

FROSTBITE

The most common injury caused by exposure to cold temperatures is frostbite. Body parts most susceptible to frostbite include the nose, ears, chin, fingers and toes. Frostbite occurs when the blood flow through a body part is restricted due to extreme cold temperatures and ice crystals then begin to form in the body tissue.

Symptoms: The first symptom of frostbite is a slightly flushed skin color. The color of the skin then changes to white or grayish yellow and finally grayish blue. Pain may be felt during the early stages, however, the pain may cease in later stages. The frostbitten area will also feel very cold, numb and the outer layer of skin may feel "hard".

First Aid Treatment: Move the victim to a warm location. Place the frostbitten part into a warm water bath between 100-105 degrees. Do not use hot water. Handle the part with extreme care. Do not rub or massage the area. Avoid exposing the part to hot air or metal objects. The re-warming process may take between 30-60 minutes. Severe frostbite should be handled by medical personnel.

HYPOTHERMIA

Prolonged exposure to cold temperature may also cause the cooling of the body's inner core, more commonly known as hypothermia. This loss of body temperature can be fatal.

Symptoms: Hypothermia symptoms include shivering, dizziness, numbness, confusion, weakness, impaired judgment, impaired vision and drowsiness. Later stages of hypothermia include the loss of consciousness, decreased pulse and breathing rate, coma and possible death.

First Aid Treatment: Professional medical treatment should be obtained. Move the victim to a warm area. If available, have the victim change into a set of dry, warm clothing. If the victim is fully conscious, a warm drink may be given. Do not give the victim a caffeinated or alcohol beverage.

PROTECTIVE MEASURES

- a. Avoid consumption of caffeinated or alcohol beverages. Temporary warmth may be achieved; however, body heat loss will occur.
- b. Wear a hat and scarf. Up to 50% of heat loss occurs from the head and neck.
- c. Wear three (3) layers of clothing.
 1. Against the skin: a warm, breathable synthetic fabric such as Gore-Tex or Thinsulate will allow moisture to escape to the next layer.
 2. Middle: layer of wool clothing to draw moisture away from skin.
 3. Outer: water-resistant or repellent material.
- d. Frostbite and hypothermia may occur when temperatures are above freezing due to extended periods of exposure and windy conditions.

This document provides general information about a safety and health topic and is only intended for use in facilitating discussions with employees in safety meetings. It does not address all hazards, OSHA or local requirements related to the topic or accompanying photograph. This document cannot be relied on to determine whether a site specific situation meets all safety and health requirements. Assurance Safety Consulting is not responsible for any health and safety violation or injury at a job site.