

Common Manifestation of Death by Choking.

It is not uncommon for documentation or discussion to use the term “choking” to describe instances in which food or liquid went “down the wrong pipe” or a significant cough occurred. Those instances are not, in fact, choking in the sense of foreign body airway obstruction that leads to death by asphyxiation. This article will discuss the choking event that deprives the body of oxygen and results in death by asphyxiation.

For obvious reasons we cannot conduct experiments inducing choking death, thus the estimates of time it takes to choke to death vary widely and are approximate. The time for death also varies significantly secondary to the victim’s medical status, level of blood oxygenation at the onset of the choking event, vitality, amount of activity at the time of the choking event and age.

It is generally accepted that occlusion of the airway for 20 seconds or less is harmless and a healthy person deprived of oxygen for less than 60 seconds has a small probability of brain damage or death. Estimates of the time for death to occur secondary to choking range from a low of one minute thirty seconds to a high of ten minutes, the majority fall between those two extremes at between four and six minutes. There are those, however, who espouse the rule of three: Three minutes without air, three days without water and three weeks without food for human survival. Despite the wide discrepancies and lack of scientifically arranged studies, there are physical manifestations of asphyxia due to choking that occur within generally accepted time frames.

True choking begins when the trachea or larynx become blocked, usually by food. In the first 0 to 20 seconds, the victim realizes they cannot breathe and tries to dislodge the obstruction by coughing or sometimes reaching into the mouth.

When the victim realizes they have been unsuccessful in removing the object, they gasp for air in the first 20 to 30 seconds. They will not be able to breathe in air, as the airway is obstructed, and they will be silent as the vocal cords have no air flow with which to make sound. The victim typically grabs their throat in this time frame. The reflexive two handed throat grab coupled with the inability to make sound is considered the universal sign for choking. The victim often reflexively flails their arms, jumps up or runs secondary to the freeze fight or flight reflex and the need to act in defense of oneself.

Within 30 to 60 seconds, oxygen saturation in the blood and tissues starts to fall appreciably as carbon dioxide increases and serious panic sets in. At this time, a counterproductive reflex occurs called the “drowning reflex.” The body recognizes it is in significant danger and reacts as if the victim were drowning by closing the trachea. This is nature’s way of sustaining life a bit longer by making it impossible to breathe water into the lungs in an actual drowning. The victim can feel the vise like grip as their windpipe clenches around the food and impedes all movement. They become frantic.



As all this is happening, the throat can swell around the lodged piece of food, exacerbating the drowning reflex. This can be quite painful, but it is also possible the victim does not notice pain secondary to the panic surging through their system.

Within 60 to 90 seconds the victim is severely oxygen deprived and becoming weak and possibly confused. Every muscle and organ in the body desperately needs oxygen and they are all sending signals to the brain simultaneously. The victim is being bombarded with neuro signals as vital organs begin to die. The brain and heart are becoming hypoxic. The body becomes chemically imbalanced with an increase in carbon dioxide and lack of oxygen initiating metabolic acidosis and respiratory acidosis.

Within 60 to 120 seconds, the victim may manifest a bright red face as the body sends blood to the surface of the skin to cool the skin and decrease anxiety.

Shortly thereafter the victim will very likely appear very white or what has been described as “ghostly white.” As one’s system realizes that panic is not the primary threat to life, but organ failure is, it pulls blood from the extremities and face to the organs in an effort to sustain life.

Finally, the victim may turn blue or gray blue especially around the lips. This is called “cyanosis” and it indicates the blood is starved of oxygen. The victim’s vital organs are failing.

Within 4 to 6 minutes the brain will begin to die and shut parts of the system down. The victim will lose the ability to see or hear and will faint. Loss of consciousness is part of the body shutting down progressively more critical parts of the system. In a relatively short period of time the heart and brain will shut down and death will occur.

It is possible that when the body realizes it is dying, it will release dopamine creating a calm before death, it is also possible the victim will have lost consciousness before this occurs.

The Speech Language Pathology (SLP) expert witnesses at Lios Manhe LLC can review documentation and assist in determining if the signs and symptoms of choking are evident. Contact hamilton@liosmanhe.com