

COLD

Weather Workers

Safety Guide

3rd Edition



Prepared by the Canadian Centre for
Occupational Health and Safety



Summary

Extreme cold is potentially hazardous to your health. You can learn to work and live in cold environments, provided you have adequate clothing and access to warm shelter. You must wear sufficient winter clothing, including face protection, gloves and foot wear. Loose multi-layered clothing provides the best protection, because air trapped between layers of clothing provides additional thermal insulation. Hypothermia and frostbite are two major health hazards of cold exposure.

Hypothermia is the lowering of body temperature due to excessive loss of body heat. Hypothermia can be fatal unless the victim is moved to a warm shelter and receives timely medical attention. Hypothermia victims are unable to recognize their own signs and symptoms of hypothermia. Their survival depends on co-workers ability to do so. As a precaution, you should not work alone in cold extremes. Use the "buddy system" to detect signs of cold injury in co-workers.

Frostbite is the freezing of extremities such as fingers, nose tip, toes, ears and cheeks, which become numb and hard. Because of poor blood supply, these extremities may become frostbitten even if the rest of the body remains warm or even overheated. Frostbitten parts should be placed against warm body surfaces and rewarmed.

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1. Cold Weather Safety

Working in cold weather could be dangerous to the untrained and to people without adequate winter clothing. For a well informed and prepared worker, winter work can be enjoyable and fulfilling. To cope with winter, stay active, dress warmly and follow safety rules.

Why Worry About Cold?

- * A cold environment takes away body heat.
- * Too much heat loss can cause lowering of the inner body temperature to dangerously low levels causing hypothermia.
- * Exposed body parts may freeze in extreme cold, causing frostbite.
- * Loss of body heat (hypothermia) and frostbite (freezing of body tissue) can present serious danger to health and can be life threatening.
- * Cold air is dry air and can cause dry skin and loss of body fluid.
- * If you have arthritis or rheumatism, cold weather can create more pain problems for you.
- * Prolonged exposure to moderate cold and dampness can result in an injury called "trench foot", which can occur at temperatures above freezing point when feet are cold and damp while wearing constricting footwear
- * Working in cold environments increases the risk of back injuries and other musculoskeletal injuries. Perform "warm up" stretching exercises before handling heavy equipment and material.

Why Worry About Working in Cold?

- * Winter clothing, head protection, gloves and boots while working in the the cold, can restrict movement.
- * Cold affects dexterity, affecting skill and ease of using the hands.

3. Dress Warmly—Be Prepared

- ✓ WEAR cotton or polypropylene long underwear for all-over warmth.

WEAR multiple layers of light, loose-fitting clothes.

Air between the layers provides warmth. Outer wear should be waterproof.

WEAR cold weather clothing or arctic clothing that is appropriate for the outdoor temperature range and the type of activity.

WEAR mittens instead of gloves whenever possible, as mittens are warmer.

WEAR a warm hat with ear protection to prevent heat loss from the head. A wool knit cap provides the best protection. As much as 40% of body heat can be lost from an uncovered head.

USE an appropriate hard hat liner to reduce heat loss when wearing a hard hat.

WEAR woolen socks to protect your ankles and feet. Carry an extra pair where moisture or sweat is likely, and change when necessary.



Trench Foot (Immersion Foot)

Trench foot is injury of the feet resulting from continuously having wet feet in cold water at near freezing temperatures. The symptoms of various stages of trench foot are:

Minimal:	Reddening of the skin, slight numbness
Mild:	Swelling, numbness (reversible), pain
Moderate:	Swelling, redness, bleeding into the skin, nerve damage
Severe:	Swelling, bleeding into the skin, gangrene

Prevention



AVOID wet feet for prolonged periods.

KEEP a spare pair of dry socks available.

REMOVE boots and wet socks after work. Dry the feet and massage well to promote blood circulation.

SEEK medical attention as soon as possible.

8. Injuries That Happen Over Time

White Finger (Raynaud's phenomena, dead finger)

White finger is the blanching of the fingers, caused by use of hand-held vibrating tools. The early signs of disease are noticeable only when fingers are exposed to cold. The symptoms are tingling, numbness, whitening of the fingers, and a reduced sense of heat, cold and pain.

GO straight up and down slopes with the heavy end of the loader uphill.

X DO NOT USE a loader without approved Roll-Over Protection (ROP) and Falling Object Protection (FOP) cab.

DO NOT EXCEED rated operating capacity.

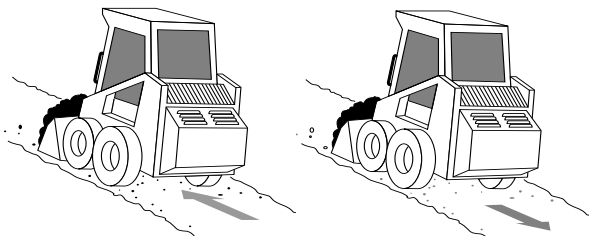
DO NOT CARRY passengers.

DO NOT TRAVEL or turn with lift arms up.

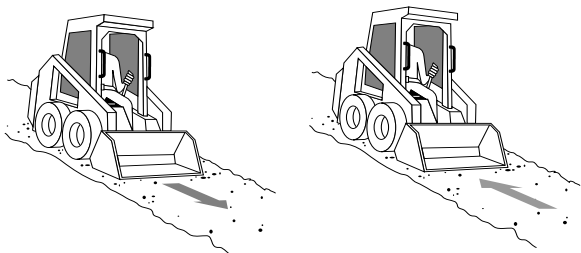
DO NOT LEAVE loader with engine running or with lift arms up.

DO NOT GO across a slope.

DO NOT APPROACH overhead wires.



**Going UP and DOWN a Slope With Bucket FULL
KEEP HEAVY END UP**



**Going UP and DOWN a Slope With Bucket EMPTY
KEEP HEAVY END UP**