

What Is Heat Stress?

Working where it is hot puts stress on our body's cooling system. When the heat is combined with other stresses such as hard physical work, loss of fluids, fatigue or some medical conditions, it may lead to heat-related illness, disability and even death. This can happen to anybody--even if you are young and fit. In Ontario, heat stress is usually a concern during the summer. This is especially true early in the season, when people are not used to the heat.

How We Cope With Heat

Your body is always generating heat and passing it to the environment. The harder your body is working, the more heat it has to lose. When the environment is hot or humid or has a source of radiant heat (for example, the sun), your body must work harder to get rid of its heat. Workers over 40 should be more careful because of a reduced ability to sweat.

Controlling Heat Stress - Modifying Work and the Environment

Management and the Joint Health and Safety Committee can reduce heat stress in the following ways:

- assess the demands of all jobs and have monitoring and control strategies in place for hot days
- increase the frequency and length of rest breaks
- schedule hot jobs to cooler times of the day
- provide cool drinking water near workers and remind them to drink a cup every 20 minutes or so
- workers should salt their food well, particularly while they are acclimatizing to a hot job (workers with a low salt diet should discuss this with their doctor)
- assign additional workers or slow down work pace
- make sure everyone is properly acclimatized
- train workers to recognize the signs and symptoms of heat stress and start a 'buddy system' since people are not likely to notice their own symptoms
- workers with a medical condition should discuss working in the heat with their doctor

Read the complete guide on the Ministry of Labour, Occupational Health and Safety Branch, web site at http://www.gov.on.ca/LAB/english/hs/guidelines/gl_heat.html

Heat Stress Hazards

	Cause	Symptoms	Treatment	Prevention
Heat Rash	Hot humid environment; plugged sweat glands.	Red bumpy rash with severe itching.	Changes into dry clothes and avoid hot environments. Rinse skin with cool water.	Wash regularly to keep skin clean and dry.
Sunburn	Too much exposure to the sun.	Red, painful, or blistering and peeling skin.	If the skin blisters, seek medical aid. Use skin lotions (avoid topical anaesthetics) and work in the shade.	Work in the shade: cover skin with clothing; wear suntan lotions with a sun protection factor of at least 15. People with fair skin should be especially cautious.

Heat Cramps	Heavy sweating drains a person's body of salt, which cannot be replaced just by drinking water.	Painful cramps in arms, legs or stomach which occur suddenly at work or later at home. Cramps are serious because they can be a warning of other more dangerous heat-induced illnesses.	Move to a cool area; loosen clothing and drink cool salted water (1 tsp. Salt per gallon of water) or commercial fluid replacement beverage. If the cramps are severe or don't go away, seek medical aid.	When working in the heat, workers should put salt on their food (if on a low-salt diet, this should be discussed with a doctor). This will give the body all the salt it needs; don't take salt tablets.
Fainting	Not enough blood flowing to the head, causing loss of consciousness.	Sudden fainting after at least two hours of work; cool moist skin; weak pulse.	Fainting may be due to a heart attack or other illness. GET MEDICAL ATTENTION. Assess need for CPR. Move to a cool area; loosen clothing; make person lie down; and if the person is conscious, offer sips of cool water.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms which often precede heat stroke.
Heat Exhaustion	Inadequate salt and water intake causes a person's body's cooling system to start to break down.	Heavy sweating; cool moist skin; body temperature over 38°C; weak pulse; normal or low blood pressure; person is tired, weak, clumsy, upset or confused; is very thirsty; or is panting or breathing rapidly, vision may be blurred.	GET MEDICAL AID. This condition can lead to heat stroke, which can kill. Move the person to a cool shaded areas; loosen or remove excess clothing; provide cool water to drink (salted if possible); fan and spray with cool water.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms which often precede heat stroke.
Heat Stroke	If a person's body has used up all its water and salt, it will stop sweating. This can cause body temperature to rise.	High body temperature (over 41°C) and any one of the following: the person is weak, confused, upset or acting strangely; has hot, dry, red skin; a fast pulse; a headache or dizziness. In later stages, a person may pass out and have convulsions.	CALL AMBULANCE. This condition can kill a person quickly. Remove excess clothing; fan and spray the person with cool water; offer sips of cool water if the person is conscious.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms which often precede heat stroke.