



# Cold Work

## Recognize the Symptoms

### Recognize the Symptoms

Environmental cold can affect any worker exposed to cold air temperatures and puts workers at risk of cold stress. As wind speed increases, it causes the cold air temperature to feel even colder, increasing the risk of cold stress to exposed workers, especially those working outdoors, such as loggers, snow crews, construction workers, maintenance workers, emergency workers, police officers and firefighters. Any workers who may be affected by exposure to environmental cold conditions should prepare and perform the work with adequate warm, dry clothing, preferably in layers.

#### Risk Factors for Cold Stress

- Wetness/dampness, dressing improperly, and exhaustion
- Predisposing health conditions such as hypertension, hypothyroidism, and diabetes
- Poor physical conditioning

Cold stress occurs by driving down the skin temperature, and eventually the internal body temperature. When the body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result. Types of cold stress include: trench foot, frostbite, and hypothermia.

#### Immersion/Trench Foot

Trench foot is a non-freezing injury of the feet caused by prolonged exposure to wet and cold conditions. It can occur in temperatures as high as 60°F if feet are constantly wet. Injury occurs because wet feet lose heat 25-times faster than dry feet.

**Symptoms include:** Reddening skin, tingling, pain, swelling, leg cramps, numbness, and blisters.

- Seek medical assistance as soon as possible.
- Remove wet shoes/boots and wet socks.
- Dry the feet and avoid working on them.
- Keep affected feet elevated and avoid walking. Get medical attention.

#### Hypothermia

Hypothermia occurs when the normal body temperature (98.6°F) drops to less than 95°F. Exposure to cold temperatures causes the body to lose heat faster than it can be produced. Prolonged exposure to cold will eventually use up the body's stored energy. The result is hypothermia, or abnormally low body temperature. Hypothermia is most likely at very cold temperatures, but it can occur even at cool temperatures (above 40°F) if a person becomes chilled from rain, sweat, or immersion in cold water.







Symptoms include: Uncontrollable shivering, loss of coordination, confusion, slurred speech, heart rate/breathing slow, unconsciousness and possibly death.

- Move the worker to a warm, dry area.
- Remove any wet clothing and replace with dry clothing.
- Wrap the entire body (including the head and neck) in layers of blankets;

### COLD WEATHER HAZARDS

**HYPOTHERMIA- Body temperature drops below 95°F (normal 98.6°F)**

**EARLY SYMPTOMS**

 Uncontrollable shivering*	 Confusion	 Slow/slurred speech
 Exhaustion	 Poor balance, stumbling	 Drowsiness

\*Medical emergency if shivering stops when still exposed to the cold

and with a vapor barrier (e.g. tarp, garbage bag) Do not cover the face.

- If medical help is more than 30 minutes away:
  - \* Give warm sweetened drinks if alert (no alcohol), to help increase the body temperature. Never try to give a drink to an unconscious person.
  - \* Place warm bottles or hot packs in armpits, sides of chest, and groin.
  - \* Call 911 for additional rewarming instructions.

### Frostbite

Frostbite is caused by the freezing of the skin and tissues. Frostbite can cause permanent damage to the body, and in severe cases can lead to amputation. The risk of frostbite is increased in people with reduced blood circulation and among people who are not dressed properly for extremely cold temperatures.

**Symptoms include:** Reddened skin develops gray/white patches in the fingers, toes, nose, or ear lobes; tingling, aching, a loss of feeling, firm/hard, and blisters may occur in the affected areas.

- Follow the recommendations described for hypothermia.
- Protect the frostbitten area, e.g., by wrapping loosely in a dry cloth and protect the area from contact until medical help arrives.
- DO NOT rub the affected area, because rubbing causes damage to the skin and tissue.
- Do not apply snow or water. Do not break blisters.
- DO NOT try to re-warm the frostbitten area before getting medical help, for example, do not use heating pads or place in warm water. If a frostbitten area is rewarmed and gets frozen again, more tissue damage will occur. It is safer for the frostbitten area to be rewarmed by medical professionals.
- Give warm sweetened drinks if alert (no alcohol).

**If it is an emergency, call 911 immediately.**

### What happens to your body in cold temperatures?

**Frostnip:** Mild form of frostbite, only skin freezes, skin appears yellowish or white, but feels soft to the touch. Painful tingling or burning sensation.

**Frostbite:** Severe condition, with skin and underlying tissue are frozen. The skin appears white-waxy, and is hard to the touch. No sensation - the area is numb.

**Hypothermia:** Being cold over a long period of time can cause a drop in the body temperature below normal.

Normal: 98.6° F  
Mild: 98°-95° F  
Moderate: 95°-89° F  
Severe: 89°-78° F



## SAFETY TRAINING SIGN-IN SHEET

Company Name: \_\_\_\_\_ Date: \_\_\_\_\_  
Subject: Cold Work - Recognize the Symptoms  
The following employees participated in this training:

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