

Hot Weather Plan

The University implements a 'Hot Weather Plan' when high outdoor temperatures, humidity and pollutants pose a concern for outdoor workers.

Triggered during any of these conditions:

- **Humidex reaches or exceeds 35**
- **Heat wave** (3 or more days of temperatures of 32°C or more)
- **Environment Canada Humidex Advisory** (air temperature exceeding 30°C and Humidex exceeding 40)
- **Ontario Ministry of the Environment Smog Alert**

Implement the controls listed to manage heat stress induced by hot weather.

Workers should be able to recognize the signs and symptoms of heat stress in themselves and others and how to prevent them (see Heat-related Illness Table on reverse).



Symptoms to watch for

- Nausea or irritability
- Dizziness
- Muscle cramps or weakness
- Feeling faint
- Headache
- Fatigue
- Thirst
- Heavy sweating

See reverse for detailed information on causes, symptoms, treatment and prevention of heat-related illnesses.

FOR MORE INFORMATION

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For outdoor workers, direct sunlight is typically the main source of radiant heat.

Heat exposures can occur in indoor work areas on campus as well, where there may be radiant sources such as cooktops or ovens in kitchens, bakeries and process heat in plants or workshops.

For guidance on heat stress due to indoor radiant sources, contact the Occupational Hygienist.

WORKING IN HOT ENVIRONMENTS

High temperatures, high humidity and hard physical work can be a dangerous combination and can overwhelm the body's ability to regulate temperature. Exposure to these conditions may lead to heat-related illnesses such as **heat rash, cramps, heat exhaustion, heat syncope** and in serious cases **heat stroke**. Such illnesses can be prevented through worker awareness and control measures.

Preventing heat stress

Scheduling Work

- ☞ Schedule strenuous tasks at cooler times of the day or on cooler days

Preparing for Work

- ☞ Consider worker rotation for 'hot' jobs
- ☞ Acclimatize workers to work in hot environments prior to starting full schedule and physically demanding work.
- ☞ Unacclimatized workers should gradually increase time and work pace working in hot conditions. Consult Occupational Hygienist for further guidance.
- ☞ Pregnant workers or those with medical conditions should consult with physician prior to work in hot environments
- ☞ Workers should be able recognize the signs and symptoms of heat stress and how to prevent them (see reverse for Heat-related Illness Table).

During work

- ☞ Provide a supply of cool drinking water
- ☞ Reduce air temperature and humidity through air cooling
- ☞ Provide cool, shaded work areas and air conditioned rest areas
- ☞ Provide fans to increase air movement if temperature is below 35°C
- ☞ Avoid working in direct sunlight
- ☞ Workers should be encouraged to drink 1 cup of cool water or electrolytes every 20 minutes
- ☞ Monitor for symptoms of heat-related illness. Promote a buddy system to detect signs and symptoms.
- ☞ Worker should take a break if showing any signs or symptoms of heat stress.
- ☞ Implement check-in or toolbox talk at hottest part of day

Physical Demands

- ☞ Reduce physical work demands by using mechanized equipment or supports (hoists, lifting devices)
- ☞ Encourage workers to slow down the pace of work
- ☞ Increase frequency and length of rest breaks. Implement an appropriate work/rest regimen that accounts for work demands and expected heat load. Consult with Occupational Hygienist.

Clothing

- ☞ Light summer clothing to allow free air movement and sweat evaporation
- ☞ If outdoors, light-coloured clothing, long-sleeve shirt and pants and head cover to prevent exposure to direct sunlight

Heat-Related Illnesses

Heat-related illnesses	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 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 and weak, and has nausea and vomiting; is very thirsty; or is panting or breathing rapidly; vision may be blurred.	GET MEDICAL ATTENTION. This 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.	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.
Heat stroke	There are two types of heat stroke: 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. 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. Heat stroke may develop suddenly or may follow from heat exhaustion.	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 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 that often precede heat stroke.

Source: Ministry of Labour Heat Stress Guideline: https://www.labour.gov.on.ca/english/hs/pubs/gl_heat.php (Accessed: May 16, 2017)