



# Weekly Safety Meeting

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## Cold Stress

Cold stress or hypothermia can affect workers not protected against it. When the body cannot maintain its warmth, serious cold-related illnesses and injuries can occur. This may lead to permanent tissue damage or even death.

It is natural for your body to try to maintain its core temperature (chest and abdomen) of approximately 97.6° F (37° C) by reducing heat loss and increasing heat production. To accomplish this, blood vessels on the skin, arms, and legs constrict, which decreases the blood flow to your extremities. This minimizes the blood from cooling and keeps the inner organs warm. Reducing the blood flow to the skin, however, results in a lower skin temperature and increases the risk of frostbite.

Another factor that contributes to cold stress is wind chill — the combined factor of wind speed and air temperature on exposed skin. Extreme wind chill can cause flesh to freeze.

### Hypothermia:

Means low heat, can occur when the body loses more heat than it can replace by constricting blood vessels. The body attempts to increase heat production by shivering, which begins when the body temperature falls to 95°F (35°C). Hypothermia can occur in below freezing temperatures, but it can also happen when temperatures are above freezing, and a strong wind produces a dangerous wind chill.

Hypothermia can progress from mild to moderate to severe. Symptoms for each level include:

- Mild – shivering, stomping of feet, poor coordination, blue lips and fingers;
- Moderate – mental impairment, confusion, poor decision making, disorientation, inability to take precautions from the cold, heart and breathing slows; and
- Severe – This stage may resemble death, unconsciousness, and the heart slows down. (The pulse may be irregular or difficult to find.) No shivering or no detectible breathing.

### Hypothermia - First-Aid Steps:

First-aid measures should stop further body cooling. Move the victim to a warm area, remove any wet clothing and help the person stay active. With moderate symptoms, call for medical assistance and cover the person's extremities.

With severe symptoms, call 911 for medical treatment and transport the victim to a medical facility.

Treat the victim very gently. Do not attempt to re-warm him or her since this is best done in a hospital setting.

## Cold Stress Controls:

Be prepared for cold temperatures and be alert for any signs of cold stress. Employees must recognize the early stages of cold stress in themselves and others. The first warning sign may be pain in the extremities. The onset of shivering should warn you that you need to come out of the cold.

Workers in cold conditions should:

- Be medically fit for the cold exposure;
- Eat a balanced diet that includes increased carbohydrates to burn more fuel and increase your body heat. Carbohydrates burn faster than protein and give you quicker energy;
- Understand the risk imposed by the chill factor and be prepared for the conditions;
- Avoid caffeinated or alcoholic drinks that increase water loss and blood flow to the extremities;
- Have a back-up plan when working in isolated areas or use a buddy system to keep an eye on each other and watch for signs of cold stress; and
- Clothing should be suited for the cold and your level of physical activity. Here are tips to remember when working in the cold:
  - Wear several levels of clothing to capture insulating air between the layers;
  - To allow for ventilation, wear cotton or synthetic layers next to the skin;
  - Wear waterproof or water-repellant outer clothing when working in wet conditions;
  - Protect your head from heat loss. When you do not cover your head, you can lose 40 percent of your body heat. Use hats, hoods or hard-hat liners; and
  - In case your work clothes become wet, keep a change of clothing available.

## Remember:

Cold environmental conditions can affect your body. Be aware of the signs or symptoms caused by hypothermia or frostbite and take appropriate action to correct the situation. If you act quickly, the effects of cold stress may be controlled and lessened.

***ICE AND SNOW MEAN TAKE IT SLOW!!***

