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## Human Decomposition Fact Sheet

How quickly a body decomposes depends on many factors including temperature and humidity. Decomposition is accelerated in warmer weather and decelerated in cooler climates or if the body is submerged in water. The human body begins the decay process approximately fifteen minutes after all life functions such as breathing and heartbeat have ceased.

While living, the lining in our intestinal tract protects our body from the acids and bacterium that would otherwise be harmful. Upon death, our protective coating in our intestines breaks down releasing the bacteria to begin feeding and consuming our body. The bacterium in the gastrointestinal tract produces gas as a waste product which causes the body to bloat. When the bloating has reached a maximum, the body ruptures and fluids drain out. These fluids will be extremely foul-smelling. Veteran police officers will often gag and/or vomit upon smelling these odors. They are very powerful and usually overwhelming even for people who have worked around them for many years.

This odor will permeate everything and every material such as wood, brick, metal, linoleum, etc. Carpets and all the padding usually must be replaced at scenes of decomposition. Depending upon weather conditions, size of the dwelling, number of porous materials in the dwelling and the amount of time the decedent was decomposing in the dwelling, it could possibly take several weeks to neutralize this odor. All contaminated items and materials must be removed or else this odor will remain for an indefinite period of time.

Throughout this process, insects are almost continually present. Flies can sense death and decay odor within minutes of the death of an organism. Research has proven flies can smell this odor from up to thirty-nine miles away under field testing conditions.

Flies lay eggs in soft tissue and moist areas such as the eyes, wounds, nose, mouth, rectum and vagina. The eggs develop into larvae, more commonly known as maggots. These maggots usually appear to be small, white and worm-like and will consume the soft tissue of the body. They will then mature into flies, lay more eggs, and the cycle repeats itself. A forensic entomologist (study of insects/arthropods) can determine the time of death very closely due to the activities of the insects being very time specific and predictable. It is imperative that a crime scene be disturbed as little as possible by non-professional personnel so as not to lose any potentially valuable forensic evidence.

When a body decomposes on cold concrete, it will produce a residue that is white/opaque in color called adipocere, or more commonly known by the funeral industry as Grave Wax. Grave wax is actually comprised of body fat. This grave wax could be used to make candles in the same manner as any animal fat is used to make candles.

When bodies decompose, they change and they change dramatically. Decontamination services have performed crime and trauma scene decontamination in which bodies had been lying undisturbed and decomposing for more than ten months. The odor was still very strong even after ten months. This is the reason why fluid-soaked carpet, padding, lightweight concrete, plywood and sheetrock must often be removed from the property. Body fluids do not evaporate and can take months or even years to dry.

It is a common scenario for people to die while lying in bed or sitting on their couch/recliners. The blood and body fluids will seep into and usually all the way through the couch, chair, mattress, box springs, carpet, carpet padding, and into the lightweight concrete floor. If the unit is an upstairs apartment, the fluids can seep into the space between the floors and onto the sheetrock of the ceiling below.

A professional company specializing in this type of work with the necessary experience will know where to look for these fluids and will know how to decontaminate the scene properly.

Remember: viewing crime and trauma scenes can be a life-altering event. You cannot undo seeing or smelling such scenes. Once the damage is done, it cannot be undone.