

Cold weather and environments pose many hazards to employees. A cold environment forces the body to work harder to maintain its temperature. An environment that is considered “cold” depends on the region of the country and the individual. Each unique situation needs to be analyzed and addressed individually to keep employees safe.

Cold Stress Health Hazards

Frostbite is caused by exposure to frozen conditions. Frostbite causes a loss of feeling and color in the affected areas. It most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can lead to permanent damage or amputation of the affected areas.

First aid for frostbite: Get the victim into a warm area immediately. Do not walk on frostbitten toes or feet. This will cause more damage. Use warm water to warm the affected areas up. Hot water can burn the affected area.

Trench foot is an injury of the feet resulting from prolonged exposure to wet and cold conditions.

Wet feet lose heat 25 times faster than dry feet.

To prevent heat loss, the body constricts blood vessels to shut down circulation in the feet. Skin tissue begins to die because of lack of oxygen and nutrients and due to the buildup of toxic products.

First aid for trench foot: Remove any wet socks or boots. Dry the feet and do not walk on them as this can cause more damage if already affected.

Hypothermia - When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up your body’s stored energy. The result is hypothermia, or abnormally low body temperature. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well.

First aid for hypothermia: Alert a supervisor and get medical help on the way. Move the victim to a warm area. Warm the center of their body first—chest, neck, head, and groin area—using an electric blanket, if available; or use skin-to-skin contact under loose, dry layers of blankets, clothing, towels, or sheets. If the victim is not breathing, begin CPR until the paramedics arrive on scene.

Safe Work Practices for Cold Environments

- **Eliminate or limit work** as much as possible when extremely cold temperatures are present. (OSHA established recommendations for work in colder temperatures [that can be found here.](#))
- **Allow for acclimatization** to cold environments or weather.
- **Layer up on clothing** and keep clothes dry. It is important to remove any wet clothing or boots and put on dry items when working in a cold environment.
- **Take breaks** in warm areas or vehicles as needed.
- **Drink warm beverages** to help warm up your core temperature.
- **Monitor the condition of other workers** around you. If you notice something could be wrong get them into a warm area and notify a supervisor.

Discussion Points:

1. What other hazards does the cold bring? (ice, slips/trips, equipment problems, etc.)
2. How can we mitigate or engineer out cold hazards?

<https://www.cpwr.com/sites/default/files/publications/Cold%20Weather%20Web%20HazAlert.pdf>