

Cold Weather: Frostbite

What Is It?

Frostbite is an injury to the body that is caused by freezing of the skin and underlying tissue. The lower the temperature, the more quickly frostbite will occur. Frostbite typically affects the extremities, particularly the hands and feet.

Signs & Symptoms:

- Cold skin with a prickling feeling.
- Numbness.
- Red, white, gray, or yellow skin.
- Hard or waxy looking skin.
- Clumsiness due to joint and muscle stiffness.
- Blistering after rewarming in severe cases.

What To Do:

- Give warm, sweetened drinks, if the person is alert. Avoid drinks with alcohol or caffeine.
- Loosely cover and protect the area from contact.
- DO NOT rub the affected area to warm it because this action can cause more damage.
- DO NOT apply snow or water to the area.
- DO NOT break any blisters.
- DO NOT try to re-warm the frostbitten area before getting medical help. If the area is re-warmed and freezes again, more tissue damage will occur.

Staying Safe & Warm

PROVIDE EMPLOYEE TRAINING - Every worker should be trained on how to prevent and recognize cold stress illness and injuries and how to apply first aid treatment. Training topics include: appropriate engineering controls, personal protective equipment and work practices to reduce the risk of cold stress.

PROVIDE ENGINEERING CONTROLS - Radiant heaters may be used to warm workers in outdoor security stations. If possible, shield workers from drafts or wind to reduce wind chill.

PROMOTE SAFE WORK PRACTICES - It is easy to become dehydrated in cold weather. Employers should provide plenty of warm, sweetened liquids to workers. Avoid alcoholic and caffeinated drinks. If possible, employers can schedule heavy work during the warmer part of the day and should provide frequent breaks in warm areas. Assign work tasks in pairs, so that employees can monitor each other for signs of cold stress.

ENCOURAGE PROPER CLOTHING - The type of fabric worn makes a difference. Cotton loses its insulation value when it becomes wet. Wool, silk and most synthetics, on the other hand, retain their insulation even when wet.

The following are recommendations for working in cold environments.

- Workers should wear at least three (3) layers of loose fitting clothing. Layering provides better insulation:

Layer 1: An inner layer of wool, silk or synthetic to keep moisture away from the body.

Layer 2: A middle layer of wool or synthetic to provide insulation even when wet.

Layer 3: An outer wind and rain protection layer that allows some ventilation to prevent overheating.

- Wear a hat or hood to help keep your whole body warmer. Hats reduce the amount of body heat that escapes from a worker's head.
- Use a knit mask to cover the face and mouth when necessary.
- Use insulated gloves to protect the hands and ensure water resistance when necessary.
- Wear insulated and waterproof footwear.

Sources: Mayo Clinic, OSHA

SafetyConnection: Cold Weather: Frostbite

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