or lipcord is pulling the gum away from the teeth. She was referred for a frenectomy (removal of the strand of tissue between the lip and the gum). Because we were convinced the surgical procedure was not necessary, and that the mouth health could be restored through proper mouth hygiene, she was sent to our hygiene classes to learn how to take care of her mouth. Figure 87 gives evidence of the plaque being drawn from the crevice during blotting. Slight bleeding helps to make visible the white material being absorbed or blotted into the bristles. After three weeks of blotting, gums were completely healed (Figure 88). The enlarged frenum is still present but is no longer pulling the gum tissue away from the teeth. The frenum is a normal body tissue and rarely causes problems except in mouths that are diseased due to poor hygiene. The need for a frenectomy will seldom occur in a clean mouth. The girl is very happy in Figure 89 for she was able to heal her mouth. She has a pleasing smile, a sweet, pleasant breath; and does not have to camouflage it with mouthwashes which tend to make things worse. To show her gratitude, she volunteered to be our cover girl. Figure 90 shows a young girl, hospital X-ray technician, with a problem of extremely bad mouth odor, sore mouth, and yet very little visible problem as far as gum disease is concerned. One can see some edema (swelling), hyperplasia (excess tissue growth), and redness, but to no extreme degree. She learned to take care of her mouth through the blotting technique and now enjoys a healthy mouth (Figure 91) without taking any antibiotics or medication. How pleasant it is for this young lady to be able to face people, knowing that her breath is not offensive! Figure 92 is of a young girl with early trench mouth. She had been bordering on this problem for several months; and with each episode, it got worse. She was given antibiotics to control it. As soon as the antibiotics were discontinued, the mouth disease returned. She attended the classes and learned how to take care of her mouth. In three weeks her mouth was completely healed, as seen in Figure 93. Here is Perri in Figure 94 with his favorite message!

Figure 95.

Figure 96.

Figure 97.

Figure 98.

Figure 99.

Figure 100.

Figure 101.

Figure 102.

Figure 103.

Figure 104.

Figure 105.

Figure 106.

A college girl with a two year history of periodic gingival problems is depicted in Figure 95. Her mouth would become so sore that she was unable to eat. The gingiva was so painful that brushing was impossible. She learned how to blot her mouth, and the gingiva started to heal. Figure 96 shows the mouth two weeks later. The calculus is visible on the teeth. As mentioned previously, this is never removed until the mouth is healthy so as not to confuse the patient into thinking that the dentist has helped in healing his mouth. In Figure 97, the mouth is completely healed. There is some defect, which brings out the point that there was already some bone damage. Even with the bone damage, the mouth did heal; and the only thing that remained to be done was remove the calculus after the mouth was healthy. Figure 98 represents a young man, the son of a physician, who has been on antibiotics for many months. He continually had what is known as an intermittent chronic and acute trench mouth. As was mentioned before, acute trench mouth is brought about by two things: an unclean mouth and a nervous or emotional upset. In this case, after four weeks of blotting, Figure 99 shows a mouth that is completely healed with no other treatment. Figure 100, the mouth of a school teacher, represents a breakdown of the gingiva due to an unclean condition. She was taught to blot her mouth effectively, and her mouth healed. Figure 101 shows a defect that cannot correct itself. After the teacher's mouth was healthy, tissue was grafted in on the labial of the right lower central and healed as seen in Figure 102. No surgery is performed until the mouth is healthy as surgery is not a cure in mouth disease but rather a mechanical correction of defect. Figure 103 is of a young man who presented himself for a prophylaxis (cleaning of teeth by professional dental personnel). He related that it was customary for him to have this done annually and that after he had this bloody procedure done, his mouth would be very sore so that he was unable to brush his teeth. By the time the mouth healed enough, he felt brushing did no good. Consequently, he would wait until the next year to have the mouth cleaned again. This time, no prophylaxis was done. Instead, he was assigned to our class on oral health education. Figure 104 shows his mouth three weeks later. Figure 105 is of the mouth of a young executive who had extremely tender bleeding gums. The bleeding was so spontaneous and profuse that his wife would cover his pillow with a rubber sheet. To help this condition, he had his dentist do a prophylaxis (scaling and cleaning of the teeth) every six to eight weeks. He had a number of medical tests performed as systemic diseases were suspected. When he was enrolled in the hygiene classes, mainly to do a differential diagnosis (rule out systemic diseases), his mouth responded rapidly to total mouth hygiene and the blotting technique. In Figure 106, the same mouth is shown one year later. During the past year, no prophylaxis by a dentist or dental hygienist was performed. He is no longer troubled with gingival bleeding problems which had plagued him since he was fourteen.

Figure 107.

Figure 108.

Figure 109.

Figure 110.

Figure 111.

Figure 112.

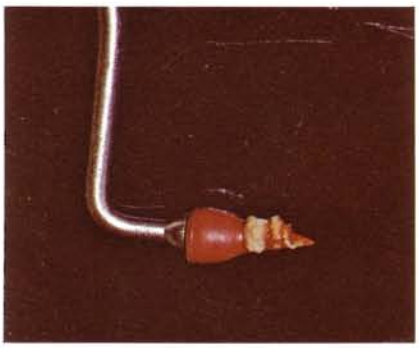


Figure 113.

Figure 114.

Figure 115.

Figure 116.

Figure 117.

Figure 118.

Figure 107 shows a young man who had trench mouth intermittently for about three and a half years. He over-brushed his teeth until they were worn down, yet much of the gum was lost to disease. He is a nephew of a dentist who was busy looking for systemic diseases, so he didn't see the forest for the trees. In Figure 108, after the patient learned how to blot, the gingiva healed. Figure 109 represents a young mother who had periodontal disease so bad that she could not brush her teeth. Her gums bled so profusely that the dentist did not want to repair her teeth. She was referred for periodontal treatment but instead was taught how to take care of her mouth properly. In Figure 110, the mouth is completely healed by her own efforts. She did not need any surgical correction. It is surprising how many mouths can be healed without any surgery. The goal of every periodontist should be to see how many mouths can be healed with no surgical intervention. The surgery should not be used in place of good hygiene technique, or failure is quite certain to result. The young mother then returned to her dentist, had her teeth restored (Figure 111), and by taking care of the mouth properly will enjoy a lifetime of mouth health. Figure 112 is of a school teacher with extreme gingival disease, periodontal destruction, and with gingival pockets ranging from six to ten millimeters. It took about six to eight weeks for her to get her mouth healthy by using the blotting technique. In Figure 113, the rubber detection device is shown with plaque after plowing through the gingival crevice. After she learned how to take care of her mouth properly (Figure 114), the gums tightened and lost the edema (swelling). When gingival surgery is performed to correct some of the deep destruction, the mouth should stay healthy the rest of her life. So far, two teachers with severe gum disease have been shown. There are a great number of elementary school teachers who are afflicted with severe gum disease. Certainly there must be some reason for this. It is not that they are not interested in mouth health. The apparent explanation is that in order to convince their students that tooth brushing is good, the teachers brush more than most people. This well-intentioned improper and excessive brushing may produce an increase in the incidence of gum disease.

Figure 115 is of a sixty-eight-year-old man who has never brushed his teeth. His dentist sent him to the author because of a statement made in the oral hygiene lectures that anyone can be taught proper oral hygiene. The dentist sent his patient and said, "Here is one man you cannot teach!" The patient went to the classes and learned how to take care of his mouth; in Figure 116, the mouth is considerably healed. The calculus was left to show that calculus does not cause periodontal disease; and even with the calculus present, the mouth is healing. Finally, in Figure 117, the calculus was removed because the man had done a good job healing his mouth and was now ready to have his partial dentures. No surgery was done except for deep curettage (root scraping). Because of proper encouragement, this man accomplished the seemingly impossible task of healing his mouth. Because of his knowledge of mouth cleanliness, this man was so sure of maintaining mouth health that he was willing to have partial dentures constructed rather than have his teeth removed. Since he now takes care of his mouth, he should maintain its health for the rest of his life. In Figure 118, the restorations have been inserted and his ability to chew has been restored. In his case, he can utilize this function since he is an ardent tobacco chewer. The one thing that is really important is that he learned to maintain his teeth and gums properly.

Figure 119.

Figure 120.

Figure 121.

Figure 122.

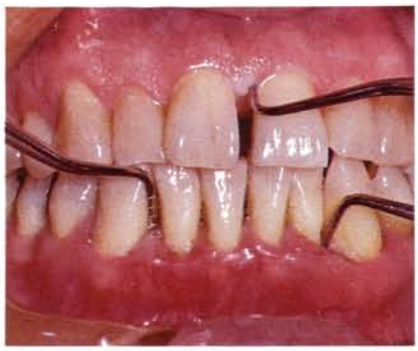


Figure 123.

Figure 124.

Figure 125.

Figure 126.

Figure 127.

Figure 128.

Figure 129.

Figure 130.

Figure 119 shows the brush when the man represented in the four previous pictures began blotting. At first, the blood saturated the brush. Each time he employed the blotting technique, the amount of blood diminished. Eventually, the bleeding stopped. Figure 120 shows a seventeen-year-old girl who brushed her teeth five or six times a day since she had been in first grade. She had a fear of losing her teeth. She was much worse off than the sixty-eight-year-old man who never brushed his teeth. This does not in any way indicate opposition to tooth-brushing, for brushing is an excellent method of keeping the teeth bright and polished. It does aid in keeping the mouth clean if it is followed immediately by blotting. This is probably the best example of what brushing can or cannot do. It should help convince even the greatest of skeptics. At the rate she was destroying her gums, she would never have teeth at forty, let alone at sixty-eight. She had done so much damage, that Stillman's Clefts (gum worn away by excessive brushing) formed along the gingival area. She enrolled in our classes on total mouth hygiene, employed the blotting technique, and did not brush her teeth for three months. The results can be seen in Figure 121. The clefts have almost completely disappeared. According to all scientific evidence, this is not supposed to happen.

Figure 122 is of a man with extreme advanced periodontal disease. Judging by the polished teeth, one can see that the man spends much time brushing his teeth. His teeth are very shiny; yet Figure 123 reveals the periodontal probes penetrating anywhere from six millimeters to ten millimeters into the gum, showing the extreme destruction of mouth bone. He was taught proper mouth care, and Figure 124 shows how much the gum healed without any further help. The gum tissue that was not supported by bone receded. One might erroneously conclude that the mouth had already had surgery. In Figure 125, probes show more destruction;and as the area is opened surgically, Figure 126 shows that the bone has been destroyed down to the apices (root ends) of some of the teeth. Bone was grafted in surgically; and in Figure 127, the area is shown after it healed. He returned to his dentist to have a root canal (nerve removed) done on that tooth and will have a bridge placed. Figure 128 represents the completely healed mouth.

Hopefully, these photographs have given the reader ample proof that it is possible for anyone to get his mouth healthy and maintain it that way for a lifetime. It would be unfair not to show the five per cent or fewer of the American population who can and do maintain a healthy mouth by only brushing their teeth. These are rare finds. Figure 129 and 130 are representative of this small group. Both people are in their early twenties. On the other hand, most people need the benefits derived from the blotting technique and total mouth hygiene. This is even less surprising when one reads that dental students at the University of Minnesota were found to have very bad mouth hygiene in spite of their tooth-brushing. At least fifty percent were considered to have very poor oral hygiene. Proper and effective oral hygiene must be taught at all age levels.

Figure 131. Cleaning mouth while working.

Figure 132. Cleaning mouth while reading.

Figure 133. Cleaning mouth in automobile.

Figure 134. Sipping the brush.

TIME FACTOR IN CLEANING

If one has practiced cleaning the crevice diligently, he has been confronted with the age-old problem of time factor. On the average, it takes about fifteen to twenty minutes to clean the crevice areas around the teeth. In addition, there is extra time needed to remove the loose skin cells from the gums, cheeks, palate, and tongue. It is not customary for people to spend that much time on any health procedure. Often, people that go on exercise routines find that the factor of time discourages the best of intentions. This is also true concerning mouth care. Therefore, this method has been adapted so that it can be done without the loss of valuable time. More accurately, it can be done on "borrowed time." Time is borrowed by becoming so proficient at blotting that one can do it while doing something else. These examples might suggest some ways to blot on "borrowed time:"

1. Television watchers may very well do this blotting while watching their favorite show. This, by the way, will work well for all age groups. After a child has been taught the blotting technique, there will be little resistance to the suggestion, "Clean your mouth while you are watching television."
2. Time can also be borrowed while one is reading a magazine or studying at a desk. This is very acceptable for students.
3. Traveling salesmen have found it very easy to do the blotting while driving. At first thought, this seems dangerous. However, if one considers that many people manage to drive a car safely while smoking, then cleaning the mouth would be far safer since there is no smoke to distort one's vision, nor is there danger of dropping hot ashes. If one feels it is dangerous to blot while driving, he should borrow time elsewhere.
4. People trying to quit smoking or eating sweets have found that the blotting technique gives an adequate substitute and produces oral health with the same effort.
5. Some find it inviting to keep a brush on the nightstand and blot after retiring.
6. Many people carry a blotting brush in their shirt pocket, purse, glove compartment, or leave it in their desk; for borrowed time is of no value without a brush.

One will find more time than needed to perform the blotting if he stretches his imagination. What is needed is an adequate place to clean the brush during the blotting period.

It is very important that the brush be kept as clean and dry as possible, for it takes a clean dry brush to give maximum capillary action to produce high absorbing efficiency. If running water is not readily available, one can employ an almost effortless method of cleaning or "vacuuming" the brush to keep it clean and dry. This is done by placing the bristles of the brush between the lips and drawing a sharp breath of air through the brush to remove the saliva and debris. Many people call the procedure "sipping." This cleaning should be done frequently to maintain the brush's absorbing ability. Those who might consider the material in the brush as foreign dirty material will not be able to perform this cleaning process. However, studying the matter reasonably may remove this objection. The dirt has always been in the mouth; therefore, it should be totally unobjectionable. Swallowing this material is harmless as everyone swallows it daily with food, and the stomach acids destroy it readily.

Figure 135. Brush disfigured by biting during sipping.

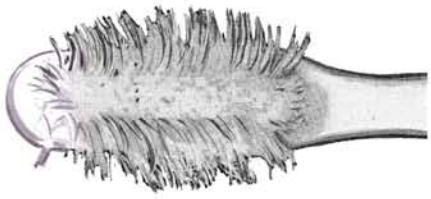


Figure 136. Brush disfigured by pressing too hard against teeth or forcing bristles over teeth.

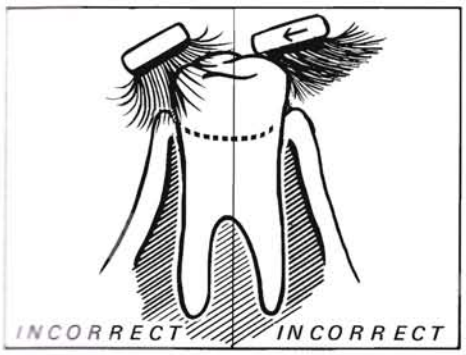


Figure 137. Diagram of brush abuse causing distortion.

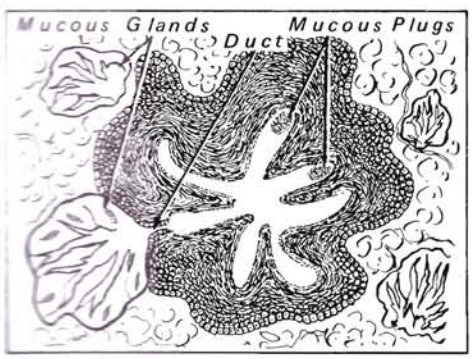


Figure 138. Diagram of throat.

Many patients with excess stomach acid problems have reported that after swallowing this material for a time, they have found it has enabled them to eliminate taking acid neutralizing medication. Some have even claimed that they were able to discontinue medication used in controlling intestinal ulcers. To confirm these remarks, we have consulted a biochemist, whose answer was, "This certainly would sound feasible since the mucus (protein portion of saliva) that is swallowed is one of the best acid-buffering agents (neutralizing substances) that one could use. It is also a natural lubricant for the intestinal walls." It is not the author's intent to prescribe a method to heal intestinal disorders; however, if any one can profit from this added bonus, and get his mouth healthy at the same time, there should be no objection.

It is important not to bite the brush while drying it out. If the teeth clamp down on the brush, it will become disfigured.

There are a number of errors in blotting that can be diagnosed by examining the brush for damage. For example, in Figure 136 the bristles are flared out toward one side or spread both ways. This flaring is due to pressing the brush too hard against the teeth. This can also be produced by allowing the brush bristles to come over the teeth. The damage in Figure 135 is produced by biting bristles while drying the brush.

MOUTH ODOR

The subject of mouth odor needs special consideration. When an individual says that the other fellow has "mouth odor," "bad breath," "halitosis," or whatever he may call it, he does not really mean it as such. What he really means is that the other person's breath is slightly worse than his. The individual with the worst breath does not think anybody has bad breath while the person who really takes care of his mouth pays the penalty of enduring everybody's halitosis. Anyone who does not clean his entire mouth (by entire mouth, we mean thoroughly cleansing the cheeks, roof of the mouth, and the gums.) will have mouth odor.

If one is not motivated to take care of his mouth for the sake of health or economic reasons, it should interest him to do so for the sake of pleasant breath. Mouthwash advertisements certainly remind people of the unpleasantness of mouth odor. The only trouble is that using mouthwash only beguiles the person using it from noticing that the odor exists. Mouthwash numbs the taste and smell organs so one is not aware of his own odor. As Dr. Joe Frisch once said, "Mouthwash makes bad breath taste better." A comparison can be made to someone's not taking a bath but putting on more deodorant and cologne to disguise body odor.

Another area which contributes to mouth odor is the throat. This is especially true when someone is affected by what is known as sour breath. The walls of the throat have many crypts and mucous glands.

These glands do not empty the mucus except during a gag reflex. Mucus consists of glucose (simple sugars) and liquid protein similar to egg albumen. Bacteria enter into the gland opening, causing the mucus to putrify and the sugars to ferment.

Figure 139. Making spare moments count.

Figure 140. Interproximal cleaning (upper teeth).

Figure 141. Interproximal cleaning (lower teeth).

Figure 142. Anytime is blotting time.

This putrifying and fermenting action produces the bubbling out of the contents on to the surface. Air passing by picks up the odor, and a sour or putrid breath results. Therefore, it is important to clean the tongue as far back as possible to create the gag reflex. At first the response might be, "This will make me sick," because one associates this reflex with the regurgitating reflex during illness. If one conditions his mental attitude to the fact that this exercise is important for a healthy clean breath, the sick feeling will disappear.

We have heard people say, "It is a rare friend that will inform you of your bad breath." This friendly gesture need not be exercised since all one must do to determine the quality of his breath is lightly run the brush over the insides of the cheeks and the posterior (extreme back) portion of the tongue and then check the odor on the brush. The odor may shock many people. It is also an excellent motivating factor for cleaning the mouth. The mouth odor test has a great motivating impact on the teenage population since this group is very breath conscious, owing to television influence. However, they do usually possess very offensive breath. It is very rare to find a young person who will not clean up his mouth to achieve a pleasant breath.

It bears repeating that the best friend one has, the one that will tell how bad one's breath is, is one's own Periodontal Health Brush.

INTERPROXIMAL CLEANING

The cleaning of the interproximal (between the teeth) spaces is very important in the prevention of tooth decay and in preserving the health of the gums.
One might think that it is of little importance since it was not discussed with the cleaning of the gingival crevice. It has been thus far omitted because the position of the brush conflicts with the position used in the blotting of the crevice.
It should be noted that the placing of the brush is completely opposite of what was taught in the first part; it is a direct reversal. However, this is as far as the change goes. Once the brush has been placed properly, blotting may be done as usual.

In addition to cleaning the interproximal spaces, this same action will clean the tooth surfaces; that is, it will clean the surface of plaque, though it will not remove the pellicle (thin protein film) which stains and gives the teeth a discolored appearance. This is removed by the polishing action of brushing with a dentifrice. This is the main purpose of using toothpaste.

When the interproximal spaces are cleaned, the same blotting action can be applied to the occlusal (chewing) surface of the teeth as this will remove the debris from the pits and fissures (grooves) of the teeth.

This last exercise will complete the total mouth hygiene and give a clean, healthy mouth and pleasant breath. If this is done properly, little time will be needed; and one can feel assured his mouth can be kept healthy for a lifetime with little or no other maintenance.

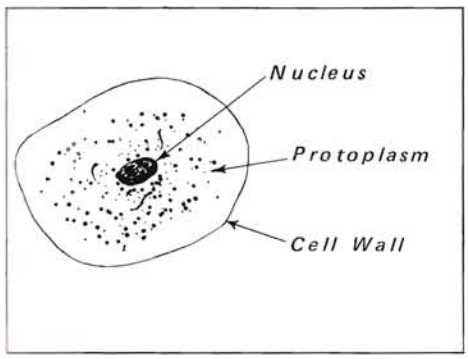


Figure 143. Diagram showing bacterial protoplasm (living protein)

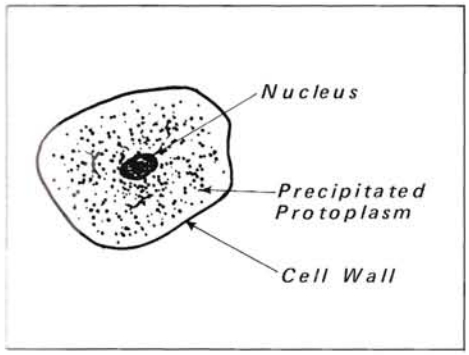


Figure 144. Figure 143 after the use of protein precipitating mouthwash.

Figure 145. Don't be fooled by the bottle.

Figure 146. Mouthwash didn't keep this mouth clean or the breath pleasant.

In order to discuss mouthwashes in the proper perspective, we will set up a standard of values by which to answer the following questions. The first question must then be: "Why do people use mouthwash?" The reasons generally are:

1. To kill the bacteria (germs) in the mouth.
2. To improve the breath.
3. To clean the mouth.
4. To give the mouth a good taste.

We have previously discussed the value of bacteria in the mouth in preventing disease and maintaining the health. Even though we do not recommend killing the bacteria in the mouth, we need to understand the function and action of mouthwash, also the effect it has upon the cleanliness of the mouth. There are not too many substances that can be used to kill bacteria in the mouth. Poison, strong acids, or alkalies, which would effectively kill such bacteria, would also kill or severely damage the host (person on whom bacteria live). Therefore, most commercial mouthwashes today use what is known as a protein precipitating agent (P.P.A.). The action of this P.P.A. must be understood for one to evaluate the use of the mouthwash. One must first understand how a germ lives and what the mechanism of the P.P.A. is.

The germ is a single-celled organism that has its protoplasm (liquid protein of life) concentrated along the outer membrane. The manufacturers of mouthwashes use this knowledge to help them carry on their germ warfare. This liquid protein, which is similar to egg albumen, must be precipitated (solidified) so the bacteria cannot utilize food. The side effects from this are the most undesirable part of mouthwash, for the mucus in the mouth is also a liquid protein; and the mouthwash precipitates this to form more mouth dirt and to feed other bacteria which produce mouth odor. An experiment to show this can easily be done in one's home. Begin by placing some liquid protein (egg white) in a bowl. Next, cut in two a piece of soiled cloth and place both pieces into the bowl. Remove one piece of the cloth and wash it under tap water. Observe that the presence of the egg white will actually act as a detergent in washing out the dirt. Now dip the other half of the cloth into boiling water to precipitate the protein very rapidly. When an attempt is made to wash the cloth out in tap water, the liquid protein that previously acted as a detergent becomes the dirt itself. The same results are produced when the mucus in the mouth is acted upon by a protein precipitating mouthwash.

The same experiment can be performed in the mouth. Begin by having an individual's mouth cleaned and the teeth polished by a hygienist or dentist. Check the mouth for visible signs of mouth dirt by scraping the tooth surface every fifteen minutes. It will take from four to six hours to see any visible signs of dirt. Now repeat the same process, except this time have the individual rinse his mouth with a commercial mouthwash (P.P.A. type). It can be noted that after the use of most mouthwashes, the white material can be scraped off the tooth surface in less than one hour. This precipitated or cooked protein decays rapidly, so it is good food for bacteria and for the formation of mouth odors. Any homemaker knows that a cooked egg spoils much faster than a raw one.

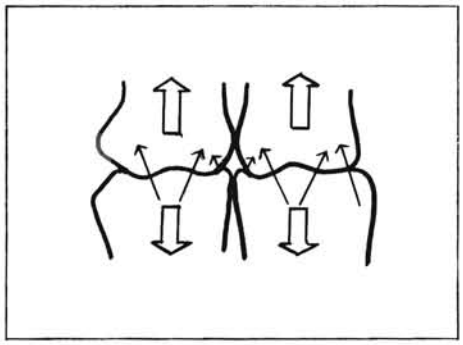


Figure 147. Occlusal harmony.

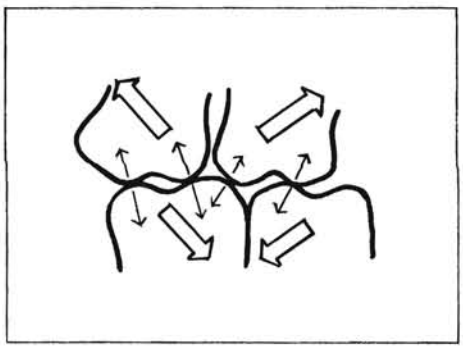


Figure 148. Occlusal disharmony causing food impactions, spreading, loosening and fracturing teeth.

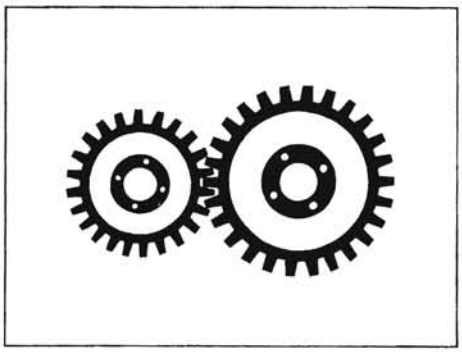


Figure 149. Gear harmony.

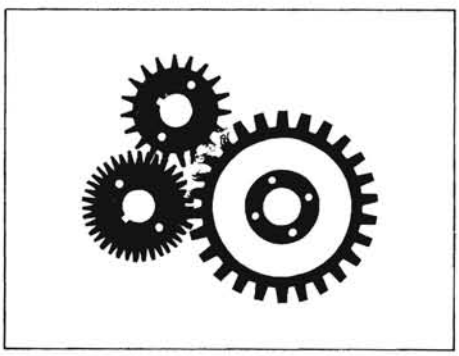


Figure 150. Gear disharmony causing wearing, bending or breaking gear teeth.

Many people believe that it is the bacteria that produce the odor. Actually, the odor is produced by the bacteria ingesting food. Wherever there is food available, bacteria will grow. One of the best ways to avoid odors is to remove the food (the source of the problem) and not destroy the bacteria. Total mouth hygiene accomplishes this.

The surprising thing is that one of the best mouthwashes is found within the mouth itself. This natural mouthwash is saliva. When one cleans the floor of the mouth, large amounts of serous (very liquid) saliva are produced. This can be swished through the mouth as a mouthwash. It is important to note that this fresh, clean saliva will only kill bacteria that do not belong in the mouth, while it has no effect on those bacteria that belong there to guard mouth health. Those persons who like a mouthwash primarily for taste can obtain the desired flavor by buying a concentrate to make flavored water or by having a druggist make it up. There is no objection to using this flavored water as long as the protein precipitating agent normally found in commercial mouthwashes is not present. If a gargle or rinse is required to relieve pain, hot saline solution is beneficial in that it increases blood circulation to the area. Blood in itself is the best healing agent; likewise, the saliva in the mouth is the best mouthwash. People are quite surprised at the increased amount of saliva production when the blotting technique is employed.

OCCLUSAL INTERFERENCE

Next to mouth cleanliness, the other important factor in maintaining a healthy set of teeth is to eliminate occlusal interference (the striking of the lower teeth against the upper, causing the teeth to rock from side to side). During mastication (chewing), the mandible (lower jaw) brings the lower teeth against the upper teeth. If the teeth are well-balanced (matched), the resultant pressure should be directed in the long axis of the tooth. If occlusal disharmony exists, one of two things happens: either the mandible skids bodily in a lateral (side) or anterior (forward) direction or the individual teeth are rocked due to cuspal interference. The cusps (elevations on the chewing surface) of the lower teeth then fail to mesh with the cusps of the upper teeth. In either case, some or all of the teeth are pushed sideways.

Depending on how well the teeth are anchored in the jawbone, these forces will loosen the individual teeth or produce damage to the articulating (gliding) surfaces of the condyle (hinge of the lower jaw). These interfering sensations are not normally noticeable until some or most of the teeth become extremely loose or severe pain and discomfort occur in the area of the ear during chewing. Such sensations may or may not be accompanied by partial loss of hearing and grating or cracking in the area of the articulating condyle (jaw hinge). By this time, considerable permanent damage is done, which is only partially reversible. Tooth interference in the mouth can be compared to tooth interference in a set of gears. If two gears running together are not matched up so that the forces strike equally or are not lined up to avoid side thrust, one of two things will happen. Either the individual teeth will destroy themselves by undue wear or breakage, or there will be damage to the movable shaft itself. These effects can easily be compared to damages to the teeth in the mouth.

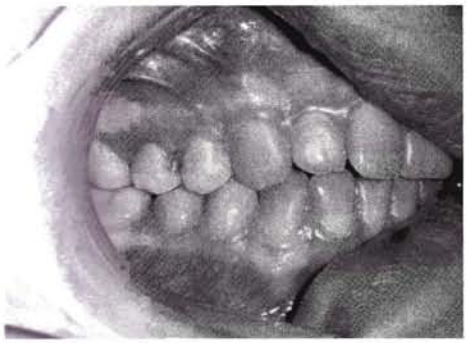


Figure 151. **Food impaction resulting from occlusal disharmony.**

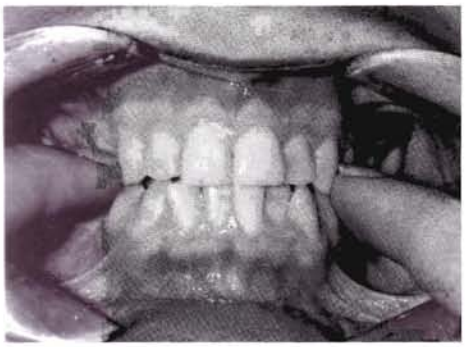


Figure 152. **Checking for tooth movement in occlusal disharmony.**

Figure 153. **Checking for occlusal disharmony by retruding lower jaw.**

Figure 154. **Healthy mouth.**

Since early diagnosis of occlusal disharmony is of utmost importance, it is advisable that every individual check his own occlusion approximately once every three months. The first step should be to observe for food impaction during eating. If meat or other fibrous foods force themselves between the teeth while one is eating, one of the first signs of occlusal disharmony is present and may be the beginning of eventual tooth loss (Figure 151). It is not necessary for food impactions to occur. One should never accept food impactions as something that just happens. The second thing to observe is excessive wear on an individual tooth. This can be checked by running the tongue over the chewing surfaces of the teeth. If a tooth is getting a sharp edge or is chipping off to form a sawtooth edge, there is individual tooth occlusal disharmony. If ignored, this may even produce a fracture of the entire cusp. The third thing to check for is the rocking or shaking of one or two teeth while chewing. This is best observed by placing the nails of the index fingers so as to bridge the space between two teeth and then closing the jaws together firmly up and down in a chewing fashion. It is best to use a finger from each hand for comparison. Figure 152 will help in doing this. A discrepancy in the amount of rocking between one tooth and the other indicates individual tooth disharmony. The fourth method of checking occlusal disharmony is to bring the lower jaw as far back as possible under the upper teeth and then bite the teeth together to check how much the lower jaw skids forward. Taking one's hand and pushing the chin back will aid in doing this (Figure 153). If the amount of skid is more than two millimeters, tolerance is beyond the normal level. In order to check the occlusion more thoroughly, the skid check may be combined with that of individual tooth movement. With due respect to all of the expensive instruments and articulators used to determine occlusal harmony discrepancies, these simple, easy-to-do methods will outperform any instrument if employed periodically because an individual can check for discrepancies before any damage occurs.

Patient Checklist To Dentist:

1. Bleeding gums during eating or brushing.
2. Food impactions between teeth.
3. Tooth skid or tooth movement during chewing.
4. Awareness of tongue thrust (especially for child).
5. Pain in jaw hinge, ear or neck muscles.
6. Sensitivity to cold, sweet or tapping on tooth.

It is important that one observe symptoms so that he may relay them to the dentist and thus aid him in diagnosing the problems. One would not think of going to his physician and asking him, "Do I have a headache, backache, or a stomach ache?" One would say, "Doctor, I have these symptoms, so would you please tell me what is wrong and what can be done to eliminate them." In dentistry there is a problem. The patient goes to a dentist and asks, "Is there anything wrong with my mouth, Doctor?" Therefore, people must be educated to check themselves for these symptoms and then go to the dentist's office for a diagnosis and treatment. An individual is with his mouth twenty-four hours a day while the dentist may spend only fifteen minutes in each six-month period, checking the same mouth. Consequently, it is not surprising that the dentist misses finding some dental problems. Once occlusal disharmony is detected, it is important that one go to his dentist to have it corrected.

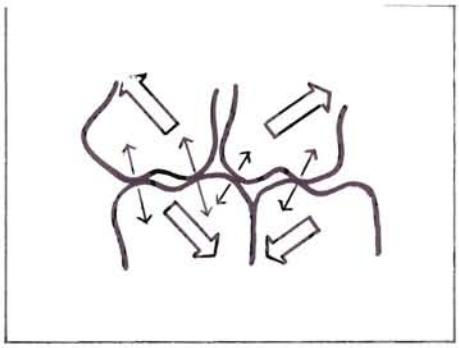


Figure 155. Occlusal disharmony.

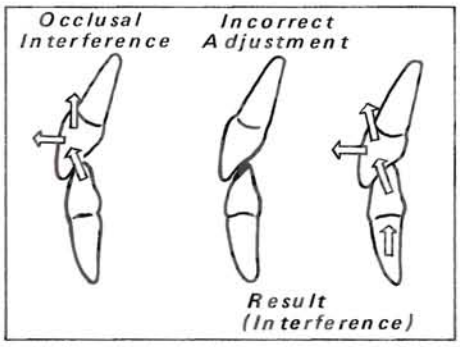


Figure 158. Incorrect method of adjusting occlusal interference resulting in greater interference.

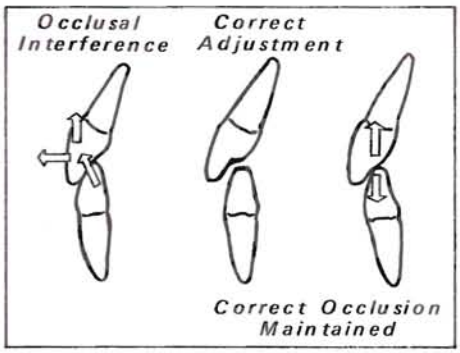


Figure 159. Correct method of adjusting occlusion by grinding in cingulum to stabilize bite.

Figure 160. Good functional occlusion plus cleanliness produces health.

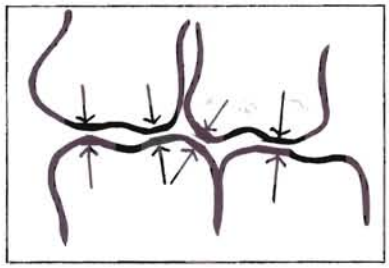


Figure 156. Minimal reduction of interfering surfaces to establish occlusal harmony.

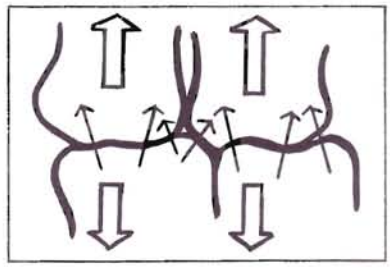


Figure 157. Occlusal harmony after correction.

TO THE DENTIST:

The following guidelines are very important. For food impactions, it is necessary to check for cavities or cracked fillings. If these are found, they should be immediately corrected. However, if there are none of these, a new filling with a tighter contact or crowning the tooth is not the answer because the space will open again and the food impaction will return. Nor should the problem be shrugged off by telling the patient, "In your mouth it just happens."

If the dentist feels qualified to correct the problem through selective polishing or grinding of the cuspal surfaces, he should do this. Otherwise, he should refer the patient to a specialist in this field. The problem should never go unattended. Usually, very little grinding is needed to correct these problems; and if much grinding is needed, the diagnosis was done incorrectly. Figures 155, 156, and 157 will assist in the proper grinding of cusps.

Damage is often done while adjusting the bite of the anterior teeth. If the patient complains about his lower incisors striking the lingual of his upper teeth, it is not uncommon to have the lower teeth as an inclined plane (Figure 158). In this case, the dentist will grind the labial surface of the lower incisors. This only encourages the lower incisors to erupt and create more wedging effect on the upper incisors. Rather than cutting the labial surface, one should cut the lingual surface in the fashion illustrated in Figure 159. This increases the ability of the lower teeth to stabilize by striking into the cingulum of the upper anteriors and thus stabilizing the bite. This will prevent further eruption of the lower teeth.

Due to the inadequate cingulum, the anterior teeth are pushed forward, producing spaces between. The common answer to this problem is to jacket the teeth with artificial crowns. This is only temporary relief because the lack of cingulum causes the teeth to push forward again. This tooth relation also has a tendency to force the food between the gum and the tooth, which creates periodontal pockets. This lack of appreciation for the cingulum has been responsible for the loss of many anterior teeth.

High fillings and bridges should be taken care of immediately. Too often, when a filling, crown, or bridge is placed, there is a small amount of striking against the teeth in the opposite arch or excessive side pressure on the teeth in the same arch. These are compensated for rapidly and become unnoticeable after a day or two, but the damage that is produced often leads to the loss of these and other teeth. There is definite need to restore decayed teeth and to replace missing ones; but if these are not placed in proper alignment, more damage than good is achieved. Therefore, a patient should never leave the office of his dentist

Figure 161. Tongue thrust habit.

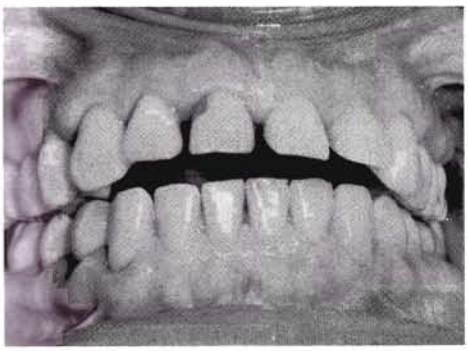


Figure 162. Results of tongue thrust habit.

Figure 163. Attempt to correct spreading anteriors with over-size jackets. (FAILURE).

Figure 164. Occlusal disharmony invisible but symptomatic.

unless the filling or bridge feels completely comfortable. If, due to local anesthetic, the high feeling of a restoration cannot be perceived, one should call his dentist and have it corrected later that day or the following day.

PHOTOGRAPHIC EVIDENCE OF OCCLUSAL DISHARMONY AND TONGUE THRUST

Another great offender in producing occlusal disharmony is tongue thrust. Tongue thrust is a habit of placing the tongue against the front teeth during swallowing (Figure 161). The results of tongue thrust are the gradual drifting out and spreading of either the upper or lower teeth or both (Figure 162). Early ways of recognizing this would be: pulling the bottom lip down makes the patient unable to swallow without pulling his lips together in a "purse string" fashion; and if the lips are held open, the tongue will attempt to force through the anterior teeth. There are two ways of training oneself to overcome this tongue thrust habit. The common one is to place the tip of the tongue in the middle of the palate (roof of the mouth) while swallowing. This procedure may at first give one the sensation of swallowing his tongue, but there is no cause for alarm. With persistence, this corrective method is foolproof. The second training procedure is to gather the liquid in the mouth toward the throat and swallow with the mouth open. This may be a more difficult exercise; however, the results are achieved more rapidly.

Figure 163 shows a mouth where the anterior teeth are spreading and causing spaces. In this individual, the condition has been corrected twice by placing oversize jacket crowns on the teeth. The condition returned because the proper diagnosis was not made. The teeth were drifting because the mouth had periodontal disease and tongue thrust. If the gums were healed and the tongue thrust habit changed, the teeth would go back together and there would be no need for the jacket crowns.

The mouth in Figure 164 appears to be healthy. However, the person is suffering from earaches and head pains. The problem has persisted for more than two years. She has submitted to every test, including psychoanalysis and brain scans. As a last resort, she was to have middle ear surgery for exploratory purposes. In the meantime, she was checked for occlusal disharmony during a routine dental exam. There was a discrepancy of four millimeters when her jaw was set back in centric occlusion. Figure 165 shows the bite opening in centric. After the bite was corrected through minimal grinding, the jaw would close in this same position. Figure 166 shows the jaw closed in centric. Within a week, most of the pain symptoms disappeared; and she has since had no more problems.

Figure 165. Figure 164 after chin was retruded, occlusal disharmony now visable.

Figure 166. Occlusal harmony restored by eliminating interfering surfaces.

FLUORIDES AND CLEANING AIDS

Q — Are fluorides good for the teeth?

A — Fluorides in drinking water in the proper proportions enable children to grow stronger teeth that are more resistant to cavities; but in a dirty mouth, teeth will decay, even with the use of fluorides. It is also important to clear up the erroneous belief that fluorides will keep one from getting gum disease. The ingestion of fluorides will not help the health of the gums.

Q — What about fluorides painted on the teeth by the dentist?

A — This painting helps to harden the teeth but has limitations.

Q — What is the best dentifrice (toothpaste)?

A — Dentifrice is only important in the cosmetic or polishing effect it has on teeth. In polishing the teeth, as in polishing silverware, the less polish used, the more effective it is. Smooth polished teeth are easier to keep clean. We are, therefore, interested in polishing teeth. It is important to keep in mind that no brushing should be done unless it can be followed by blotting. The cleansing of the mouth and the blotting of the teeth and crevices are always done without the use of a dentifrice.

Q — Are electric toothbrushes effective?

A — This mechanical brush is good only for the cosmetic effect on teeth, but it is not comparable to blotting for helping the health of the mouth. It is also difficult to carry around and not at all necessary. Until an effective electric blotting brush (small vacuum cleaner) is developed, the hand blotting brush will have to be used.

Q — How effective is dental floss?

A — Dental floss may be used providing the user is able to do so without injuring the gum. Most dental floss users snap the floss through the contact of the teeth and cut the papilla (gum between the teeth). When this happens, the damage done to the tissue greatly overshadows any good derived. A dentist can train a person to use dental floss correctly to avoid such gum damage. By blotting the mouth and teeth correctly, one will find that the debris left at the contacts (area between the teeth) is insignificant; thus, the need for dental floss is minimized. Ordinary tooth-brushing plus dental floss cleans 10% of the mouth while blotting of the teeth and crevices with total mouth hygiene cleans 98% of the mouth without floss.

Q — What about using a rubber tip for cleaning in between the teeth and massaging the gums?

A — Like dental floss, the rubber tip can do considerable damage if it is not used correctly. It can be used for massaging and shaping healthy gums but never for cleaning into the crevice as this will separate the gum from the tooth.

Q — Are stimudents (soft, triangular, balsa wood sticks) useful?

A — They can be used beneficially to polish the areas of the tooth that cannot be brushed, but the user should be very careful not to cause damage.

The same logic can be used for toothpicks. They can be used to clean and polish the spaces between the teeth, but toothpicks must be used very carefully so no gum injury is produced.

Q — How can one clean wide embrasures caused by tipped over teeth or those left after pyorrhea treatment?

A — This can best be done by cutting a pipe cleaner (preferably plastic core type) into convenient toothpick lengths and using this piece to clean in between. If polish is desired in these areas, a little toothpaste may be put on the pipe cleaner. Small cone-shaped interproximal brushes can also be used very effectively.

IMPORTANCE OF DIET

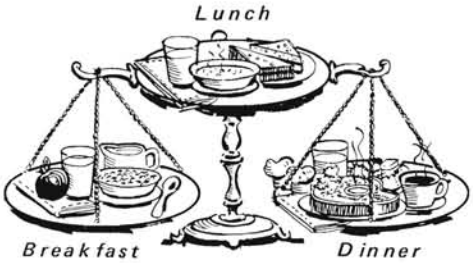
Q — Is diet important for healthy teeth?

A — Certainly it is important but not more so than for the health of any organ in the body. Everyone should maintain a good balanced diet.

Q — What is a balanced diet?

A — A balanced diet consists of enough varieties of food to give one the essential proteins, vitamins, and minerals necessary for normal growth and health. The most important meal is a good breakfast. Without this meal, there can be no balanced diet. The least important meal is the evening meal. Not eating breakfast and having a large evening meal would be like going on a thousand mile trip, then checking and adding oil after one gets there. It is usually too late to do any good.

Meals are not balanced only by checking for content. They should be balanced in relation to distribution. One should attempt to consume the same amount of food for breakfast as for dinner.



Q — What if I do not eat any breakfast?

A — Then you should eat no dinner either.

Q — How does eating of sweets affect the health of the mouth?

A — Sugars are turned into acid in the presence of bacteria in the materia alba or plaque. These bacteria live on sugars which form an acid. Normally, this acid is not strong enough to dissolve the enamel. However, under the protection of the plaque or mouth dirt, the acids cannot be diluted and become strong enough to dissolve the teeth. It must be emphasized that in a clean mouth, free of mouth dirt, sugar cannot damage the teeth.

Q — Does excessive eating of sweets cause gum disease?

A — Excessive eating of sweets does not in itself cause gum disease. However, it does weaken the body defenses, making it easier for disease to attack the gums. This is also true of the causes of skin blemishes.

Q — How can I eat breakfast, if I don't have an appetite?

A — If you follow the simple formula of eating the same amount of food for the evening meal as what is consumed for breakfast, the balancing of food intake is rapidly achieved. If you have eaten no breakfast, eat the same amount for the evening meal and you will soon develop an appetite for breakfast.

Q — How does this type of eating affect people on a weight control diet?

A — Well-balanced meals at breakfast time actually help to reduce weight by increasing energy (calorie) consumption by the body.

Q — Why do I continue getting cavities even though I brush my teeth immediately after eating?

A — Brushing the teeth after eating will not keep teeth from decaying because sugar is returned to the mouth through the saliva for an extended period after food is consumed. This sugar feeds the bacteria that are responsible for the decay. Brushing the teeth does not make the mouth clean enough to avoid tooth decay.

Cavities can be produced without eating any sweets. Sugar can be injected into the blood and it will cause tooth decay in a dirty mouth as it flows into the mouth with the saliva.

Q — How can tooth decay be avoided?

A — Cavities can be avoided by cleaning the entire mouth. This includes the tongue, cheeks, floor and roof of the mouth, teeth, and especially the crevices around the teeth.

During tooth-brushing, the materia alba and its associated bacteria are swept into these crevices. Only through blotting can this area be cleaned.

Q — Are vitamins and minerals important for mouth health?

A — Vitamins and minerals are important for general health. However, one cannot blame bleeding gums on vitamin deficiency unless other organs are also affected; that is, bleeding of eye, ears, nose, etc.

Q — Is there a limit to drinking soft drinks and still keeping the teeth healthy?

A — Soft drinks as a rule have a deteriorating effect on the teeth because the acids in these drinks dissolve the teeth. Erroneously enough, some people believe that sugarless drinks are less damaging to teeth than sweet drinks. This is a fallacy, as sugarless drinks usually have a higher acid content than the ones with the sugar, and thus do more damage to the teeth in spite of no sugar present.

GUM DISEASES

Q — Is gum disease inherited?

A — The weakness toward gum disease may be inherited; but if one maintains a clean mouth through blotting and total mouth hygiene, there should be no reason to have gum disease. Regular checkups by a dentist will give one ample notice if the mouth is not being cared for properly.

Q — How often should one see his dentist?

A — This depends upon what kind of care is given to the mouth. One could go to his dentist once a month and still lose his teeth due to gum disease since the dentist can only repair the damage done. The person to whom the teeth belong is the only one who can maintain his mouth in good health. If one does an excellent job of mouth care, a visit once a year to the dentist is adequate. A prophylactic polishing by the dentist may be done for cosmetic reasons.

Q — Are radiographs (X rays) necessary to diagnose gum disease?

A — No, not always; but radiographs do help to determine the amount of damage that has been done by the disease. Early gum disease is best diagnosed by either the presence of bleeding gums or the formation of calculus on the necks of the teeth. No damage is visible in the radiographs at this early stage.

Q — If a person has gum disease, how long can he expect to keep his teeth?

A — The chances are usually very good that the gums can be healed. Once the gums are healthy and are maintained properly, there should be no reason for losing the teeth. Teeth are meant to last a lifetime, and this can nearly always be accomplished.

Q — Can one get trench mouth by kissing?

A — A healthy, clean mouth cannot get trench mouth.

Q — Are gum diseases contagious?

A — No, they are not. Trench mouth or Vincent's Disease at one time was believed to be contagious. Attempts have been made to transplant the disease, but today it is known that it is impossible to produce trench mouth in a clean mouth. It is just as difficult to produce trench mouth in a clean, healthy mouth as it is to produce athlete's foot on dry, clean feet.

Q — Do nervous people have more gum problems?

A — Nervousness does weaken the body and makes it susceptible to disease. Thus, it adds to the gum disease problem but does not cause it.

Q — At what age does gum disease usually start?

A — It has long been said that gum disease generally begins at about 35 to 40 years of age. This statement is very misleading. Gum disease usually starts in the teenage group and is manifested as bleeding gums and goes unrecognized until bone damage is evident at about the age of 35 or 40. At this time little or no bleeding is evident.

Q — Are all gum diseases curable?

A — It could be said that 99% of all gum diseases are curable. An incurable gingivitis is produced by leukemia. Another gum disease known as desquamative gingivitis is also incurable, but the symptoms can be greatly reduced through mouth cleanliness.

Q — Does pyorrhea condition produce arthritis?

A — One cannot say that a gum disease can directly produce arthritis; but it is known that when people with severe gum disease chew food, they pump bacteria into the bloodstream. Bacteria in the bloodstream are able, under the right conditions, to produce arthritis, strokes, or heart attacks.

Q — Can one expect to have bleeding gums during pregnancy?

A — Diseased gums flare up and bleed more during pregnancy. Healthy gums should never bleed, even during pregnancy. It is even possible to heal the gums during pregnancy.

Q — What are gum boils?

A — Gum boils are usually caused by badly decayed and infected teeth or by an advanced pyorrhea condition. They can be cured but are best prevented.

Q — Are canker sores and mouth ulcers due to gum disease?

A — No, they are not. They are produced by a virus in the tissue. When the body resistance is lowered, the virus becomes active and creates the typical lesion. The body resistance can be lowered by a change in diet, larger than usual ingestion of sweets, eating highly acid foods, or by an unusual increase in nervous tension. There is no cure for these lesions without knowing what brings them on in each particular case. The bacterium known as Lactobacillus Boreas has been known to relieve the symptoms for many people. It is bottled and sold in drugstores under the name of Lactinex. Also, it is found in buttermilk and yogurt.

LOOSE, MISSING, OR WIDELY-SPACED TEETH

Q — Is it important to tie loose teeth together?

A — Loose teeth should be splinted (tied together) only if they cannot stand alone and there is a strong tooth nearby to anchor to. The most important thing, far more important than splinting, is to keep the plaque or mouth dirt out of the crevices.

Q — Is it important to replace missing teeth?

A — It is usually very important to replace all missing teeth so that one's teeth can be used to their fullest potential.

Q — Is it true that partial dentures destroy the teeth to which they are attached by wearing off the enamel or loosening the tooth?

A — Properly constructed partial dentures do not do either. If the enamel is destroyed, it is because the mouth is not kept clean; and the acid formation dissolves the enamel. If the teeth are loose, the cause is usually that the clasps holding the partial to the teeth are too tight or gum disease is present. Frequently, the patient convinces the dentist to tighten the partial. Usually, the looser the clasps are, the better the health of teeth remains. Teeth bearing partial dentures should remain as healthy as those teeth not bearing partial dentures.

Q — How about crowns and fixed bridges?

A — Fixed bridges are very necessary and should always replace missing teeth. If constructed properly, they should never endanger the teeth to which they are attached. Teeth that are covered with a crown or jacket have a greater chance of having periodontal disease. However, if the tooth is decayed badly, a crown or jacket may be the only thing that can restore it. If crowns or jackets are used, they should not extend into the gingival crevice (under the gum tissue).

Q — Is it still important for someone to clean his mouth even though he has lost his teeth and is wearing dentures?

A — Proper cleaning of the gums and the entire mouth strengthens the tissue, making the dentures easier to endure and helping the dentures to maintain their proper fit. It is also important to remove the dentures two or three times a day and cleanse the entire mouth to avoid odor commonly known as denture breath.

Q — What happens if missing teeth are not replaced?

A — Missing teeth cause the complete dentition to shift and thus, aid in the destruction of bone.

Q — What is the reason for spaces between the front teeth?

A — If this occurs in an adult, it may well be one of the signs of advanced gum disease. In children, it is often produced by a habit known as tongue thrust. Tongue thrust consists of swallowing by placing the tongue firmly against the teeth. This habit can usually be corrected. The labial frenum (the cord of tissue running from the lip to the gum attached between the two front teeth) is often blamed for the separation between the two front teeth. In most cases, the cord is there because of some unusual habit and is not the cause of the problem. There are rare instances when this cord must be removed.

CHEWING GUM AND TOBACCO

Q — What effect does chewing gum have on mouth health?

A — The greatest damage caused by chewing gum is that it provides no cushion for the teeth. It is like running the car engine at full speed without having it in gear.

Q — What effect does smoking have upon teeth?

A — Smoking only discolors the teeth, as does the drinking of coffee or tea. In addition, smoking produces foul mouth odor. Cleaning the entire mouth helps to eliminate this. Instant coffee and instant tea are heavy stain producers.

Q — Is there damage done by tobacco chewing?

A — One damage which results is severe staining. The other is that in order to get rid of the tobacco juice, one must spit often. Saliva (mouth fluid) is loaded with minerals needed for digestion and health maintenance of the stomach and intestines. When one spits often, these needed substances are eliminated from the body.

MOUTHWASHES

Q — Is an antiseptic gargle good for sore throats?

A — An antiseptic gargle is not advisable for sore throats because it kills the good bacteria as well as the bad. The old fashioned hot water and salt rinse or gargle is still the best. This is true because the hot water increases the flow of blood to the infected area. Blood is by far the best healer known.

Q — Is penicillin mouthwash an advisable treatment for bleeding gums?

A — Neither penicillin nor any other antibiotic mouthwash is ever advisable for gum infections.

Q — Are there any mouthwashes that can be used?

A — If a mouthwash is desired, a druggist can make up a gallon of flavored water concentrate in any flavor requested. This mixture would have no protein precipitating agent.

Q — Are there any mouthwashes that are beneficial?

A — Yes, plain hot water or hot salt water is beneficial because the heat increases the blood circulation; and blood is the only real healer in existence. Healthy saliva is a natural beneficial mouthwash since it has enzymes in it that help destroy harmful bacteria that do not belong in the mouth. Therefore, just swishing the saliva through the mouth is all that needs to be done.

Q — Is hot salt water a good mouthwash?

A — Hot saline mouthwash may be beneficial or damaging, depending upon the specific problem of the individual; hot water brings blood to the area and is beneficial in the process of healing. The salt also has stimulating qualities. One must understand his general health because salt used in a mouthwash rinse

is readily absorbed through the tissues. Individuals that are suffering from hypertension (high blood pressure), kidney disease, heart disease, and others should stay away from using salt. There have been instances where people were put on salt-free diets but received excessive salt intake through saline mouthwashes or brushing their teeth with salt. Baking soda has the same effect on blood pressure.

RELATED QUESTIONS

Q — Why are food impactions formed between some teeth?

A — If food is forced between the teeth during eating, it is most likely due to an improper match of the upper and lower teeth; or it may be due to a cavity between the contact points. In either case, a dentist can make repairs. One should never tolerate food impactions as they are very damaging to the gums.

Q — Do some teeth decay because they are soft?

A — No, they do not. In fact, hard teeth get caries (decay cavities) more rapidly than the soft ones. The tooth is broken down because of acids that form in the mouth when the plaque or mouth dirt acts upon the sugars. The acid then dissolves the teeth. Since the hard tooth has much more calcium, it is more readily broken down by the acid.

Q — Can anything help a dry mouth and drying of the eye fluid?

A — The cleaning of the posterior part of the tongue makes the eyes water and helps activate the tear glands. The gag reflex stimulates the tear ducts. This has worked in many instances.

Q — Is it advisable to spit or rinse the mucus or saliva from the mouth?

A — It appears that mucus and saliva are very beneficial and should not be wasted. People who spit excessively have a greater incidence of stomach ulcers.

Q — Are there any benefits derived from the use of a water irrigating device?

A — Dr. Dirk Gootjes, a Wisconsin periodontist, has found a use for the irrigating device. He says in part ". . . it is not completely without merit and can be a useful diagnostic aid as it may elicit an abscess in a mouth and thus reveal a previously unsuspected pyorrhea."

Q — What effect do oral contraceptives have on mouth health?

A — In many cases, the use of oral contraceptives may well cause bleeding of gums. However, if the mouth is kept very clean, they should not produce this.

Q — How often should one clean his mouth?

A — If the gums are infected, the cleaning should be done three to four times daily. After the gums are completely healthy, cleaning the mouth thoroughly twice daily (blotting of the crevices and cleaning the rest of the mouth) will maintain health.

Q — How much time should one spend?

A — It is difficult to set the amount of time one should spend since there is a varying degree among people. A very rough average would be a minimum of twenty minutes, twice daily. One should keep in mind that though it is possible to blot too hard, it is nearly impossible to blot too much; for one can never get the mouth too clean.

Q — How hard should one press when blotting?

A — It is difficult to put amount of pressure into words. If the gums become sore, one is pressing too hard. Usually, it is best to begin the blotting technique with very little pressure and gradually increase it as the mouth becomes healthier. One should never use excessive pressure as this usually causes soreness of the gums.

Q — Are there other reasons for tenderness following blotting?

A — Aside from pressing too hard, tenderness is caused because one is combining brushing and blotting.

Q — How long will one have to continue this blotting?

A — We hope that this blotting and total mouth hygiene will be accepted as a way of life and you will want to continue doing it as you would eating; that you get to enjoy a clean mouth as you do a clean body. With this habit, you should enjoy a lifetime of mouth health free of cavities and gum diseases.

Q — Why do some people grind their teeth?

A — Bruxism (grinding of teeth) is often caused by an improper fit of the upper teeth to the lower teeth. It usually takes only a slight bit of polishing the cusp (projection) for the dentist to correct this condition. Sometimes bruxism is brought about by psychological problems.

Q — A drug prescribed for epilepsy causes gums to grow over the teeth. Can anything be done to stop this growth?

A — In many cases where the individual has been taught the blotting technique, hyperplasia (growth of gum) from the use of dilantin sodium has been eliminated.

Q — How can one interest teenagers in keeping their mouths clean?

A — Young people cannot appreciate the benefit of having teeth at age forty or eliminating expensive dental care. However, if they are made to understand that mouth cleaning will give them a pleasant breath, most teenagers will clean the mouth.

Q — What assurance is there that the blotting and cleaning method will work?

A — People have used this method of cleaning for over twenty years without getting a cavity or gingival disease. The same individuals had undue dental problems prior to beginning this type of care. There has, as yet, not been any case where the blotting method has not worked, unless severe systemic blood diseases were present.

Q — Can blotting help people who already have a dry mouth condition?

A — Yes, it usually can. The stimulating action produced by the cleaning of the mouth can reactivate partially degenerated mucous glands (glands that produce saliva) and restore their vigor in producing the fluid. People that have a dry mouth should not use any mouthwash whatsoever.

Q — Since brushing teeth after a meal destroys the after taste of food, is there an alternative?

A — If the mouth is cleaned thoroughly by use of the blotting technique and total mouth hygiene before the meal commences, it should be clean enough so that no further brushing is necessary immediately after eating.

Q — If one does this type of cleaning, is it still important to have a prophylaxis (a cleaning by a dentist or dental hygienist)?

A — In any type of treatment, one must first answer the question, "Why?" Why would you want your teeth cleaned by the dentist? There are reasons: (1.) removing of calculus, (2.) removing of stains, (3.) polishing teeth. Of these three, after the blotting and total mouth hygiene technique is completely mastered, removing stains and polishing the teeth are the only reasons left. However, this is a good time to have the dentist check and see if calculus is forming; for if it is, you know that your method of mouth care is not diligent nor complete enough.

Q — My gums used to bleed during brushing and sometimes while eating. Now the bleeding has subsided and I think that my mouth is healthy. How can I be sure?

A — If your gums have stopped bleeding, it is either because the mouth has become healthy or that the disease has advanced to Stage 2, where at this point the infection is too deep to produce gingival bleeding. One simple check is this; if you form tartar or calculus, you definitely know you still have periodontal disease. However, periodontal disease can occasionally exist without calculus forming. It is best to check with your dentist, since he can use a periodontal probe to check the pocket depth to rule out periodontal disease. Healthy gums have a 1 mm. or less crevice depth; 3 mm. or more denotes disease.