Protect Against Frostbite and Hypothermia Hazards

What’s at Stake

Working in a cold environment—such as cold weather, cold water or an indoor freezer—can lead to serious injuries, illnesses and death.

What’s the Danger

Two cold weather dangers are hypothermia and frostbite. Hypothermia is a dangerous lowering of the body’s core temperature that occurs when a person is exposed to wet, cold and windy conditions. The body loses heat faster than it can produce it and uses up the body’s stored energy. The result is hypothermia, a potentially fatal condition. Another danger is frostbite, which occurs when the body tissue freezes. It can permanently damage the body and even lead to amputation.

Example

A young man was driving his pick-up truck late one night when winter road conditions caused his vehicle to slide off the road into a snowbank. He tried to free the truck, but eventually decided to leave the vehicle and go for help. Four hours later, he was found unconscious on the road, not far from his vehicle. He was taken to the hospital, where he died of hypothermia.

In the same month, a cross-country runner suffered frostbite after spending two days in frigid Alaska temperatures without winter gear. The damage was so bad he had to have his legs amputated just above the ankles.

How to Protect Yourself

Your best defence against the hazards of extreme cold-weather conditions is to take preventive action. Here are some ways to prevent hypothermia and frostbite:

Wear adequate clothing, including a hat, and keep all of the extremities covered. Make sure that gloves and footwear do not fit so tightly that they can cut off circulation, increasing the risk of frostbite. Dress in layers so you can add or remove clothing as conditions change.

Keep dry. Carry replacement clothing, such as socks, in case your clothing does get wet or sweaty.

Keep your strength up by avoiding overexertion and fatigue. Drink plenty of fluids, but don’t eat snow as a water replacement, since it will only chill you further. Eat high energy foods to replace calories needed for body heat.

Don’t work alone. You and your companions should keep an eye on one another for signs of hypothermia and frostbite.

Watch for warning signs of hypothermia in yourself and your co-workers. These include uncontrollable shivering, mental confusion, slurred speech, drowsiness and excessive fatigue.

Symptoms of frostbite include a white or grayish-yellow skin area, skin feeling unusually firm or waxy and numbness.

What to Do

At the first sign of frostbite or hypothermia, get the person out of the cold and seek medical care immediately. (Avoid walking on frostbitten feet or toes.) If you can’t reach medical help, start warming the person slowly. Be sure to handle the person gently, as rough handling can cause heart beat irregularities and death.

If a person is showing signs of frostbite, check also for signs of hypothermia.

Get the person into dry clothing and wrap in warm blankets covering the head. Warm the body core first—the chest, neck, head and groin. Do not warm the arms and legs first because this can drive cold blood to the heart and possibly cause heart failure. And do not rub or apply heat to frostbitten areas, as this can cause more damage. You can also use your own body heat, skin-to-skin contact under loose, dry layers of blankets or clothing, to help warm the person.

If the person is conscious, give him warm water or broth, but do not give alcoholic beverages.

If necessary, give the person CPR and keep treating the person even if he appears lifeless. A person with severe hypothermia may be unconscious and may not seem to have a pulse or to be breathing. However, hypothermia victims who appear to be dead can be successfully resuscitated.

Final Word

Reduce your risk of winter weather dangers. Learn how to prevent, recognize and treat hypothermia and frostbite.