



## Rhode Island Local Technical Assistance Program

### Everyday Safety Talks

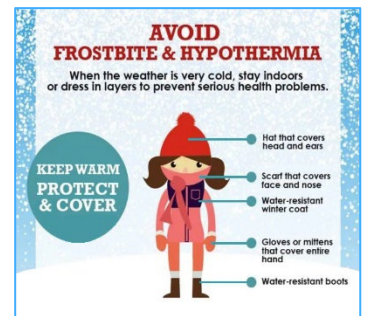
# Cold Stress

## Do You Know What to Look For?

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Workers who are exposed to extreme cold or work in cold environments may be at risk of cold stress. Extreme cold weather is dangerous and can bring on health emergencies in susceptible people, such as those without shelter, outdoor workers, and those who work in an area that is poorly insulated or without heat.

Cold weather can limit your ability to see, hear, smell, and touch as well as hinder your ability to recognize danger. Whenever temperatures drop well below normal and as wind speed increases, heat can more rapidly leave your body. It's important to dress for the weather conditions and to be aware that extreme cold can lead to serious health problems such as hypothermia and frostbite.



### Hypothermia

When exposed to cold temperatures, your body begins to lose heat faster than it can be produced. Hypothermia happens when your body temperature gets lower than what is needed to be healthy and work properly. A body temperature that is too low affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous because a person may not know it is happening and will not be able to do anything about it. If you notice any of the below symptoms, take the person's temperature and if it is below 95°F, get medical attention immediately!

#### Early Symptoms:

- Shivering
- Fatigue
- Loss of coordination
- Confusion and disorientation

#### Late Symptoms:

- No shivering
- Blue skin
- Dilated pupils
- Slowed pulse and breathing
- Loss of consciousness

#### First Aid

- Alert the supervisor and request medical assistance.
- Move the victim into a warm room or shelter.
- Remove wet clothing.
- Warm the center of their body first - chest, neck, head, and groin - using an electric blanket, if available; or use skin-to-skin contact under loose, dry layers of blankets, clothing, or towels.
- If conscious, warm beverages may help increase the body temperature, Do Not give alcohol. Do not try to give beverages to an unconscious person.
- After body temperature has increased, keep them dry and wrapped in a warm blanket, including the head and neck.
- If the victim has no pulse, begin CPR.

## Frostbite

Frostbite happens when skin tissue is damaged from freezing temperatures. Frostbite causes a loss of feeling and color in the affected areas and most often affects the nose, ears, cheeks, chin, fingers, or toes. Frostbite can permanently damage body tissues, and severe cases can lead to amputation. In extremely cold temperatures, the risk of frostbite is increased in workers with reduced blood circulation and among workers who are not dressed properly.

### Symptoms:

- Reduced blood flow to hands and feet
- Aching
- Numbness
- Bluish or pale, waxy skin
- Tingling or stinging

### First Aid

- Alert the supervisor and request medical assistance.
- Get into a warm room as soon as possible.
- Unless absolutely necessary, do not walk on frostbitten feet or toes - this increases the damage.
- Immerse the affected area in warm, not hot, water.
- Warm the affected area using body heat; for example, the heat of an armpit can be used to warm frostbitten fingers. Do not use a heating pad, fireplace, or radiator for warming.
- Do not rub or massage the frostbitten area; doing so may cause more damage.

## Recommendations to Protect Yourself

Workers should avoid exposure to extremely cold temperatures when possible. When cold environments or temperatures cannot be avoided, workers should follow the below recommendations to protect themselves from cold stress.

- Monitor your physical condition and that of your coworkers.
- Wear appropriate clothing.
  - Wear several layers of loose clothing for better insulation.
  - Tight clothing reduces blood circulation to extremities.
  - When choosing clothing, be aware that some clothing may restrict movement resulting in a hazardous situation.
  - Use outer layer of clothing as windbreaker. This makes the layers underneath more effective.
- Protect the ears, face, hands, and feet in extremely cold or wet weather.
  - Boots should be waterproof and insulated.
  - Wear a hat to reduce the loss of body heat from your head and keep your whole body warmer.
  - Wear gloves and note that often a thin pair of wool gloves under a pair of leather gloves will provide the best protection.
- Move into warm locations during breaks and limit the amount of time outside.
- Minimize sweat. If you begin to get hot, take a layer off. Try to avoid getting your clothing wet. Once wet, they will not serve as good insulation from the cold.
- Carry extra socks, gloves, hats, a jacket, blankets, a change of clothes, and a thermos of hot liquid.
- Include a thermometer and chemical hot packs in your first aid kit.
- Avoid touching cold metal surfaces with bare skin.

Remember to not overdress. Overdressing can restrict your movements and increase the chance of an accident. Shock resulting from an accident in cold weather can be much more dangerous than in warm weather. Should an accident occur in cold weather, it is critical to keep the injured person warm. When dealing with the weather and its effects, use common sense to minimize the adverse effects.