

Hypothermia and Frostbite

As healthcare providers we understand the importance of preventing hypothermia particularly in the trauma patient. This is the time of year when cold weather emergencies are often associated with prolonged exposure to the cold; the most common cold-related problems are hypothermia and frostbite.

According to the CDC (www.cdc.gov) hypothermia is defined as a core body temperature of <95 degrees. If persons exposed to excessive cold are unable to generate enough heat through shivering to maintain a normal core body temperature of 98.6 degrees, their organs such as brain, heart, or kidneys can malfunction. When the brain function deteriorates, persons with hypothermia are less likely to perceive the need to seek shelter.

Signs and Symptoms:

- Shivering
- Slurred speech
- Abnormally slow breathing
- Cold, pale skin
- Loss of coordination
- Fatigue, lethargy or apathy

The persons most at risk are older adults (older than 65), infants and young children and those that are very lean. Other individuals at risk are the mentally ill or persons with Alzheimer's disease, in addition to those that are homeless, intoxicated, malnourished, or have previous conditions that predispose them to cardiovascular disease and thyroid disease (hypothyroidism.)

- Mild hypothermia: core body temperature is 90-95 degrees Fahrenheit
- Moderate hypothermia: core body temperature is 82-90 degrees Fahrenheit
- Severe hypothermia: core body temperature is <82 degrees Fahrenheit

Recommendations and Treatment (www.cdc.gov)

- Mild hypothermia can be treated with passive rewarming using blankets.
- Moderate hypothermia requires active rewarming with warm intravenous fluids, oxygen, lavage, or immersion baths.
- Severe hypothermia might require active rewarming with cardiopulmonary bypass.
- Provide support care, monitor the cardiac rhythm and replenish electrolytes as needed.
- Rewarm and provide cardiopulmonary resuscitation and supportive care, even if a person appears to be dead.

Frostbite

The National Safety Council (www.NSC.org) offers the following information regarding frostbite. Frostbite is the most common injury resulting from exposure to severe cold. A superficial frostbite is characterized by white, waxy, grayish-yellow patches on the affected areas. The skin feels cold and numb but underlying tissue feels soft and pliable when depressed. Deep frostbite will usually affect the hands and feet and is characterized by waxy, pale, solid skin, and may have blisters that form.

Recommendations and Treatment

- Place dry, sterile gauze between toes and fingers to absorb moisture and keep them from sticking together.
- Slightly elevate the affected part to reduce pain and swelling.
- If you are more than one hour from a hospital and have warm water, place frostbitten part in the water (102-106 degrees).