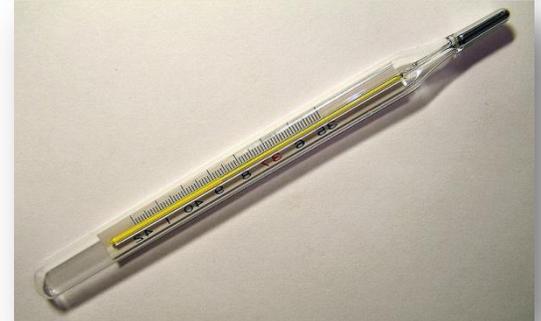


Human Health: in a changing climate

The health and well being of people in Canada is inextricably linked to the environment. The impacts of climate change on human health, either directly or indirectly, are already presenting new challenges for the health services sector and environmental health practitioners.

Climate Change effects on health

- ❖ Projected increases in extreme heat days (i.e. Toronto is predicted to have 50+ days exceeding 32°C by 2080). An increase in heat related deaths is predicted (NRCan, 2007; Pollution Probe, 2002).
- ❖ Increasing temperatures are expected to increase heat-related illnesses, such as heat stroke and exhaustion, and further worsen existing medical conditions to respiratory, circulatory, and nervous system health issues (NRCan, 2007).
- ❖ Increasing temperatures lead to the potential for the northward movement of vector-borne and zoonotic diseases (Pollution Probe, 2002).
- ❖ Background ambient levels of ground-level ozone are expected to double, causing significant health-related problems to air pollution (Health Canada, 2009; Pollution Probe, 2002).
- ❖ Due to changes in intensity and frequency of rainfall events, water and food-borne contamination is of concern (Health Canada, 2009)



Facts and Examples of Change:

- According to research undertaken by Toronto Public Health, an average of 120 acute deaths every year between 1954 and 2000 were heat related.
- Environment Canada projects a near doubling of hot days above 30°C in the City of Toronto by 2050.
- Toronto Public Health projects a doubling of heat related mortality to about 240 persons per year by the 2050s as a consequence of increased heat days.
- Heat waves were responsible for almost 600 deaths in Chicago during five days in July 1995 and about 37,000 deaths in Europe in August 2003.

(The Expert Panel on Climate Change Adaptation, 2009)



Human Health

Adaptation Options for Health:

Climate change adaptation has the potential to significantly reduce human vulnerability to changing weather and climate and to improve overall resiliency. Options for adaptation include:

- ❖ Locate and characterize vulnerable populations within a community
- ❖ Develop or improve disaster management plans to include impacts of changing weather and climate
- ❖ Minimize bank and stream erosion to prevent flash flooding
- ❖ Support and/or develop current monitoring and surveillance systems i.e. weather tracking systems, vector and disease surveillance, etc
- ❖ Develop early warning systems for extreme weather systems
- ❖ Develop and implement public education programs that target the reduction of greenhouse gas emissions (mitigation) to improve air quality
- ❖ Provide public education towards protection against disease exposure and transmission, heat-related stress, and UV related illnesses
- ❖ Adopt policies and actions to reduce the heat island effect in urban areas
- ❖ Provide cooling or warming shelters
- ❖ Developing a climate adaptation plan

(Pollution Probe, 2002; NRCan, 2007; the Expert Panel on Climate Change Adaptation, 2009)



References

Health Canada. 2009. Understanding the Health Effects of Climate Change. Online. <http://www.hc-sc.gc.ca>

Natural Resources Canada (NRCan). 2007. Climate Change Impacts and Adaptation: A Canadian Perspective Human Health and Well-Being. Online. <http://adaptation.nrcan.gc.ca/>

Pollution Probe. 2002. Towards An Adaptation Action Plan: Climate Change And Health In The Toronto-Niagara Region Summary For Policy Makers. Toronto, Ontario.

The Expert Panel on Climate Change Adaptation. 2009. Adapting to Climate Change in Ontario. Queen's Printer for Ontario. http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079212.pdf

Photos: Wikipedia. 2011. Image Gallery. www.wikipedia.org



Ontario Centre for Climate Impacts and Adaptation Resources (OCCIAR)

OCCIAR specializes in communication of climate impacts and supports adaptation planning to a wide range of stakeholders throughout the province of Ontario.

OCCAR

MIRARCO/Laurentian University
935 Ramsey Lake Road
Sudbury, ON P3E 2C6
P: 705 675 1151

www.climateontario.ca