

## Occupational Health and Safety Health Effects of Heat Stress

Saint Mary's University recognizes the potential problems caused by high temperatures in the work environment or associated with sports activities. Heat Stress Guidelines have been established to prevent the occurrence of heat related illness.

This document is one of a series which is intended to provide information to persons who may be exposed to heat stress through their work or sports activities. If any time, you believe your physical health and safety is being affected by the workplace environment or task you are performing, contact your direct supervisor immediately.

## **Health Effects of Heat Stress**

Health Effect	Symptoms
Heat Rash	Most common problem. Prickly heat rash shows itself as red bumps normally where clothing is restrictive or chafes. As sweating increases the bumps begin to feel prickly. Prickly heat occurs in skin that is persistently wet from unevaporated sweat. Rash may become infected if not careful.  In most cases heat rash will disappear when the individual returns to a cooler environment.
Heat Cramps	Usually caused by performing hard physical labour in a hot environment. Cramps are caused by a lack of water - note: excess salt can build up in the body if water lost through sweating is not replaced; do not use salt pills. Thirst cannot be relied on as a guide to the need for water.  Water must be taken every 15 to 20 minutes in hot environments - avoid alcohol, coffee, tea, carbonated drinks (pop).
Heat Collapse	In a collapse or faint, the brain does not receive enough oxygen because blood pools in the extremities. The individual may lose consciousness. The onset of collapse is rapid and unpredictable.  Move to cooler area, loosen clothing, and give fluids
Heat Exhaustion	Signs are headache, nausea, dizziness, blurred vision, weakness, giddiness, thirst. Skin is damp and looks muddy or flushed. Fortunately, this condition responds readily to prompt treatment. Symptoms in heat exhaustion are similar to heat stroke.  People suffering from heat exhaustion should be removed from the hot environment, given fluids, loosen clothing, shower or sponge bath with cool water and rest in a cool place.



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Heat Stroke	Heat stroke is a medical emergency. It occurs when the body's system of temperature regulation fails and body temperatures rise to critical levels. This condition is caused by a combination of highly variable factors and is difficult to predict. Primary signs and symptoms of heat stroke are confusion, irrational behaviour, loss of consciousness, convulsions, hot dry skin, lack of sweating (usually), and an abnormally high body temperature. If body temperature is too high it can cause death. The elevated metabolic temperatures caused by a combination of work load and environmental heat load are also highly variable and difficult to predict.
	Seek medical attention immediately

For treatment of these conditions, see the topic below: First Aid Treatment of Heat Stress.

Further information on heat stress topics is available on the Saint Mary's University OHS Site: http://www.smu.ca/administration/ohs/

- Saint Mary's Heat Stress Guidelines Policy
- Occupational Health and Safety: Thermal Comfort and Heat Stress
- Occupational Health and Safety: Heat Stress Alert Notice
- Occupational Health and Safety: Indoor Heat Stress Warning Notice
- Occupational Health and Safety: Outdoor Heat Stress Warning Notice
- Occupational Health and Safety: First Aid Treatment of Heat Stress