



Working under cold conditions can lead to injuries or health effects, which are collectively known as **cold stress**.

Workers may experience cold stress when working:

- Outdoors on a cold day.
- In a refrigerated room.
- In an unheated building.
- In cold water, rain, or snow.
- While handling cold objects or materials.

Workers in industries who may be susceptible to cold stress include construction, agricultural field workers, cold storage workers, and those who work with refrigerated or frozen foods.

The hazardous effects of cold on the body may include

- dehydration
- numbness
- shivering
- Frostbite
- hypothermia

Hazards associated with cold stress are categorized into **systemic** and **local** effects.

Local effects impact the part of the body where the exposure to cold is the greatest.

Systemic effects impact the whole body.

How can you recognize cold stress?

Shivering is the body's response to cold stress and serves as a protection mechanism by increasing the rate of metabolism. Be on guard for cold stress if workers are shivering because it is an important sign of cold stress and possible hypothermia.

Recognizing cold stress in the workplace requires regular interactive communication with potentially exposed employees. Behaviors that may indicate cold stress exposures include:

- Seeking warm locations
- Adding layers of clothing
- Increasing their work rate

If there is a **noticeable drop in manual dexterity** for workers, local cold stress may be occurring. Manual dexterity decreases with cold, which could result in safety hazards to the worker and coworkers.

Employers can help protect workers from cold stress by providing training, controlling temperature and wind exposure by using heaters and windbreaks, and rotating workers in cold jobs so that no one is exposed too long. Schedule work at warmest times, encouraging self-pacing and extra breaks if necessary. Establish a buddy system and keep first aid supplies and equipment on site.

Equally important, **employees can do their part** to prevent cold stress.

Proper insulation and good ventilation are critical for clothing worn during cold stress exposures. Better insulation is achieved by layering clothes rather than by wearing just one warm garment. Layering allows a person to add or remove layers to adjust for different insulation needs during the work period.

Resources:

https://www.osha.gov/dts/weather/winter_weather/windchill.html

<https://www.cdc.gov/niosh/topics/coldstress/default.html>