

# THE STAGES OF HUMAN DECOMPOSITION

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**Human decomposition** is a natural process involving the breakdown of tissues after death. While the rate of human decomposition varies due to several factors, including weather, temperature, moisture, pH and oxygen levels, cause of death, and body position, all human bodies follow the same four stages of human decomposition.

IF YOU'RE IN NEED OF IMMEDIATE ASSISTANCE, CALL 24/7/365

CALL US: 877-697-0348

## WHAT ARE THE FOUR STAGES OF HUMAN DECOMPOSITION?

According to Dr. Arpad A. Vass, a Senior Staff Scientist at Oak Ridge National Laboratory and Adjunct Associate Professor at the University of Tennessee in Forensic Anthropology, human **decomposition begins around four minutes after a person dies** and follows four stages: autolysis, bloat, active decay, and skeletonization.

### Stage One: Autolysis

The first stage of human decomposition is called autolysis, or self-digestion, and **begins immediately after death**. As soon as blood circulation and respiration stop, the body has no way of getting oxygen or removing wastes. Excess carbon dioxide causes an acidic environment, causing membranes in cells to rupture. The membranes release enzymes that begin eating the cells from the inside out.

Rigor mortis causes muscle stiffening. Small blisters filled with nutrient-rich fluid begin appearing on internal organs and the skin's surface. The body will appear to have a sheen due to ruptured blisters, and the skin's top layer will begin to loosen.

### Stage Two: Bloat

Leaked enzymes from the first stage begin producing many gases. The sulfur-containing compounds that the bacteria release also cause skin discoloration. Due to the gases, the human body can double in size. In addition, insect activity can be present.

The microorganisms and bacteria produce extremely unpleasant odors called putrefaction. These odors often alert others that a person has died, and can linger long after a body has been removed.

### Stage Three: Active Decay

Fluids released through orifices indicate the beginning of active decay. Organs, muscles, and skin become liquefied. When all of the body's soft tissue decomposes, hair, bones, cartilage, and other byproducts of decay remain. The cadaver loses the most mass during this stage.

### Stage Four: Skeletonization

Because the skeleton has a decomposition rate based on the loss of organic (collagen) and inorganic components, there is no set timeframe when skeletonization occurs.

# BODY DECOMPOSITION TIMELINE

**24-72 hours after death** — the internal organs decompose.

**3-5 days after death** — the body starts to bloat and blood-containing foam leaks from the mouth and nose.

**8-10 days after death** — the body turns from green to red as the blood decomposes and the organs in the abdomen accumulate gas.

**Several weeks after death** — nails and teeth fall out.

**1 month after death** — the body starts to liquify.

## HOW CAN THE STAGES OF HUMAN DECOMPOSITION AFFECT THE SITE OF AN UNATTENDED OR TRAUMATIC DEATH?

An unattended death, and the accompanying bacteria, mold, and insect infestation, can cause damage to a building's structure and personal belongings. After a body is properly removed, a professional trauma and crime scene cleanup company should always be called to clean and disinfect the site. And while an unattended death could lead to exposure to dangerous bloodborne pathogens, decomposition itself is a perfectly natural process.

**Aftermath takes great care to ensure our sympathetic, compassionate, and discreet teams clean the death site as soon as possible so families can begin the healing process. Contact us 24/7 online or at (877) 697-0348 for further information.**

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*Sources:*

*Compound Interest:* <http://www.compoundchem.com/2014/10/30/decompositionodour/>

*EnkiVillage:* <http://www.enkivillage.com/how-long-does-it-take-for-a-body-to-decompose.html#affix-section-1>