



Extreme Heat

Climate change is likely to have wide-ranging effects on human health in coming years – it is expected that heat waves will occur more frequently, be hotter, last longer and have higher levels of humidity. Warmer temperatures and prolonged heat waves will also bring an increase in air pollution.

What happens to the body during extreme heat?

The body's temperature control system can become overwhelmed and the body's core temperature increases. Sweating helps cool the body, however, when the humidity is high, sweat will not evaporate as quickly. This will prevent the body from releasing heat quickly and high core temperatures can damage the brain or other vital organs.

Are you at risk from extreme heat?

Everyone is at risk, but some individuals are more susceptible to the effects of extreme heat:

- infants and children
- seniors
- the homeless
- pregnant women
- individuals who are ill or on certain medications
- individuals who exercise vigorously or play sports outdoors
- individuals who do strenuous outdoor work for prolonged periods of times (e.g. construction or manual labour)
- individuals who are overweight (tend to retain more body heat)

Why are children at risk?

Children have a high metabolic rate and therefore produce more heat. Also, their capacity to sweat is not as great compared to adults; so it is more difficult for them to release heat from their bodies. Additionally, the effects of dehydration are greater in children. Children also rely on others to provide adequate fluids,

Are there certain children to monitor even more carefully?

Yes, children with diabetes, anorexia, obesity, developmental delays, cystic fibrosis, heart disease and diarrhea are at an even greater risk.

What should be done to protect children's health when temperatures and humidity are high?

Keep the children cool and use common sense:

- be sure children drink plenty of fluids (non-caffeinated)—even more than their thirst indicates
- wear lightweight, light-colored, loose-fitting clothing
- stay cool indoors and if possible, stay in an air-conditioned place
- electric fans provide comfort by increasing evaporation, however when the conditions are extreme, fans will not prevent heat-related illness
- keep physical activity to an absolute minimum
- draw blinds/curtains to prevent radiant heat from entering classrooms
- never leave babies or children unattended in a car

Why are seniors at risk?

- Elderly people do not adjust to sudden changes in temperature.
- They are more likely to have chronic medical conditions that can upset the normal response to heat.
- They are more likely to take medications that impair the body's ability to regulate its temperature, or that inhibit sweating.

What should seniors do to protect themselves?

- Drink plenty of fluids (consult with your doctor to see how much fluid to drink).
- Wear lightweight & loose-fitting clothing.
- Keep physical activity to a minimum.
- Rest indoors and use a fan and draw blinds/curtains to prevent radiant heat from entering. If possible, stay in an air conditioned place.

What you can do to help protect elderly relatives or neighbours?

- Visit or check in with them regularly.
- Take them to air conditioned locations if they have transportation problems.
- Ensure they have an electric fan or another means to circulate air and keep cool.

Minimizing Your Risk – General Precautions

Keep out of the heat

- Be aware of environmental conditions such as the smog, air quality, UV and humidity indexes.
- Try to limit your activity to the morning and evening.
- Rest often in a shady area.
- Wear a wide-brimmed hat, sunglasses, sun screen and light/loose-fitting clothing.
- Drink plenty of water.

Stay Cool

- Stay indoors. Spend time in an air-conditioned building – if possible.
- Draw blinds/curtains to prevent radiant heat from entering.
- Take cool showers or baths.

Drink Fluids Regularly

- Drink plenty of water or natural fruit juices. Do not wait until you are thirsty.
- Avoid alcohol, caffeine, or beverages with large amounts of sugar.
- Heavy sweating causes the body to lose salts and minerals.

If you have a health condition, check with your doctor before increasing fluids.

How will I know how to treat a condition caused by extreme heat?

On the bottom of this fact sheet you will find a table to assist you in recognizing conditions caused by extreme heat, symptoms to look for and how you can prevent these conditions from occurring.

Where can you go for more information?

For more information call Your Health Connection at 721-7520 (1-877-721-7520) Monday to Friday 8:30 a.m. to 6 p.m. or visit the following websites:

Simcoe Muskoka District Health Unit
www.simcoemuskokahealth.org

Health Canada http://hc-sc.gc.ca/iyh-vsv/environ/heat-chaleur_e.html#info

Centre for Disease Control and Prevention
<http://www.cdc.gov/Features/ExtremeHeat>

Condition	Cause	Symptoms	Prevention
Heat Rash	Hot, humid environment; plugged sweat glands.	Red, bumpy rash; severe itching.	Wash regularly, keeping skin clean and dry.
Heat Cramps	Heavy sweating depleting body's salt causing painful cramps in the muscles. <i>May also be a sign of heat exhaustion.</i>	Muscle pain or spasm, normally in the legs, arms or abdomen. May be associated with activity.	Avoid strenuous activity during times of high heat and humidity. Maintain fluid levels.
<i>The following conditions are considered more life threatening. Both heat exhaustion and heat stroke are considered medical emergencies.</i>			
<u>Medical attention must be sought immediately if signs of fainting, heat exhaustion or heat stroke are observed.</u>			
Fainting	Lack of blood flow to the head, causing loss of consciousness.	Cool moist skin; weak pulse.	Reduce activity levels and heat exposure. Drink fluids regularly.
Heat Exhaustion	Inadequate salt and fluid intake causes body's cooling system to start to break down. Body overheats but not above 40°C.	Heavy sweating; cool, moist skin; muscle cramps/pain; headache; nausea; weak pulse; normal or low blood pressure; feel faint or weak; shortness of breath; chest or abdominal pain	Reduce activity level in hot humid environments; maintain fluid levels.
Heat Stroke	Body's salt and water is depleted; sweating stops; and body temperature rises.	High body temperature 41°C or more; red, hot and dry skin; no sweating; rapid pulse; seizures; abnormal mental status; nausea.	Reduce activity levels. Maintain fluid levels. Recognize signs and symptoms.