

HEALTH & SAFETY OPERATIONAL GUIDELINE			
Title:	HEAT STRESS		
Section:	SAFE WORK RULES	Number:	05-017
Subsection:	General Health & Safety	Effective Date:	January 1, 2008

Definitions

“Heat Stress” occurs when heat is combined with other stresses such as hard physical work, loss of fluids, fatigue or some medical conditions and can lead to illness, disability and even death. The following table provides specific symptoms and treatment strategies:

Table One

	Symptoms	Treatment
Heat Rash	Red bumpy rash with severe itching	Change into dry clothes and avoid hot environments. Rinse skin with cool water
Heat Cramps	Painful cramps in arms, legs or stomach which occur suddenly at work or later at home. Can be a warning of more dangerous illness.	Move to a cool area; loosen clothing and drink cool, salted water or sports beverage; If the cramps are severe or don't go away, seek medical attention
Fainting	Fainting due to fluid loss	GET MEDICAL ATTENTION. ASSESS NEED FOR CPR. Move to a cool area; loosen clothing; make person lie down. If conscious, offer sips of cool water.
Heat Exhaustion	Heavy sweating; cool moist skin; body temperature above 38C; weak pulse; normal to low blood pressure. Person is tired and weak has nausea and vomiting. Is panting or breathing rapidly; may have blurred vision	CALL AMBULANCE. This condition can lead to heat stroke. Move to cool, shaded area; loosen or remove excess clothing; provide cool water to drink; fan and spray with cool water. If nauseous, lay person on side
Heat Stroke	High body temperature 41C+ and any one of the following: weakness, confusion, upset, acting strangely; hot, dry, red skin; fast pulse; headache or dizziness. In later stages, person may pass out or have convulsions	CALL AMBULANCE. This condition can kill quickly. Remove excess clothing; fan and spray the person with cool water; offer sips of cool water if conscious. Move the person to a cool shaded area and lie on side. DO NOT LEAVE PERSON ALONE.

Purpose and Scope

- Define and understand heat stress
- How to prevent heat-related illness in the workplace
- Describe roles and responsibilities

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General

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, a furnace or the sun), your body must work harder to get rid of its heat.

If the air is moving (for example, from fans) and it is cooler than your body, it is easier for your body to pass heat to the environment.

Workers on medications or with pre-existing medical conditions may be more susceptible to heat stress. These workers should speak to their personal physicians about work in hot environments.

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.

Procedures

Hot Weather Plan

For hot work environments due to hot weather, a hot weather plan is appropriate. A hot weather plan is a simplified heat stress control plan based on environmental triggers:

Table Two

Humidex Reading (°C)	Action
25-29	Supply water to workers as needed
30-33	Encourage workers to drink extra water
34-37	Advise workers to double water intake. Ensure workers can recognize symptoms of heat stress
38-39	75% work / 25% relief. One cup cool water every 20 mins
40-42	50% work + water / 50% relief
43-44	25% work + water / 75% relief
45+	Re-assign work to cooler environment

Generally, plans related to hot weather should be in place between May 1 and September 30 of each year.

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Engineering Controls

- Provide air-conditioned rest areas
- Provide cool work areas
- Reduce physical demands of work task through mechanical assistance (hoists, lift-tables, etc.)
- Control the heat at its source through the use of insulating and reflective barriers (e.g. insulate furnace walls)
- Exhaust hot air and steam produced by operations
- Reduce the temperature and humidity through air cooling
- Increase air movement if temperature is less than 35°C (fans)

Administrative Controls

- Increase the frequency and length of rest breaks.
- Schedule strenuous 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.
- Caution workers to restrict strenuous work in direct sunlight.
- Assign additional workers or slow down the pace of work.
- 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.
- Pregnant workers and workers with a medical condition should discuss working in the heat with their doctor.
- First Aid responders and an emergency response plan should be in place in the event of a heat-related illness.
- Do not use salt tablets unless directed by a physician
- Avoid drink that contain, alcohol or large amounts of sugar. These can cause you to lose more body fluids.

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Personal Protective Equipment

- Light summer clothing should be worn to allow free air movement and sweat evaporation.
- Outside, wear light-coloured clothing.
- In a high radiant heat situation, reflective clothing may help.
- For very hot environments, air, water or ice-cooled insulated clothing should be considered.
- Vapour barrier clothing, such as chemical protective clothing, greatly increases the amount of heat stress on the body, and extra caution is necessary.

Emergency Procedures

See Table One above

THIS GUIDELINE TAKES EFFECT IMMEDIATELY AND REMAINS IN EFFECT UNTIL REPLACED BY A NEW GUIDELINE OR SUPERSEDED BY LEGISLATION/REGULATION

ORIGINAL SIGNED

Employer Co-Chair, JHSC

Worker Co-Chair, JHSC