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# Climate Change and Health Adaptation Bulletin

## Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials

### Heat in Canada

Extreme heat is a current health risk, one that is expected to increase as the climate continues to change. All people are at risk but older adults, the chronically ill and socially disadvantaged people, among others (Box 1) are more vulnerable to the health effects from extreme heat, which can include serious illnesses and even death.

In 2009, British Columbia experienced prolonged episodes of high air temperatures during July and August that were associated with total excess deaths of more than 200 people across the province.<sup>1</sup> As the annual number of extremely hot days (days with maximum temperature above 30°C) is predicted to more than double over the next 30 years in some parts of Canada, the health and well-being of many Canadians may be greatly impacted.

These impacts can be prevented by improving public knowledge of the risks and protective measures and by providing support to vulnerable populations requiring assistance.

#### Box 1: Heat-Vulnerable Groups

- Older adults
- Infants and young children
- People with chronic illness or physically impaired
- Socially disadvantaged individuals and communities:
  - Low income
  - Homeless
  - Living alone
- Newcomers to Canada and transient populations such as tourists
- Occupational groups with increased workplace heat exposure
- The physically active

### Public Perceptions of Heat-Health Risk

Heat illnesses are preventable through awareness, education and appropriate behaviour, since many weather conditions can be forecasted and broadcast to the public. However, many heat-vulnerable people do

not see themselves as being at risk and therefore do not take actions to safeguard their health during extreme heat events<sup>2</sup>:

*“I don’t feel elderly and it’s very difficult to say when you become elderly.” — female age 86*

Many messages currently available to the public can also be confusing or contradictory which reduces their efficacy:

*“Some people say shut all the doors and draw all the curtains... other people say open everything” — male age 78*

To protect the health of Canadians, it is essential that the public messages are consistent and science-based.

Public health and emergency management officials play a key role in reducing the health impacts of extreme heat. *Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials*<sup>3</sup> was developed by Health Canada to assist officials in these efforts.

### Using the Toolkit

The Toolkit is intended for use by public health and emergency management officials who are developing or updating heat-health communication strategies. It is designed to guide the development of targeted heat-health communication campaigns and necessary outreach products.

### Communicating the Health Risks of Extreme Heat

Effective communication planning must begin well in advance of an extreme heat event to positively influence behavioural change and to help people at risk deal with extremely hot weather. The characteristics that increase the heat vulnerability of a community and/or a population group should be assessed in order to choose appropriate communication

strategies and tools. There is no single approach to developing an effective communication campaign. The most appropriate strategy will depend on the:

- campaign's goals and objectives
- available resources
- audience reach — which relates to, audience size, the ability of the message to be passed on to others, and the relevance to the heat-vulnerable audience<sup>4</sup>
- specific needs of target audiences
- involvement of community partners

Successful heat-health communication campaigns often include three means of communication to reach the target audience, all of which should be community-based:

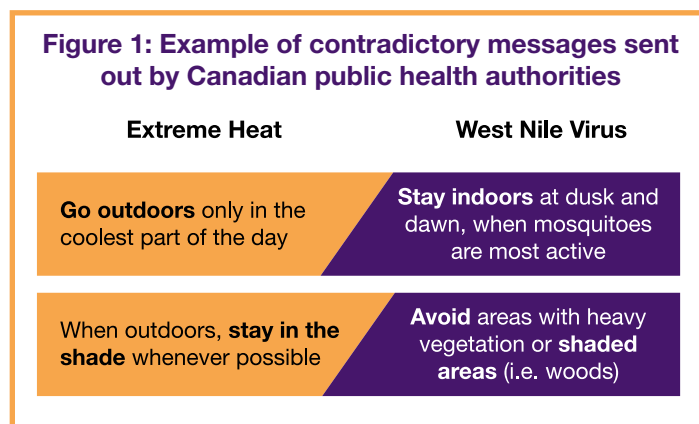
- media — which includes mass/broadcast media and targeted media (also known as narrowcast)
- interpersonal networks
- community and group events

### Developing Heat-Health Messages

Communication products should be tailored to each target audience. To enhance understanding and retention of the message, heat-health written material and graphics must be appropriate for the reading level, age, and ethnic or cultural background of the audience. Messages should focus on the abilities of the audience and address their unique challenges and perspectives. The information provided should emphasize practical steps to protect health within available community resources.

When communicating with intended audiences, several techniques can be used which are designed to capture attention, along with strategies that will influence behavioural outcomes.<sup>5</sup> It is important to ensure that heat-health messages are accessible, credible, and personally relevant, with consideration of existing knowledge and with a focus on achievable outcomes.

Contradictory messages can be addressed by integrating heat-health messages into other health-promotion campaigns or developing a databank of health messages for the public when extreme heat events happen at the same time as other public health emergencies (Figure 1).



This would help to maintain consistency and minimize confusion among the public. It is also important that the messages are developed based on the scientific research and literature reviews about extreme heat-health risks (Box 2).

### Box 2: Examples of scientifically based heat-health messages for the public

Drink plenty of cool liquids, especially water, before you feel thirsty to decrease your risk of dehydration. Thirst is not a good indicator of dehydration.

If you are taking medication or have a health condition, ask your doctor or pharmacist if it increases your health risk in the heat and follow their recommendations.

Frequently visit neighbours, friends and older family members, especially those who are chronically ill, to make sure that they are cool and hydrated.

## Conclusions

Information in the Toolkit provides public health officials with guidance about how to effectively prepare heat-health messages for different vulnerable groups. It includes materials that can be integrated into existing communication efforts including heat-health fact sheets for the public, a heat advisory media release template and a heat-health communication message review tool. In addition, the Toolkit provides information on how to conduct an evaluation of a community's heat-health communication campaign.

To order *Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials* please contact Health Canada Publications — [www.hc-sc.gc.ca/contact/pubs-eng.php](http://www.hc-sc.gc.ca/contact/pubs-eng.php).

To receive more information about climate change and health activities at Health Canada, please contact: [Climatinfo@hc-sc.gc.ca](mailto:Climatinfo@hc-sc.gc.ca).

### References:

1. Kosatsky, T. 2010. *Hot Day Deaths, Summer 2009: What Happened and How to Prevent a Recurrence*. BC Medical J. 52: 261–273.
2. Abrahamson, V., Wolf, J., Lorenzoni, I., Fenn, B., Kovats, S., Wilkinson, P., Adger, N., Rosalind, R. 2009. *Perceptions of Heatwave Risks to Health: Interview-Based Study of Older People in London and Norwich, UK*. Journal of Public Health. 31: 119–126.
3. Health Canada. 2010. *Communicating the Health Risks of Extreme Heat Events: Toolkit for Public Health and Emergency Management Officials*. Health Canada, Ottawa, Ontario.
4. The Health Communication Unit. 2007. *Overview of the Health Communication Campaigns*. The Health Communication Unit at the Centre for Health Promotion, University of Toronto, Toronto, Ontario, 109. Retrieved December 18, 2009, [www.thcu.ca](http://www.thcu.ca).
5. Rimer, B. K. and Kreuter, M. W. 2006. *Advancing Tailored Health Communication: A Persuasion and Message Effects Perspective*. J. Commun. 56: S184-S201.