

Working in the Cold

This program is presented by the Centers for Disease Control and Prevention.

During the winter, many workers are outdoors, working in cold, wet, icy, or snowy conditions. The cold stress they experience can lead to injuries and illnesses, such as hypothermia, frostbite, and trench foot. CDC's National Institute for Occupational Safety and Health, or NIOSH, wants you to know how to protect yourself from cold stress while at work.

Hypothermia is an abnormally low body temperature which can affect your brain, making it difficult to think clearly or move well. It's especially dangerous because you may not know it's happening and therefore won't be able to do anything about it.

Symptoms of hypothermia vary, depending on how long you've been exposed to the cold. Early symptoms may include shivering, fatigue, loss of coordination, and confusion. Late symptoms may include *no* shivering, blue skin, dilated pupils, slowed pulse and breathing, and loss of consciousness.

Frostbite occurs when body tissues freeze, and severe cases can lead to amputation. Symptoms of frostbite may include reduced blood flow to hands and feet, numbness, tingling or stinging sensations, and blueish or pale, waxy skin.

Trench foot, or immersion foot, results from prolonged exposure to wet *and* cold conditions, and can occur at temperatures as high as 60 degrees Fahrenheit if the feet are constantly wet. Wet feet lose heat faster than dry feet, and the body tries to slow down this heat loss by constricting blood vessels. This causes the skin tissue of the feet to die. Symptoms of trench foot include reddening of the skin, numbness, leg cramps, swelling, tingling pain, blisters, and gangrene, where the foot turns purple, blue, or gray.

If you work in cold conditions, there are three main ways to reduce your risk of hypothermia, frostbite, and trench foot.

1. Wear appropriate clothing. Layering provides better insulation, so wear several layers of loose clothing. Protect your ears, face, hands, and feet by wearing a hat and waterproof gloves and boots. Carry an extra change of clothes and a blanket in case you get wet or need additional protection from dropping temperatures or blustery winds.
2. Try to limit time outside on extremely cold days. Move into warm locations during work breaks, and, if possible, reschedule outdoor tasks to a warmer time or a different day.
3. Monitor your physical condition and that of your coworkers. Remember that a very low body temperature affects the brain, making it difficult to think clearly or move well.

For more information about cold stress at work, including a free Fast Facts card with first aid instructions, please go to cdc.gov and enter *NIOSH Cold Stress* in the search box. NIOSH is spelled n-i-o-s-h.

For the most accurate health information, visit www.cdc.gov, or call 1-800-INFO.