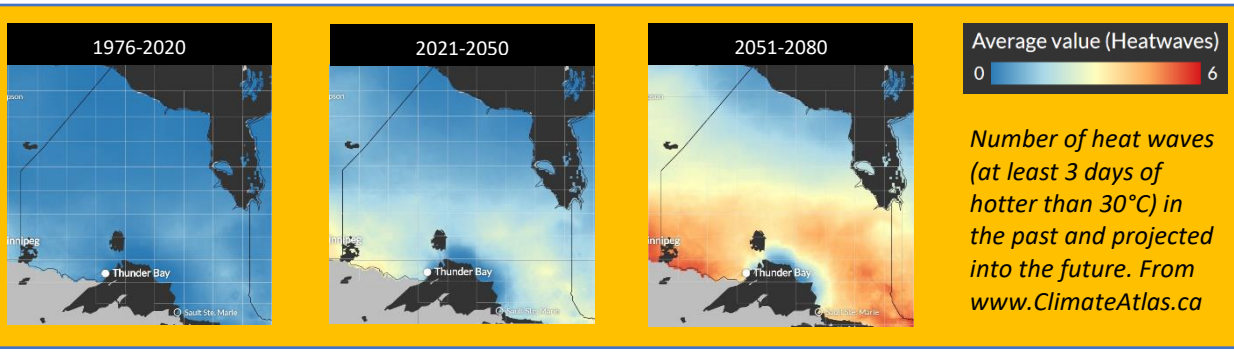
Extreme Heat & Health

Temperatures are expected to increase for all seasons in northern Ontario because of climate change. In summer, extreme heat events and heat waves are projected to happen more often and to be more extreme. These heat events may lead to heat-related illness in people especially the vulnerable.

What is considered an extreme heat event?

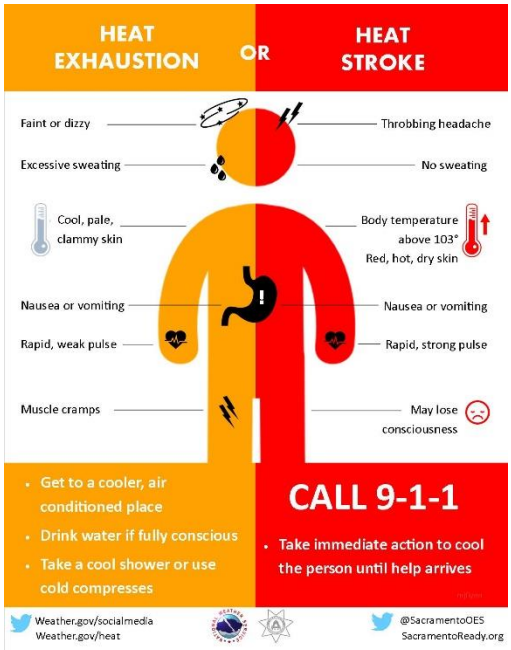
What is classified as an extreme heat event varies depending on the region. In northern Ontario, where temperatures are generally cooler, an unusually hot period might be defined as temperatures over 25°C, whereas southern Ontario might use days over 30°C. Extreme heat is also more than just temperature; it also depends on humidity (the amount of water vapour in the air), wind speed, and radiant load (heat from sunlight or other heated surfaces). The term "humidex" is an effort to combine the temperature and humidity factors into a number that describes how hot the weather feels to the average person. An extreme heat warning is often called when there is the potential for an unacceptable level of health effects, including increased mortality. A "heat wave" is generally defined as three consecutive days of extreme heat.



Number of heat waves (at least 3 days of hotter than 30°C) in the past and projected into the future. From www.ClimateAtlas.ca

What is heat illness?

Heat illness is when your body is unable to cool down and can lead to conditions such as heat rash, heat cramps, heat edema (swelling of the hand/feet/ankles), heat exhaustion and heat stroke. Heat stroke is a medical emergency, it is when a person's core temperature reaches 40°C. Heat can also affect mental health and community well-being. Heat waves can increase irritability and aggression. Domestic violence and violent crimes have been shown to spike during heat events.



Populations at the greatest risk for heat illnesses are:

- elders
- infants and young children
- people confined to a bed
- overweight individuals
- those who work or exercise in the heat
- those with low-income
- homeless individuals
- those that have a pre-existing health condition (breathing, heart and kidney problems, hypertension, mental illness)

How can we prepare?

Increase awareness of heat illness

Understanding the potential for heat-related illness, and knowing what can be done to prevent it, are good ways to help reduce the risks of heat events. People should also familiarize themselves with the signs and symptoms of heat illness, so they know when they or someone around them may be at risk, and what can be done to help. Community education campaigns could be used to spread information about heat illness. They can take many forms (local television/radio, social media, community meetings, printed materials) and can be specifically targeted to the most vulnerable groups. Communication of the risks of extreme heat should begin before the summer season arrives, continue through the summer season, and especially during extreme heat events.

Prevent heat-related illness

- ✓ **Avoid direct sun and use sunscreen**
- ✓ **Wear breathable, loose fitting, light coloured clothing**
- ✓ **Keep hydrated (drink often, avoid alcohol and caffeinated beverages)**
- ✓ **Plan outdoor activities for the cooler parts of the day**
- ✓ **Keep your home cool (close windows/blinds for hottest part of the day, avoid using your oven)**
- ✓ **Use fans or air conditioning**

Emergency action plan

Communities may also wish to develop an emergency plan for extreme heat events. It should include roles and responsibilities of the key people who will roll out the emergency plan as well as a list of vulnerable community members with contact information. The plan should also include a monitoring and alerting system and cooling centers.

Community monitoring and alerting system

A community monitoring and alerting system for extreme heat events can help warn community members of hot weather days and expected heat waves. This allows individuals to prepare the appropriate preventative measures (modifying activities, monitoring vulnerable individuals, preparing a cool rest area, etc.). Community alerting can be done through multiple avenues including online (Facebook and band websites), local media, and community bulletins.

Cooling centres

Community cooling centres can offer relief for individuals that are of greater risk to heat illness, or to those who do not have access to air conditioning, electric fans or a cool area in their home. These centres could be equipped with air conditioning, provide access to cool liquids (water, sport drinks, fruit juices) and foods (fruit and vegetables with high water content, ice treats etc.). In addition, trained individuals could be available at these locations to provide any assistance or treatment to heat ill individuals.

Heat waves are projected to happen more often in the north. Prepare by raising awareness of heat related illness and having an emergency plan for vulnerable people in your community.

More information:

https://www.canada.ca/en/health-canada/services/sun-safety/extreme-heat-heat-waves.html
https://climateatlas.ca/sites/default/files/PCC%20-%20Heat%20Waves%20and%20Health%20-%20Nov%202019.pdf

UP NORTH ON CLIMATE
Climate Change Impact and Adaptation Study for the North of Ontario