



Safety Bulletin Number: **0000004**

Issued February 19th, 2021 by the Safety Branch, Department of Labour and Advanced Education

COLD STRESS

Legal Information

Employers in Nova Scotia have a duty under clause 13(1) of the *Occupational Health and Safety Act* to take every reasonable precaution to ensure the health and safety of persons at or near the workplace.

Summary

What is cold stress

Cold is a physical hazard and cold stress can impact workers who are not properly protected against cold conditions. When the human body is unable to sufficiently warm itself, cold-related illnesses and injuries can occur that could lead to tissue damage and potentially death. Environmental factors include air temperature, wind speed, and humidity. Personal factors include physical activity, work/rest schedule, protective clothing, age, gender and medical conditions, etc.

Cold stress related diseases

- **Hypothermia** is defined as a core body temperature below 35 °, which results from the body's losing heat more quickly than producing heat. When the body temperature is too low, it affects the brain, and may prevent self-rescue and possibly cause death.
- **Frostbite** results from tissue freezing (temperature decreases below 0 °C). It causes a loss of sensation and color in the impacted areas. Impacted areas include the nose, cheeks, chin, fingers and toes.
- **Trench foot** is a condition (temperature > 0 °C) when the feet are exposed to wet and cold conditions for an extended period. The body reduces blood circulation in the feet to prevent heat loss resulting in tissue death due to lack of oxygen and nutrients/buildup of toxic products.

- **Chilblains** results from repeated cold exposure (temperature > 0 °C) that causes permanent damage to the small blood vessels (capillaries) in the skin of cheeks, ears, fingers and toes.

How to prevent cold stress

In Nova Scotia the Workplace Health and Safety Regulations outline the requirements for cold stress, referencing to threshold limit values for cold stress established by American Conference of Governmental Industrial Hygienists (ACGIH) for workplace cold stress monitoring. The threshold limit values outline cold working conditions that meet standards where it is believed nearly all workers can be repeatedly exposed without negative health effects.

All employers with employees who are at risk for cold stress must develop a cold risk management strategy, which includes hazard identification, hazard assessment, controls development, controls implementation, and supervision.

What to do if a person is suffering from cold stress

If you believe you or another person may be subject to cold stress at your workplace, seek first aid immediately and notify your supervisor.

Your rights under the Occupational Health and Safety Act

Everyone has a right to a safe working environment. All concerns should be brought to your immediate supervisor. If the supervisor does not respond to your concern to your satisfaction, you should raise the issue with the Joint Occupational Health and Safety Committee or representative. If this still does not satisfy your concern, you may contact the Occupational Health and Safety Division at 1-800-9LABOUR (952-2687).

For More Information

Refer to [Cold Stress Guidelines](#)

Contact Information:

Safety Branch

Labour and Advanced Education

1-800-952-2687 or

LAESafetyBranch@novascotia.ca



SAFETY BULLETIN

