

Safety Corner

What are the hazards when working in cold environment?

Workers can be at risk when working without proper protection in a cold environment. One often overlooked consideration in cold weather work is the wind-chill effect, which can be generated naturally or mechanically and can account for about 80 per cent of the total heat loss from the body.

A worker may lose feeling in their hands and fingers under low temperature conditions, making it difficult to handle tools, equipment, and materials, hence, increasing the chance of an accident. A cold working environment can also affect a worker's safety awareness: workers who are cold and uncomfortable may be less alert to hazards or rush to get a job done.

The two most dangerous health effects of cold weather are frostbite and hypothermia. Frostbite occurs when body tissues freeze. It often affects fingers, toes, nose, and ears. Frostbite can cause permanent tissue damage, and amputation of the affected parts.

Hypothermia, or abnormally low body temperature, occurs as a result of extended exposure to the cold, which can send body temperatures down to a dangerously low level. Hypothermia can even occur in above-freezing temperatures, when it is windy or when a person is exhausted or wearing wet clothes. A low body temperature affects the brain, making the victim unable to think clearly or move well. This makes hypothermia particularly dangerous because a person may not realise it is happening and will not be able to do anything about it. Untreated, hypothermia can lead to unconsciousness and death.

To control the risk of cold hazards, a proper work schedule should be developed to minimise unnecessary exposure to a cold environment. Proper protection, shelter and relief should be provided, as well as adequate training and supervision.

Workers should avoid exposure to extremely cold temperatures as much as possible and wear proper clothing such as waterproof and insulated footwear and gloves to protect against the cold and prevent heat loss. Tight clothing that can reduce blood circulation or restrict movement should be avoided. Attend relevant training and stay alert.

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