



DID YOU KNOW?

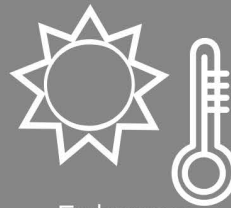
Climate change poses a clear, present and growing threat to human health. However, transitioning to a low-carbon economy and taking action to protect against the impacts of climate change has immediate benefits to health.¹

The environmental consequences such as extreme weather, extreme heat, and precipitation changes have and will increasingly, directly and indirectly, impact the physical, mental, social and spiritual health of people in Thunder Bay.²⁻⁵

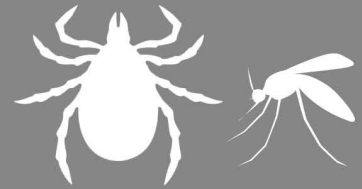
Environmental effects



Increased Precipitation and Flooding



Extreme Temperatures



Vector-borne Disease

Health effects

- Illness, injury, and death from drowning
- Unsafe housing
- Infrastructure damage (eg., road washout, stormwater management overload)
- Heat stroke
- Dehydration
- Aggravated cardiovascular illness
- Aggravated respiratory illness
- Expanded range of disease carriers leading to increased cases of vector-borne disease such as Lyme disease
- See Lyme disease handout

These are not the only impacts we are seeing, as many of the health effects of climate change are experienced indirectly, such as:



- Food Security⁵
 - Food distribution is interrupted by extreme weather and the resulting infrastructure damage.
 - Local and global food production is impacted by less predictable weather and increased risk of extreme heat and drought.



- Mental Health⁶
 - Emotional distress over the loss of traditional land, food, and culture as a result of rapid environmental change.
 - Depression, anxiety, and post-traumatic stress disorder following experiences with extreme environmental events.



- Water Contamination⁷
 - Flooding and surface water runoff spread pollutants to waterways, leading to water-borne disease.
 - Warming of nutrient-rich water produces ideal conditions for blue-green algae blooms, which can cause gastrointestinal and respiratory problems if consumed.

WHO IS AT RISK?

Even though we are all impacted by climate change, we are not impacted equally. The degree to which an individual or population is impacted by climate change is influenced by three factors: exposure, sensitivity and adaptive capacity. Many people and populations living in Thunder Bay will experience the health impacts of climate change sooner, more often, and to a greater degree.

EXPOSURE

The probability of a climate-related health hazard occurring to an individual or population

Eg. living in a floodplain increases a person's risk of being exposed to health impacts related to extreme precipitation and flooding

INCREASED EXPOSURE IN THUNDER BAY



SENSITIVITY

The degree to which an individual or populations' health will be impacted by climate change based on their physical or social attributes

Eg. a person with underlying health conditions will be more sensitive than someone who is considered to be in good health

INCREASED SENSITIVITY IN THUNDER BAY



ADAPTIVE CAPACITY

The ability of an individual or community to adapt to the changing environment due to climate change

Eg. a person having the financial means to afford an air conditioner to adapt to increasing temperatures

REDUCED ADAPTIVE CAPACITY IN THUNDER BAY



No population chooses to be or is inherently vulnerable to the impacts of climate change. Rather, populations are made vulnerable by systemic and structural forces, such as poverty, marginalization, racism, and colonialism, which must be recognized when addressing climate change.

WHAT CAN WE DO?

The Thunder Bay District Health Unit is currently:

- Working to better understand the health impacts experienced by those living in Thunder Bay by conducting a climate change and health vulnerability and adaptation assessment
- Assessing and prioritizing adaptation action within programs and services to lessen the community health impacts, while supporting ongoing community action addressing climate change
- Enhancing existing programming which has co-benefits for climate change and health
 - E.g., The Healthy Living and Healthy Schools programs promote active transport and improved walkability, working to reduce emissions while also improving individual and population health.

Here's what you can do right now to improve your health and take climate action:

- Learn more about how climate change is impacting your individual and community health and what steps you can take to protect yourself
- Take action to reduce your emissions, such as engaging in active transportation and adopting a sustainable diet
- Write to and speak with your elected officials, as well as your health care providers, about climate change and the ways it is impacting your health

REFERENCES:

1 Watts et al. (2020) *The 2020 report of the Lancet Countdown on health and climate change: Responding to converging crises*
2 Ebi et al. (2016) *Ontario climate change and health vulnerability and adaptation assessment guidelines*
3 Kipp et al. (2019) *At-a-glance- Climate change impacts on health and wellbeing in rural and remote regions across Canada*

4 Sagurova et al. (2019) *Predicted northward expansion of the geographic range of the tick vector *Amblyomma americanum* in North America under future climate conditions*
5 Schnitter & Berry (2019) *The climate change, food security and human health nexus in Canada*
6 Hayes et al. (2019) *Factors influencing the mental health consequences of climate change in Canada*
7 Bush & Lemmen (2019) *Canada's changing climate report*

THIS RESOURCE IS BROUGHT TO YOU BY:

- CITIZENS UNITED FOR A SUSTAINABLE PLANET
- EARTHCARE – CITY OF THUNDER BAY
- ECOSUPERIOR ENVIRONMENTAL PROGRAMS
- ENVIRONMENT NORTH
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- LAKEHEAD REGION CONSERVATION AUTHORITY
- LAKEHEAD UNIVERSITY – SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL
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