

# Cold Stress Requirements – Know The Laws of Your Province



The employer's duty to maintain safe thermal conditions and protect workers from cold stress.

The OHS laws require employers to maintain safe, healthy and reasonably comfortable thermal conditions in the workplace and protect workers from cold stress hazards. However, the extent and details vary by jurisdiction. Here's a complete summary of the cold stress requirements of all 14 jurisdictions.

## OHS Cold Stress Prevention Requirements Across Canada

(Abbrev.: ACGIH TLVs = Threshold Limit Values for cold exposure required by American Conference of Government Industrial Hygienists)

### FEDERAL

- Employer must ensure that levels of temperature and humidity meet standards listed in regulations (*Canada Labour Code*, Section 125(1)(n))
- Minimum temperature: i. 18°C, if feasible, for personal service rooms and food preparation areas (*COHS Reg*, Sec.

9.9); and ii. 21°C for first aid rooms (*COHS Reg*, Sec. 16.10)

- If extreme temperatures could result in oil and gas employees suffering from hypothermia, protection equipment suitable to protect employees from hazard must be used (*Oil & Gas OSH Regs*, Sec. 13.14)

## ALBERTA

Duty to protect against cold stress is implied part of employer's general duty to ensure, as far as reasonably practicable to do so, workers' health, safety and welfare (*OHS Act*, Sec. 3(1))

## BC

- Employer must take measures to guard against: (a) thermal conditions that could cause cold stress or injury; (b) thermal conditions that could cause a worker's core body temperature to fall below 36°C (96.8°F); or (c) thermal conditions that are below the levels classified as "little danger" to workers in the criteria for the cooling power of wind on exposed flesh in the cold stress section of the ACGIH Standard (*OHS Reg*, Sec. 7.33) Required measures include:
  - Doing a cold stress assessment to determine potential for hazardous exposure of workers (Sec. 7.34)
  - Implementing a cold exposure control plan that may include: i. statement of purpose; ii. risk identification, assessment and control; iii. worker education and training; iv. written work procedures; v. hygiene facilities and decontamination procedures; vi. health monitoring; vii. documentation; and viii. annual review with JHSC (Sec. 7.34)

- Maintaining ACGIH TLVs; OR ii. if maintaining TLVs is not practicable, reducing exposure via administrative controls and PPE (Sec. 7.35)
- Ensuring there's a nearby heated shelter if a worker is exposed to equivalent chill temperature of less than -7°C (19°F) (Sec. 7.36)
- Ensuring exposed workers wear insulating clothing and PPE (Sec. 7.37)
- Ensuring workers wear eye protection if work takes place outdoors in snow- or ice-covered terrain where excessive ultraviolet light, glare or blowing ice crystals may injure the eyes (Sec. 7.38)
- Ensuring workers exposed to cold who show signs or report symptoms of cold stress are removed and treated by an appropriate first aid attendant or physician (Sec. 7.38)

## MANITOBA

- If workplace or work process exposes a worker to conditions that may create cold stress risk, employer must implement safe work procedures and control measures to ensure that: i. ACGIH TLVs are maintained; and ii. worker gets information, instruction and training in symptoms of and precautions to take to avoid cold stress (*WSH Regs*, Sec. 4.12)
- Employer must ensure thermal conditions, including air temperature, radiant temperature, humidity and air movement, appropriate to nature of work being done (Sec. 4.13)

## NEW BRUNSWICK

- Employer must ensure minimum temperatures of: i. 20°C for light work done while sitting; ii. 18°C for light

physical work done while sitting; iii. 16°C for light or moderate physical work done while standing; and iv. 12°C for heavy physical work done while standing. If maintaining above temperatures is impractical, employer must provide suitable place where employee can go to get warmed (*OHS General Reg*, Sec. 21)

- If an employee is exposed to work conditions that may present a cold stress hazard, employer must ensure that:
  - i. a competent person measures and records thermal conditions at frequent intervals;
  - ii. ACGIH TLVs are maintained; and
  - iii. a competent person instructs the employee in symptoms of cold stress + and in precautions to be taken to avoid injury (Sec. 22)
- If an employee is exposed to work conditions that may present a hazard because of excessive cold, an employer must ensure that a competent person instructs the employee in significance of symptoms of cold stress such as severe shivering, pain in extremities and reduced mental awareness and in precautions to be taken to avoid injury from cold stress (Sec. 23(2))

## **NEWFOUNDLAND**

- Employer must ensure the thermal environment is reasonable and consistent with nature and degree of work performed, as established by ACGIH (*OHS General Reg*, Sec. 44)
- Employer must maintain a minimum temperature of 10°C for a refuge station (Sec. 44)
- Employer must provide appropriate and suitable monitoring equipment if the workplace thermal environment is likely to pose a hazard to a worker (Sec. 44)
- Employer must make further provision for health, safety and reasonable thermal comfort under unusually hot or cold working conditions; such provision may include: i.

regular monitoring, posting of warning devices and extra first aid measures; ii. providing special equipment and clothing; iii. providing screens or shelters; iv. medical supervision, hot or cold drinks and acclimatization procedures; v. limited work schedules with rest periods; and vi. other appropriate controls (Sec. 44)

## **NOVA SCOTIA**

Employer must maintain ACGIH TLVs for cold stress exposure (*WHS Regs*, Sec. 2.3)

## **ONTARIO**

While not specifically addressed in OHS Regulations, Ontario Ministry of Labour guidelines indicate that employers must maintain ACGIH TLVs

### **For Construction Projects**

Minimum temperatures under *OHS Regs for Construction Projects*: i. 27°C for change room for underground workers (Sec. 260(3)(d)); and ii. 18°C for medical locks at construction projects (Sec. 357(7))

### **For Industrial Establishments**

Enclosed workplace must be at least 18°C UNLESS: i. the workplace is normally unheated; ii. the need to open doors makes it impracticable to use heating to maintain 18°C; iii. the space is used to process or store perishable goods requiring lower temperatures; iv. radiant heating provides workers the necessary comfort; v. heating could cause discomfort due to the process or activity being carried out; or vi. during the first hour of the main operating shift where process heat provides a substantial portion of building heat

*(OHS Indust. Estab. Regs, Sec. 129)*

## **For Health Care and Residential Facilities**

Enclosed workplace must be at least 18°C UNLESS: i. the workplace is normally unheated; ii. the need to open doors makes it impracticable to use heating to maintain 18°C; iii. the space is used to process or store perishable goods requiring lower temperatures; iv. radiant heating provides workers the necessary comfort; v. heating could cause discomfort due to the process or activity being carried out; or vi. during the first hour of the main operating shift where process heat provides a substantial portion of building heat (*OHS Health Care and Residential Facilities Regs, Sec. 22*)

## **PRINCE EDWARD ISLAND**

- Employer must ensure minimum temperatures of: i. 20°C for light work done while sitting; ii. 19°C for light physical work done while sitting; iii. 17°C for light physical work done while standing; iv. 16°C for moderate physical work done while standing; and v. 12°C for heavy physical work done while standing (*OHS Act General Regs, Sec. 11.10*)
- EXCEPTION: The above minimum temperatures don't apply if: i. the workplace is normally unheated; ii. the need to open doors makes heating to required levels impractical; iii. the workplace is used to process or store perishable goods; iv. radiant heating makes the air comfortable without the need for heating; or v. heating to the required temperature would cause discomfort (*Sec. 11.11*)

## **QUÉBEC**

- Appropriate temperature must be maintained in a **closed**

- room**, considering the nature of work performed in the room and outdoor climate conditions; if such temperature can't be reasonably maintained, a heated place must be put at workers' disposal (*OHS Regs*, Div. XII, Sec. 116)
- A **stationary work station** inside a building minimum temperatures of: i. 20°C for light work done while sitting and for lunchrooms (other than at offices); ii. 19°C for light physical work done while sitting ii. 17°C for light work done while standing; iii. 16°C for moderate work done while standing; and iv. 12°C for heavy work done while standing (Sec. 117)
  - EXCEPTION: The above minimum temperatures aren't required if: a. the purpose for which the rooms are used or the nature of a process or of the products handled requires a cooler temperature; b. the work station is situated in a motor vehicle; or c. the work involves maintenance, inspection or repairs outside the workshop (Sec. 117)
  - The minimum temperature for a lunch room put at workers' disposal for eating their meals is 20°C; EXCEPTION: This section doesn't apply to facilities used as offices (Sec. 118)
  - In any closed rooms, a suitable relative humidity percentage must be maintained according to type of work performed inside them and outdoor climate conditions (Sec. 119)
  - Relative humidity of at least 20% must be maintained during business hours in any office building or commercial establishment built or operated after December 19, 1979 (Sec. 119)
  - Humidity in an establishment must be measured with a psychrometer or hygrometer (Sec. 120)

## SASKATCHEWAN

- Employer must maintain thermal conditions, including air

temperature, radiant temperature, humidity and air movement, that: i. are appropriate to nature of work performed; ii. provide effective protection for workers' health and safety; and iii. provide workers reasonable thermal comfort (*OHS Regs*, Sec. 70)

- If thermal environment is likely to raise health or safety concerns, employer must provide and maintain an appropriate and suitably located instrument for measuring thermal conditions (Sec. 70)
- If it's not reasonably practicable to control thermal conditions or work is done outdoors, employer must take measures to ensure thermal conditions that are safe, healthy and reasonably comfortable, which may include:
  - i. frequent monitoring of thermal conditions;
  - ii. provision of special or temporary equipment, including screens, shelters and temporary heating or cooling equipment;
  - iii. provision of suitable clothing or personal protective equipment;
  - iv. provision of hot or cold drinks;
  - v. acclimatization or other physiological procedures;
  - vi. limited work schedules with rest and recovery periods, changes in workloads, changes in hours or other work arrangements;
  - vii. frequent observation of workers by a person trained to recognize symptoms of physiological stress resulting from extreme temperatures; and
  - viii. provision of emergency supplies for use when travelling under extremely cold or inclement weather conditions (Sec. 70)
- Employer must provide and require workers to use PPE or suitable clothing, if workers must work in thermal conditions different from their normal duties (Sec. 70)

## **NORTHWEST TERRITORIES AND NUNAVUT**

- Employer must maintain thermal conditions, including air temperature, radiant temperature, humidity and air movement, that: i. are appropriate to nature of work



performed; ii. provide effective protection for workers' health and safety; and iii. provide workers reasonable thermal comfort (*OHS Regs*, Sec. 74)

- If thermal environment is likely to raise health or safety concerns, employer must provide and maintain an appropriate and suitably located instrument for measuring thermal conditions (Sec. 74)
- If it's not reasonably practicable to control thermal conditions or work is done outdoors, employer must take measures to ensure thermal conditions that are safe, healthy and reasonably comfortable (Sec. 74)
- Employer must provide and require workers to use PPE or suitable clothing, if workers must work in thermal conditions that are different from their normal duties (Sec. 74)

## YUKON

- Employer must ensure that thermal conditions in an indoor place of employment thermal conditions, including air temperature, radiant temperature, humidity and air movement, are reasonable and appropriate to the nature of the work performed ( *Health Regs.*, Sec. 9(1))
- At every indoor place of employment where the thermal environment is likely to be of discomfort or danger to workers, employer must provide an appropriate and suitably located instrument for measuring thermal conditions (Sec. 9(2))
- If it's not reasonably practicable to control thermal conditions in accordance with Sec. 9(1) above or the work is being performed outdoors, the employer must provide effective protection for the health and safety and reasonable thermal comfort of workers, which may include: i. frequent monitoring of thermal conditions; ii. special or temporary equipment such as screens, shelters and temporary heating or cooling equipment;

iii. special clothing or personal protective equipment;  
iv. hot or cold drinks, acclimatization or other physiological procedures; v. limited work schedules with rest and recovery periods, changes in workloads, changes in hours or other arrangements for work; and/or vi. any other appropriate measure (Sec. 9(3))