



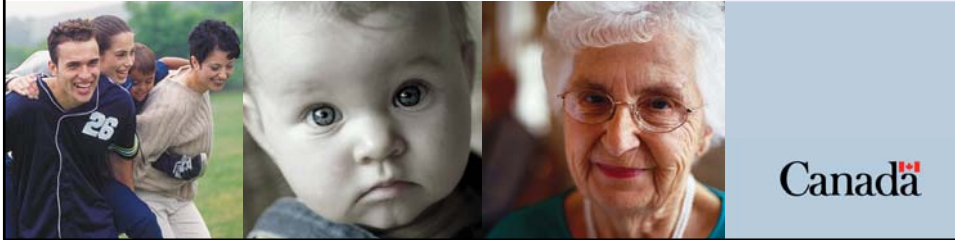
Health Canada Santé Canada

Your health and safety... our priority. Votre santé et votre sécurité... notre priorité.

Helping Canadians Adapt to a Changing Climate: Developing Heat Resilient Communities and Individuals in Canada

ARC Webinar

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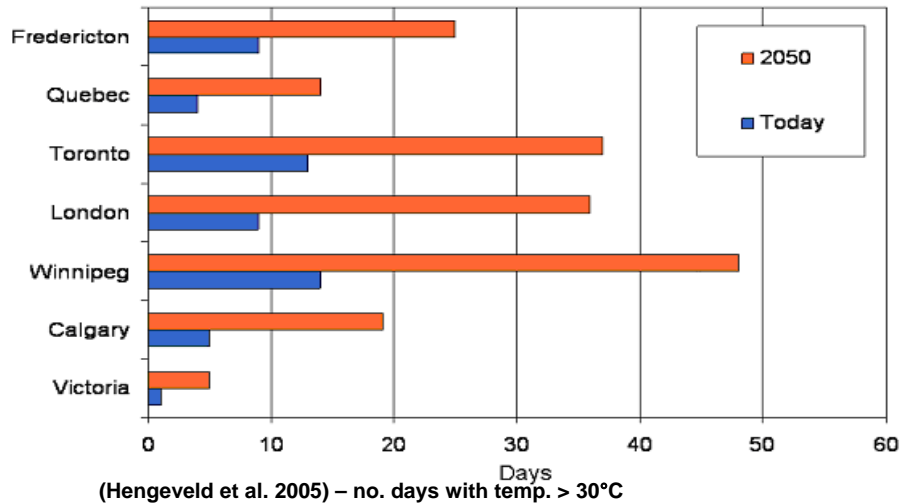
Preparing for Emergencies

**“I think our policy has served us well
in what I call normal conditions. These
were unbelievable circumstances”**

Victoria Premier John Brumby
commenting on the February 2009
bushfires in Australia



EHEs are expected to become more frequent



Helping Canadians Adapt to a Changing Climate

In Dec. 2007 the Government of Canada announced 4-year initiative to help Canadians adapt to a changing climate change

Activities to be funded include:

1. Research to improve climate change scenarios;
2. A program to assist Northerners in assessing key vulnerabilities and opportunities for adaptation;
3. A program on climate change and health adaptation in northern / Inuit communities;
4. Research on heat and infectious disease alert and response systems; and,
5. A program to develop regional adaptation programs



Developing Heat Resilience... An Overview

Five core themes:

1. Heat-Health Science
2. Clinical Competencies
3. Pilot Heat Alert and Response Systems
4. Health Messaging
5. Partnership and Dissemination

Four Key Deliverables:

1. Pilot Heat Alert and Response Systems in 4 communities
2. Best Practices Guide for Heat Alert and Response Systems
3. Clinical Guidelines on Heat
4. National Conference in 2011



Heat-Health Science

Objective: To address a number of critical knowledge gaps that currently hinder the effective diagnosis, prevention and management of heat-related morbidity and mortality.

Research Program and Outputs:

1. Assessing clinical knowledge of heat morbidity and mortality
2. Tracking and surveillance of heat morbidity and mortality
3. Evaluating existing Alert Systems and Response Plans, and
4. Measuring the healthcare costs associated with heat mortality and morbidity



Heat-Health Science

Research Projects:

- Understanding heat health thresholds and the triggers for calling heat alerts
- Modelling of environmental factors that contribute to heat stress to assist in predicting heat events
- Understanding adaptive measures such as the use of fans and hats to reduce impacts from heat
- Research on the built environment including spatial distribution of heat within communities, with a focus on areas with populations at risk



Clinical Competencies

Objective: To enable health professionals to better advise their clients/patients on how to prepare for heat events, and to rapidly diagnose and treat them, if they have experienced a heat illness

Research Program and Outputs:

1. Increase awareness, by clinicians, of the significance of environmental factors, and the various codes and other approaches that exist to protect the public.
2. Develop electronic training tools (PowerPoint presentations and web-based self-tutorials) that may be used within existing medical curricula, or as stand-alone professional development
3. Develop clinical guidelines on extreme heat events



<http://www.dh.gov.uk/en/Publicationsandstatistics>



Clinical Competencies

Research Projects:

- Literature review and cataloguing of research papers on heat and health
- Consultations with health professionals to provide input to guidance materials
- Research of various educational and institutional requirements for heat in medical curriculum

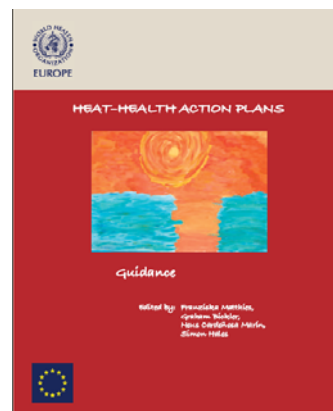


Pilot Heat Alert and Response Systems

Objective: Develop and test the effectiveness of heat alert and response systems in four pilot communities

Research Program and Outputs:

1. Operational heat alert and response systems in four communities
2. Draft best practices guidebook for developing heat alert and response systems
3. Desktop simulation exercises completed in each community



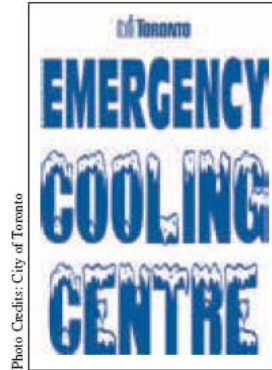
<http://www.euro.who.int/Document/E91347.pdf>



Pilot Heat Alert and Response Systems

Research Projects:

- Evaluation of Toronto and Montreal HARS
- Vulnerability assessments in pilot communities
- Review of Canadian and international best practices for heat alert and response systems
- Occupational health and safety codes and regulations for extreme heat events in Canada
- Urban heat island mitigation for extreme heat events



Health Messaging

Objective: Identify best practices for heat-health messaging to enhancing personal adaptation to heat

Research Program and Outputs:

1. Baseline understanding of current extreme heat and health outreach products used in Canada
2. Development of guidance for extreme heat and health messaging
3. Production of education and outreach materials for protecting the most vulnerable populations (e.g., seniors, socially disadvantaged, chronically ill, young children)



Health messaging

Challenges:

Scientific basis for messages

Changing behaviour of vulnerable populations

Reaching public health authorities

Reaching caregivers

IT'S Your Health

EXTREME HEAT AND YOUR HEALTH

The Issue
Possibly influenced by a changing climate, many regions of Canada are experiencing prolonged periods of unusually hot weather. 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.
Heat heat disorders occur because people have been accustomed to heat or have not 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 regularly 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 added through industrial processes (e.g., factories, bakeries, etc. cleaners)
- People taking certain medications, such as psychiatric drugs, anti-depressants, anti-Parkinson's drugs, diuretics, some antidiabetics, over-the-counter sleep medications and anti-diarrhea pills

Health Risks of Extreme Heat
A heat wave generally refers to at least three consecutive days with unusually 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 light messaging 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 freely, but their skin may be cool, pale or flushed. Other symptoms are a weak pulse, dizziness, nausea, vomiting, confusion and headache. Body temperature may be normal but it will likely rise.

Canada

<http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/heat-chaieur-eng.php>



Health Messaging

Research Projects:

- Investigation of Canadian perceptions of health risks related to a changing climate
- Focus groups on heat health messaging
- Consultation with health care officials to understanding information and education needs



Dissemination and Partnerships

Objective: Develop networks of stakeholders to support extreme heat and health research and program objectives and for disseminating products developed through the project

Key deliverables:

1. Publication of guidebook
2. Host a national extreme heat and health conference
3. Community sharing network
4. Disseminate heat info/knowledge products



Next steps

- Develop and implement HARS over the next two summers in pilot communities
- Conduct simulation exercises in pilot communities
- Begin testing of heat health messaging and individual perceptions of heat
- Conduct evaluations of existing HARS
- Engage health professionals in discussions on heat
- Undertake targeted communications activities for heat conference



More Information

Heat Health Science – [Ugis Bickis@hc-sc.gc.ca](mailto:Ugis_Bickis@hc-sc.gc.ca)

HARS Pilots – [Stephen Dolan@hc-sc.gc.ca](mailto:Stephen_Dolan@hc-sc.gc.ca)

Best Practices Guide – Peter_Berry@hc-sc.gc.ca

