

Cold Stress

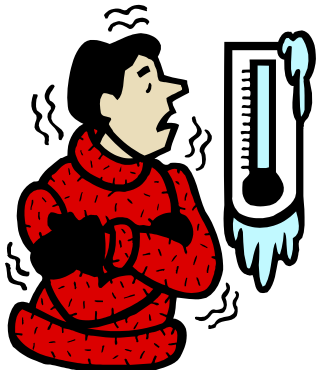
When you're cold, blood vessels in your skin, arms, and legs constrict, decreasing the blood flow to your extremities. This helps your critical organs stay warm, but you risk frostbite in your extremities.

Frostbite

This means that your flesh freezes. Blood vessels are damaged and the reduced blood flow can lead to gangrene. Frostbitten skin looks waxy and feels numb. Once tissue becomes hard, it's a medical emergency.

Treatment:

- ▶ Get medical aid
- ▶ Warm area with body heat – do not rub
- ▶ Don't thaw hands and feet unless medical aid is distant and there's no chance of refreezing. Body parts are better thawed at a hospital.



Hypothermia

This means your core temperature drops.

Moderate symptoms:

- Shivering
- Blue lips and fingers
- Slow breathing and heart rate
- Disorientation and confusion
- Poor coordination

Severe symptoms:

- Unconsciousness
- Heart slowdown to the point where pulse is irregular or hard to find
- No shivering
- No detectable breathing
- Resembles death – assume casualty is alive

Treatment:

- ▶ Get medical aid immediately
- ▶ Carefully remove casualty to shelter. (Sudden movement can upset heart rhythm)
- ▶ Keep casualty awake
- ▶ Remove wet clothing and wrap casualty in warm covers
- ▶ Apply direct body heat – re-warm neck, chest, abdomen, and groin, but not extremities
- ▶ If conscious, give warm, sweet drinks

Wind Chill

The wind accelerates heat loss. For example, when the air temperature is -30 degrees C:

- With no wind there's little chance of skin freezing.
- With 16 km/h wind (a flag will be fully extended) your skin can freeze in about a minute.
- With 32 km/h wind (capable of blowing snow) your skin can freeze in 30 seconds.

Controls

- To capture air as an insulator, wear several layers of clothing rather than one thick layer
- Wear synthetic fabrics next to the skin to "wick" away sweat
- If conditions require, wear a waterproof or wind-resistant outer layer
- If your clothing gets wet at 2 degrees C or less, change into dry clothes immediately and get checked for hypothermia
- Wear warm gloves
- Wear hats and hoods. You may need a balaclava
- Tight-fitting footwear restricts blood flow. You should be able to wear either one thick or two thin pairs of socks
- If you get hot while working, open your jacket but keep your hat and gloves on
- Take warm, high-calorie drinks and food