

## Cold Weather Safety



### Tips to Reduce the Risk of Cold Stress or Hypothermia

As temperatures drop, it is important that workers take extra precautions to reduce the risk of cold stress or hypothermia. If you are working in cold environments you 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.
- ❖ Wear several levels of clothing to capture insulating air between the layers.
- ❖ Wear cotton or synthetic layers next to the skin to allow for ventilation.
- ❖ Wear waterproof or water-repellant outer clothing when working in wet conditions.
- ❖ To prevent hypothermia, remove any wet clothing.
- ❖ Use hats, hoods or hard-hat liners to protect your head from heat loss.
- ❖ Keep a change of clothes available in case your work clothes become wet.

### Signs, Symptoms, and First Aid for Hypothermia and Frostbite

It is important to know the signs and symptoms of hypothermia and frostbite and the proper action to take to correct the situation.

**Hypothermia**, which means low heat, 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.

- ❖ Mild hypothermia is characterized by shivering, stumping of feet, poor coordination, blue lips and fingers.
- ❖ Moderate hypothermia symptoms include mental impairment, confusion, poor decision making, disorientation, inability to take precautions from the cold, heart and breathing slows.
- ❖ Severe hypothermia may resemble death, unconsciousness, and the heart slows down. The pulse may be irregular or difficult to find. No shivering or no detectible breathing.
- ❖ First aid 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.

**Frostbite** can occur when skin is exposed to severe cold. When tissue freezes, blood vessels become damaged and the reduced blood flow may cause gangrene.

- ❖ Frostbite often occurs on the face, ears, fingers, and toes. The skin will look waxy and feel numb. When the skin becomes hard, frostbite is a medical emergency. Slowly warm the affected areas and avoid rubbing this area. If the tissue freezes, seek medical treatment before thawing the skin. Seek medical follow-up for all frostbite conditions. You should not warm up or thaw the frostbitten area if there is risk of the area refreezing because the damage will be worse if that occurs.

**Source:** Pawuk, Andrew. "Cold Stress" in *2008 Safety Leader's Discussion Guide*. Ohio BWC's Division of Safety & Hygiene.