



EXTREME HEAT AND YOUR HEALTH

The Issue

Possibly influenced by a changing climate, many regions of Canada are experiencing prolonged periods of unusually hot conditions. It is important that Canadians know how to protect themselves and their families from the health effects of extreme heat.

Background

Unusually hot weather conditions affect the body by pushing it beyond its limits. When temperatures and humidity are high, the body must work extra hard to maintain a normal temperature.

Most heat disorders occur because people have been overexposed to heat or have over-exercised for their age and physical condition. During a heat wave, everyone is at risk, but some groups are more vulnerable than others. They include:

- Seniors
- Infants and pre-school children
- People on dialysis or with chronic diseases such as diabetes, heart disease and respiratory diseases
- People who play sports or exercise vigorously outdoors
- People who do strenuous outdoor work for prolonged periods of time
- Construction workers (or other outdoor manual labourers)
- People who work in places where heat is emitted through industrial processes (e.g., foundries, bakeries, dry cleaners)
- People taking certain medications, such as psychiatric drugs, anti-

depressants, anti-Parkinson's drugs, diuretics, some antihistamines, over-the-counter sleep medications and anti-diarrhea pills

- The homeless
- Pregnant women
- People who are overweight

Health Risks of Extreme Heat

A heat wave generally refers to at least three consecutive days with unseasonably high temperatures often accompanied by high humidity and where the temperature does not cool down significantly at night. Extreme heat can cause severe illness and even death.

The following are some of the conditions that may arise during high temperatures.

Heat Cramps

These are painful spasms usually in the leg and stomach muscles and usually accompanied by heavy sweating.

They can be alleviated by moving to a cooler place and lightly massaging and stretching the affected muscles. People experiencing heat cramps should also sip up to half a glass of cool water every 15 minutes.

Heat Exhaustion

During heat exhaustion, a person may be sweating heavily, but their skin may be cool, pale or flushed. Other symptoms are a weak pulse, fainting, dizziness, nausea, vomiting, exhaustion and headaches. Body temperature may be normal but it will likely rise.



People suffering from heat exhaustion should lie down in a cool place, loosen or remove clothing and put on cool wet clothes. They should sip water slowly, about half a glass every 15 minutes. Water should be discontinued if they are nauseated. They should seek immediate medical attention if vomiting occurs.

Heat Stroke (also called Sun Stroke)

This is a severe medical emergency that can result in death. Body temperature is high (103% F or 39.4% C) as opposed to normal body temperature of 98.5% F or 37% C, the pulse is strong and rapid, and breathing is shallow and rapid. The person suffering heat stroke may be experiencing throbbing headache, dizziness, nausea, confusion, have red, hot and dry skin (not sweating), and may become unconscious. This person should be taken to a hospital as quickly as possible. Delay can be fatal. En route, keep the person as cool as possible by removing clothing and sponging with cool water.

Other Effects

Heat can also aggravate other conditions such as:

- Heart disease, especially high blood pressure
- Kidney disorders
- Psychiatric disorders

Heat waves may make air quality problems (such as smog) worse and increase the risks of respiratory or cardiovascular illness. If a heat wave is accompanied by air pollution, anyone with chronic lung conditions such as bronchitis or emphysema or with a variety of cardiac conditions could be particularly affected.

Minimizing Your Risk

During periods of extreme heat, take these precautions.

Keep out of the heat

- Pay attention to the weather forecasts. If unusually hot conditions are forecast, try and plan your day in a way that allows you to stay out of the heat.
- If you must be outdoors during hot weather, try to limit your activity to morning and evening. Rest often in a shady area so that your body's temperature has a chance to recover.
- If you must go out, stay in the shade, wear a wide-brimmed hat, sunglasses and light, loose-fitting clothing.
- If you will be outside for some time, drink plenty of water.
- If you are the parent or caregiver of infants or young children, if possible, avoid taking them out in periods of extreme heat. But if you must go out, dress them in cool, loose clothing, shade their heads or faces with hats or umbrellas, and provide plenty of liquids for them to drink.

Stay cool

- Stay cool indoors, take cool showers often or wet your hands, face and the back of your neck.
- Reduce the use of your oven and stove to keep your home cooler. Turn lights off or down low. Keep shades or drapes drawn on the sunny side of your house and keep windows slightly open. Open them wide at night to cool the house.

- If you don't have air conditioning, spend part of the day in an air-conditioned place such as a shopping mall, library, community centre or cinema.

- Never leave infants, children or pets unattended in a parked car.

Drink Regularly

- Drink plenty of water and natural fruit juices. Don't wait until you are thirsty to drink. If you do heavy physical activity during hot weather, drink two to four glasses of cool liquids per hour.
- Don't drink liquids that contain alcohol, caffeine or large amounts of sugar. They may actually cause your body to lose more fluid. Also avoid very cold drinks because they may cause stomach cramps.
- Heavy sweating causes your body to lose salt and minerals. These must be replaced by drinking cool drinks or sports beverages.
- If you have epilepsy, heart disease, liver or kidney disease, or if you are on a fluid-restricted diet, consult your doctor before increasing your fluid intake.

Seek advice if you have any concerns

- Get help from a friend, relative or doctor if you are worried about your health during a heat wave.
- Watch for cramping in your arms, legs or stomach, feelings of mild confusion, weakness or problems sleeping.
- If you take medication, check with your doctor or pharmacist on their side effects during extreme heat.



- Check regularly on family, friends or neighbours who are at higher risk of heat-related illnesses and who do not have air conditioning, to see that they are all right.

Keep a watchful eye! During heat emergencies, it is important to keep a lookout for the most vulnerable in your community. Whether it's a neighbour, a parent or a friend, do not hesitate to offer assistance in person or by telephone. In an emergency call 911.

Government of Canada's Role

Health Canada and the Public Health Agency of Canada are committed to maintaining and improving the health of Canadians. They are working with their partners to better understand the impacts of extreme heat on the health of Canadians, particularly those at greatest risk, and to promote efforts to reduce these risks. They provide information to Canadians on steps they can take to preserve and better their health, including information on how they can prepare themselves to adapt to prolonged periods of extreme heat.

Need More Info?

For further information contact:

Climate Change and Health Office
Safe Environments Programme
Health Canada
269 Laurier Avenue West,
AL 4905B
K1A 0K9
Email: climatinfo@hc-sc.gc.ca

Or

Division of Aging and Seniors
Public Health Agency of Canada
200 Elgantine Driveway, 8th Floor
Ottawa, ON K1A 0K9
Tel: 613-957-7606
Fax: 613-957-9938
Email: seniors@phac-aspc.gc.ca

Or visit:

Health Canada's Climate Change
and Health Web site at:
[www.hc-sc.gc.ca/ewh-semt/
climat/index_e.html](http://www.hc-sc.gc.ca/ewh-semt/climat/index_e.html)

The Public Health Agency of
Canada's Division of Aging and
Seniors Web site at:
[www.phac-aspc.gc.ca/
seniors-aines/](http://www.phac-aspc.gc.ca/seniors-aines/)

Health Canada's Seniors section
at:
[www.hc-sc.gc.ca/jfy-spv/
seniors-aines_e.html](http://www.hc-sc.gc.ca/jfy-spv/seniors-aines_e.html)

Or visit the Canadian Centre for
Occupational Health's Health and
Safety Program Web site at:
[www.ccohs.ca/oshanswers/
hsprograms/](http://www.ccohs.ca/oshanswers/hsprogram/)

For more information on the health
effects of air pollution see the
following Web sites:

It's Your Health article on Smog at:
[www.hc-sc.gc.ca/iyh-vsv/environ/
smog_e.html](http://www.hc-sc.gc.ca/iyh-vsv/environ/smog_e.html)

It's Your Health article on Road
Traffic and Air Pollution at:
[www.hc-sc.gc.ca/iyh-vsv/environ/
traf_e.html](http://www.hc-sc.gc.ca/iyh-vsv/environ/traf_e.html)

Health Canada's Air Health Effects
Program at:
[www.hc-sc.gc.ca/ewh-semt/air/
index_e.html](http://www.hc-sc.gc.ca/ewh-semt/air/index_e.html)

To learn about weather conditions
in your area, visit Environment
Canada's Web site at:
[www.weatheroffice.ec.gc.ca/
canada_e.html](http://www.weatheroffice.ec.gc.ca/canada_e.html)

For additional articles on health
and safety issues, go to the
It's Your Health Web site at:
www.healthcanada.gc.ca/iyh
You can also call toll free at
1-866-225-0709
or TTY at 1-800-267-1245*