

Appendix C- Hazards of Extreme Heat

A summary of heat-stress-related disorders, causes, symptoms, treatment and prevention is presented in the table below.

Some individuals are more susceptible to heat stress including seniors and small children. Heat stress can also occur from wearing excessively heavy clothing, playing sports or from prolonged physical exertion. Individuals with medical conditions and women who are pregnant may also be more vulnerable to heat stress. (Source: Heat Stress, Ministry of Labour 2014)

Heat Related Illness	Cause	Symptoms	Treatment	Prevention
Heat rash	Hot humid environment; plugged sweat glands.	Red bumpy rash with severe itching.	Change into dry clothes and avoid hot environments. Rinse skin with cool water.	Wash regularly to keep skin clean and dry.
Heat cramps	Heavy sweating from strenuous physical activity drains a person's body of fluid and salt, which cannot be replaced just by drinking water. Heat cramps occur from salt imbalance resulting from failure to replace salt lost from heavy sweating.	Painful cramps occur commonly in the most worked muscles (arms, legs or stomach); this can happen suddenly at work or later at home. Heat cramps are serious because they can be a warning of other more dangerous heat-induced illnesses.	Move to a cool area; loosen clothing, gently massage and stretch affected muscles and drink cool salted water (1½ to 2½ mL salt in 1 litre of water) or balanced commercial fluid electrolyte replacement beverage. If the cramps are severe or don't go away after salt and fluid replacement, seek medical aid. Salt tablets are not recommended.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Workers should check on each other to help spot the symptoms that often precede heat stroke.
Fainting	Fluid loss, inadequate water intake and standing still, resulting in decreased blood flow to brain. Usually occurs in unacclimatized persons.	Sudden fainting after at least two hours of work; cool moist skin; weak pulse.	GET MEDICAL ATTENTION. Assess need for cardiopulmonary resuscitation (CPR). Move to a cool area; loosen clothing; have the person lie down; and if the person is conscious, offer sips of cool water. Fainting may also be due to other illnesses.	Reduce activity levels and/or heat exposure. Drink fluids regularly. Move around and avoid standing in one place for too long. Workers should check on each other to help spot the symptoms that often precede heat stroke.
Heat exhaustion	Fluid loss and inadequate salt and	Heavy sweating; cool moist skin;	GET MEDICAL ATTENTION. This	Reduce activity levels and/or heat exposure. Drink

	water intake causes a person's body's cooling system to start to break down.	body temperature over 38°C; weak pulse; abnormal or low blood pressure; person is tired and weak, may have nausea and vomiting; is very thirsty; or is panting or breathing rapidly; vision may be blurred.	condition can lead to heat stroke, which can cause death quickly. Move the person to a cool shaded area; loosen or remove excess clothing; provide cool water to drink; fan and spray with cool water. Do not leave affected person alone.	fluids regularly. Workers should check on each other to help spot the symptoms that often precede heat stroke.
Heat stroke	<p>There are two types of heat stroke:</p> <p>Classic heat stroke may occur in older adults and in persons with chronic illnesses exposed to excessive heat. When the body has used up its water and salt reserves, it stops sweating causing a rise in body temperature.</p> <p>Exertional heat stroke generally occurs in young persons, who engage in strenuous physical activity for a prolonged period of time in a hot environment and the body's cooling mechanism cannot get rid of the excessive heat.</p> <p>Heat stroke may develop suddenly or may follow from heat exhaustion.</p>	High body temperature (over 40°C) and any one of the following: the person is weak, confused, upset or acting strangely; has hot, dry, red skin (classic heat stroke) or profusely sweating (exertional heat stroke); a fast pulse; headache or dizziness. In later stages, a person may experience loss of consciousness and possibly convulsions.	CALL AMBULANCE. This condition can result in serious illness or even death. 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 that often precede heat stroke.

(Derived from - Ministry of Labour Publication- Heat Stress- June 2014-
https://www.labour.gov.on.ca/english/hs/pubs/gl_heat.php)