



# 5 Minute Safety Meetings

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## Cold Weather Preparedness

*Our Safety Training Tips editor reminds us that cold weather is coming—and may have already arrived in some parts of the country—Are you prepared?*

Winter adds its own hazards to your regular safety concerns, so get your workers ready to continue to work safely in winter weather by training them to recognize and protect against its hazards.

How cold is too cold? According to OSHA, cold stress can occur when the body is unable to warm itself. This can lead to tissue damage and possibly death. Four factors contribute to cold stress:

- Cold air temperatures
- High velocity air movement
- Dampness of the air
- Contact with cold water or surfaces

A cold environment forces the body to work harder to maintain its temperature. Cold air, water, and snow all draw heat from the body. OSHA points out that while below-freezing conditions and inadequate protection can bring about cold stress, problems can also occur with much higher temperatures, even in the 50s, when coupled with rain and wind.

The most common cold-induced problems are hypothermia, frostbite, and trench foot. Hypothermia occurs when body heat is lost faster than it can be replaced. When the core body temperature drops from the normal 98.6°F to around 95°F, symptoms generally begin. The person may begin to shiver and stomp the feet in order to generate heat. Workers may lose coordination, experience slurred speech, and fumble with items in their hands. The skin will likely be pale and cold. As the body temperature falls, symptoms will worsen, and shivering will stop. At a body temperature of below 85°F, severe hypothermia will develop, and the person may become unconscious; at 78°F, death can occur. Treatment depends on the severity of the hypothermia.

Frostbite occurs when the skin actually freezes and loses water. In severe cases, amputation of the frostbitten area may be required. Frostbite usually affects the extremities. The affected body part will be cold, tingling, stinging, or aching, followed by numbness. The skin turns red in color, then purple, then white, and is cold to the touch. In severe cases, there may be blisters.

OSHA recommends that you train workers to take these precautions:

- Wear at least three layers of clothing—
  - An outer layer, such as Gortex, to break the wind
  - A middle layer of down or wool to absorb sweat and provide insulation
  - An inner layer of cotton or synthetic weave to allow ventilation.
- Wear a hat. Considerable heat escapes the body from the head.
- Keep a change of dry clothing available in case work clothes become wet.
- Wear loose rather than tight clothing for better ventilation.
- Follow work practices, including—
  - Drink plenty of water to avoid dehydration.
  - Schedule work during the warmer parts of the day.
  - Take breaks out of the cold.
  - Work in pairs.
- Avoid fatigue.
- Consume warm, high-calorie food.