

Hypothermia develops when the body can no longer maintain its core temperature.

- The body first attempts to reduce heat loss by shutting down blood flow to the skin, arms and legs, increasing internal heat production by shivering.
- While severe cases of hypothermia can be fatal, the effects of even mild hypothermia, such as poor co-ordination, irrational or confused behaviour, can seriously impede workers' safety.

Frostbite can be caused by exposure to very cold weather, as well as through contact with extremely cold objects, such as metal tools.

- It commonly affects the face, ears, fingers and toes.
- Frostbite freezes and crystallises the fluids in the body tissues and cellular spaces. This can damage blood vessels, causing blood clotting and lack of oxygen to the affected area and deeper tissues.
- In severe cases, frostbite can damage tissue to the extent that amputation is required.

Below are a few examples of additional hazards caused by cold weather:

- Workers with cardiovascular problems, with respiratory diseases or on certain medication need to be especially careful in cold temperatures.
- Nose and ears, fingers and toes are most likely to be affected by the cold, with the first symptoms often manifested as chilblains (itchy swellings on the skin).
- Employees may suffer from more colds, attacks of bronchitis and asthma, or painful, stiff joints and fatigue as they use more energy in an attempt to keep warm.
- Cold workers are also more likely to develop hand-arm vibration syndrome when using pneumatic or vibrating tools.
- There is evidence that cold weather conditions can affect manual handling operations.

Good working practices to consider when working in extremely cold conditions:

- ✓ Allow more time for activities and the negative effect of protective clothing on performance.
- ✓ Regular checks on the health and safety of people working in cold conditions.
- ✓ Preparations for vehicle breakdowns, with warm clothing, gloves and blankets as well as a hot drink and normal emergency supplies.
- ✓ Training workers to recognise the symptoms of overexposure in themselves and their colleagues.
- ✓ Shelter, welfare facilities and regular breaks in a heated cabin, including warm water for washing and to help warm up cold hands.

Did you Know?

You are particularly at risk from cold when;

- The ambient temperature is below 10°C.
- When the air temperature is 10°C, and the wind speed is 20mph, the effective temperature, so far as the human body is concerned, drops to 0°C.
- A Temperature of about -1°C drops to -9°C with a wind speed of 10mph.



Q: Can you name two hazards associated with working in extremely cold weather?

Q: Are you more or less likely to develop hand arm vibration when working in cold, wet weather?

Q: What impact can the wind have on the temperature?