



# THE HAZARDS OF HEAT STRESS

Heat and humidity are a normal part of Ontario summers, but how your body reacts to the heat depends on how hard you are working, how much water you have been drinking, how fit you are, and whether you have become acclimatized to the higher temperatures.

Heat stress can occur wherever physical work is being done in a hot, humid environment. The body tries to cool itself by increasing the heart rate to move blood—and heat—to the skin and by sweating to help cool the blood and body. But when too much water is lost through sweating, dehydration occurs. This can lead to heat-related illnesses.

| Illness                | Symptoms   | Treatment   | Severity  |
|------------------------|--|---|---|
| <b>Heat Rash</b>       | <ul style="list-style-type: none"> <li>Red blotches and extreme itchiness in areas persistently damp with sweat</li> <li>Prickling sensation on the skin where sweating occurs</li> </ul>  | <ul style="list-style-type: none"> <li>Rest in a cool place.</li> <li>Take a shower or rinse skin with cool water.</li> <li>Change into dry clothes.</li> </ul>   | If treated, symptoms usually disappear after a few days.  |
| <b>Heat Cramps</b>     | <ul style="list-style-type: none"> <li>Painful cramps or spasms in the arms, legs, back, or stomach that occur suddenly at work or later at home</li> <li>Hard, painful lumps in the muscles as a result of the cramps</li> </ul>                            | <ul style="list-style-type: none"> <li>Rest in a cool place.</li> <li>Remove or loosen clothing.</li> <li>Drink cool water or a sports drink containing electrolytes.</li> <li>Stretch and massage muscles.</li> <li>If the cramps are severe or don't go away, seek medical aid.</li> </ul>  | If not treated promptly, heat cramps can lead to more serious heat-related illnesses.   |
| <b>Fainting</b>        | <ul style="list-style-type: none"> <li>Sudden fainting after at least two hours of work</li> <li>Cool, moist skin</li> <li>Weak pulse</li> </ul>   | <ul style="list-style-type: none"> <li><b>GET MEDICAL ATTENTION.</b></li> <li>Assess the need for CPR.</li> <li>Rest in a cool place.</li> <li>Remove or loosen clothing.</li> <li>If conscious, make the person lie down.</li> <li>If conscious, give the person sips of cool water.</li> </ul>  | If not treated promptly, fainting can lead to more serious heat-related illnesses. Fainting may also be due to other illnesses. |
| <b>Heat Exhaustion</b> | <ul style="list-style-type: none"> <li>Weakness</li> <li>Headache</li> <li>Breathlessness</li> <li>Nausea or vomiting</li> <li>Feeling faint</li> </ul>  | <ul style="list-style-type: none"> <li><b>GET MEDICAL ATTENTION.</b></li> <li>Rest in a cool place.</li> <li>Remove or loosen clothing.</li> <li>Lie down with feet raised.</li> <li>Drink cool water or a sports drink containing electrolytes.</li> <li>Do not leave affected person alone.</li> <li>Take a cool shower or rinse skin with cool water.</li> </ul>   | If not treated promptly, heat exhaustion can lead to heat stroke, which can be fatal.   |
| <b>Heat Stroke</b>     | <ul style="list-style-type: none"> <li>Irrational behaviour</li> <li>Confusion</li> <li>Loss of consciousness (fainting)</li> <li>Convulsions</li> <li>Hot, dry skin (not sweating)</li> <li>Rapid heartbeat</li> <li>Rapid and shallow breathing</li> </ul> | <ul style="list-style-type: none"> <li><b>GET MEDICAL ATTENTION. Call 911 or get the person to hospital immediately.</b></li> <li>Move the person out of the sun and into a cool place.</li> <li>Cool the person's body by covering with damp sheets, spraying with cool water, or using a fan.</li> <li>If conscious, give the person sips of cool water.</li> </ul> | Can be fatal if medical assistance is not obtained immediately.   |

Source: [ontario.ca/heatstress](http://ontario.ca/heatstress) (reviewed December 2015)

**Symptoms of heat stress should never be ignored.** They are your body's way of telling you that something needs to be done to balance your body's heating and cooling system. For more information on heat stress and helpful resources on how to prevent it, visit the **Heat Stress** topic page on [ihsa.ca](http://ihsa.ca).

## Prevention tips for workers

- **Be aware of the symptoms.** Watch out for symptoms of heat stress in yourself and your co-workers.
- **Drink water.** You need to drink one cup of cool water every 20 minutes, even if you're not thirsty.
- **Avoid alcohol and caffeinated drinks.** Alcohol and caffeinated beverages such as tea, coffee, and cola are diuretics and will dehydrate your body. These drinks should also be avoided the night before work as well.
- **Wear light, loose-fitting clothing.** Wear clothes that allow sweat to evaporate. Light-coloured garments absorb less heat from the sun.
- **Know your personal risk factors.** Any of the following conditions could increase your risk for heat-related illness: excessive weight, poor physical condition, previous heat-related illnesses, older age, heart disease, high blood pressure, recent illnesses, and certain medications.

## Prevention tips for managers/supervisors

- **Training.** Make heat stress your next safety talk and remind workers about it periodically throughout the summer. Visit [ihsa.ca](http://ihsa.ca) for free safety talks on heat stress and sun protection.
- **Breaks.** Give workers frequent breaks in cool areas.
- **Scheduling.** Schedule hotter jobs during cooler parts of the day.
- **Assistance.** Minimize strenuous tasks by pairing up workers or providing material handling equipment such as carts, dollies, pallet jacks, or manual forklifts.