



# Weekly Safety Meeting

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## Working in Cold Weather

In some areas of the country, winter storm systems are still in the weather forecast. Even though it's cold outside we still have to work and get the job done. There are several things we can do to keep warm and prevent accidents related to cold weather.

Employees who work outdoors during the winter months must deal with the hazard of exposure to the cold. Prolonged exposure to freezing temperatures can result in health problems as serious as trench foot, frostbite, and hypothermia. There are several ways of preventing employee exposure to cold weather dangers.

The first thing we want to do is to keep our body temperature at or about normal, 98.6F. This can be accomplished by wearing layers of clothing both inside and outdoors. Wear cotton or lightweight wool next to the skin and wool layers over your underwear. Keep dry by having proper rain gear available and a pair of good, waterproof boots. An extra pair of clean, dry socks can really come in handy. Don't forget to protect your neck and ears; you can lose a lot of heat from these two areas. A good pair of gloves is essential too.

### Wind Chill Index:

The Wind Chill index is the temperature your body feels when the air temperature is combined with the wind speed. For example, when the actual air temperature of the wind is 40°F (4°C) and its velocity is 35 mph, the exposed skin receives conditions equivalent to the still-air temperature being 11°F (-11°C).

### Personal Protective Clothing:

Perhaps the most important step is dressing in layers of insulation. Remember you can always take off excess clothing.

### Wear:

- An outer layer to break the wind and allow some ventilation (nylon or gore-tex);
- A middle layer of wool or synthetic fabric to absorb sweat;
- An inner layer to allow ventilation (cotton); and
- Keep your head covered; you lose up to 55% of your body heat through your head.

## Engineering Controls:

- Shield work areas from drafty or windy conditions.
- Provide a heated shelter for employees to get temporary relief from the cold.
- Use thermal insulating material equipment handles.

## Safe Work Practices:

- Allow a period of adjustment to the cold before start of a full work schedule.
- Allow employees to set their own pace and take extra work breaks as needed.
- Ensure that employees remain hydrated – lots of liquids.
- Establish a buddy system for working outdoors.
- Be aware of the symptoms of cold-related stress.

## Harmful Effects of Cold Weather:

Most cold-related injuries are a result of exposure to humidity, high wind, wet conditions, and inadequate clothing. When cold exposure lasts for more than an hour, cooling of your skin and reduced blood flow to your hands leads to a bloated sensation of touch, pain and loss of dexterity and agility.

Employees should be aware of the harmful effects of cold weather, which include trench foot, frostbite, and hypothermia.

### Trench Foot

Trench foot is caused by long, continuous exposure to a wet, cold environment.

**Symptoms** – Tingling or itching sensation, burning pain, and swelling, blisters in extreme cases.

**Treatment** – Move individual to a warm, dry area where the affected tissue can be treated. Carefully wash, dry, re-warm, and slightly elevate. Seek medical attention.

### Frostbite

Frostbite occurs when the skin tissue actually freezes causing ice crystals to form between cells and draw water from there. Typically occurs at temperature below 30° F.

**Symptoms** – Uncomfortable sensations or coldness, tingling, stinging or aching feeling, followed by numbness. Ears, fingers, toes, cheeks, and nose are primarily affected. Frostbite appears white and is cold to the touch.

**Treatment** – Seek medical assistance immediately. Frostbitten parts should be covered with dry cloth bandages. DO NOT massage frostbitten tissue because this may cause greater injury.

## Hypothermia

Hypothermia describes the condition of dramatically lowered body temperature that can result from overexposure to cold.

**Symptoms** – The first symptom is shivering, and mild confusion. As body temperature falls, the victim is in a state of dazed consciousness, blurred speech, and irrational behavior. The most severe state results in slowing of the heart rate, blood flow, and breathing.

**Treatment** – Seek medical assistance immediately. Conserve the victims remaining body heat and provide additional heat sources. Remove all wet clothing; add layers of dry clothing, blankets, etc. External warming techniques may be applied (body to body contact, chemical heat packs, insulated hot water bottles). Avoid giving beverages containing alcohol or caffeine.

Make sure to use the buddy system when working in cold weather. Signs that people are being affected by the cold include a change in behavior patterns, a change in skin or lip color (blue, purple, or gray), or shaking. When these symptoms are present, affected people should be taken indoors as soon as possible.

***DON'T BE LEFT "OUT IN THE COLD" ... PRACTICE WINTER SAFETY!!***

