

CLIMATE CHANGE

AND YOUR HEALTH

Climate change has the potential to have serious impacts on your health.

Regional differences in warming patterns, precipitation and extreme weather events mean that the health effects of climate change will vary according to where you live. Young children, the elderly, those in poor health, or those living in poor quality housing will be most vulnerable to stresses related to weather extremes.

Researchers in Canada are working together to learn more about the effects of climate change on our health. They will help us in finding ways to adapt to the impacts of climate change on communities, vulnerable individuals, and public health and emergency services.

Extreme temperature

Climate change will mean that we will experience shorter and milder winters. However, climate change scientists tell us that over the coming century we can expect heat waves during summer months to:

- Occur more frequently
- Be hotter
- Last longer
- Have higher levels of humidity

More intense heat waves may cause an increase in heat-related illnesses (heat stroke and dehydration); respiratory and cardiovascular illness, physical and mental stress; and the spread of infections.

During the next 50 years, heat-related deaths may increase, particularly in large cities in southern Canada, unless adequate measures are taken to protect vulnerable populations and to reduce the urban heat island effect. (This effect occurs when natural vegetation is replaced by surfaces that absorb heat, such as building

roofs and walls, and pavement.) The City of Toronto has already begun to protect vulnerable people during heat waves, and to take measures to reduce the heat buildup within the city.



Air quality

Warmer temperatures and prolonged heat waves will bring an increase in air pollution, particularly in urban and industrialized areas. Ground-level ozone, the primary ingredient of smog, results when sunlight and heat interact with pollutants such as nitrogen oxides and volatile organic compounds. These pollutants are released by the burning of fossil fuels. As temperatures go up, we will have more smoggy days.

Asthma and other respiratory problems are already on the rise; warmer temperatures with



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increased humidity and air pollution may cause them to increase further.

Children are especially vulnerable to air pollution because of their smaller size, the fact that their lungs are still developing, and because they spend more time being active outdoors than adults. Hotter, more humid weather could pose special health risks for children who already suffer from asthma. Changes in wind and weather patterns can also change the amount of fungi and molds in the air, affecting people with allergies.



Throughout Canada, children are more likely to be hospitalized for respiratory problems resulting from exposure to air pollution than any other cause.

*Changing Habits, Changing Climate:
A Foundation Analysis,*
Canadian Institute of Child Health.
Report available at www.cich.ca

Extreme Weather Events

A warmer climate is likely to cause more frequent and more intense severe weather events, such as hurricanes, tornadoes, thunderstorms, floods and droughts. These events have many potential health impacts, including direct physical injury or death, as well as psychological distress due to the loss or injury of loved ones and property, mass evacuations, and moving into shelters.

Although it is not possible to link recent severe weather events directly to climate change, examples in the past suggest the types of risks to health and well-being that Canadians may face in the future. The Red River flood in May 1997 caused the evacuation of more than 29,000 people in Southern Manitoba, and resulted in \$815 million in damages. The eastern Ontario, southern Quebec and New Brunswick ice storm in January 1998 resulted in massive power outages affecting 4.7 million people. More than 600,000 people had to be evacuated and there were 28 deaths and 945 injuries. Total damages were estimated to be \$5.4 billion.



Water quantity and quality

A more extreme climate could affect the quality and quantity of our water. Lower flows of water in lakes and rivers caused by heat waves and droughts can lead to poor water quality and to an increase in water-borne diseases. Surface water can also be contaminated during heavy storms and floods by storm sewer overflows. Hot weather can cause microorganisms to grow and cause outbreaks at recreational beaches and in shellfish. It can also increase chances of food poisoning outbreaks.

Want to know more about climate change?

Visit the Government of Canada climate change Web site at:
www.climatechange.gc.ca
or call toll-free: 1 800 O-Canada
(1 800 622-6232)
or TTY 1 800 465-7735 and ask
for a climate change information kit.

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