



## Working in Cold Weather and Environments

As the weather becomes “frightful” during winter months, construction workers who must brave the outdoor conditions face the occupational hazard of exposure to the cold. You need to be especially mindful of the weather, its effects on the body, and proper prevention techniques.

### Environmental conditions

The following four environmental conditions are the causes of cold-related stress:

- ◆ Low temperatures
- ◆ High/cool winds
- ◆ Dampness
- ◆ Cold water

When your body is unable to warm itself, serious cold-related illnesses and injuries may occur, and permanent tissue damage and death may result. Hypothermia can occur when land temperatures are above freezing or water temperatures are below 98.6 degrees F. Cold related illnesses can slowly overcome a person who has been chilled by low temperatures, brisk winds or wet clothing.

### Risk Factors

Major risk factors for cold-related stress include the following:

- ◆ Wearing inadequate or wet clothing increases the effects of cold on the body
- ◆ Taking certain drugs or medications such as alcohol, nicotine, caffeine, and medication; they inhibit the body’s response to the cold and impair judgment
- ◆ Having a cold or certain disease, such as diabetes, heart, vascular, and thyroid problems, may make a person more susceptible to the winter elements.
- ◆ Becoming exhausted or immobilized, especially due to injury or entrapment, may speed up the effects of cold weather.

### Preventing cold-related disorders

Wearing the right types of clothing can help in fighting the elements. You should wear at least three layers of clothing such as the following:

- ◆ An outer layer to break the wind and allow some ventilation.
- ◆ A middle layer of wool or synthetic fabric to absorb sweat and retain insulation in a damp environment
- ◆ Inner layers of cotton or synthetic weave to allow for proper ventilation.

In addition, you should do the following:

- ◆ Pay special attention to protecting feet, hands, face, and head. Up to 40 percent of body heat can be lost when the head is exposed
- ◆ Wear insulated footwear to protect against cold and dampness
- ◆ Keep a change of clothing available in case work garments become wet