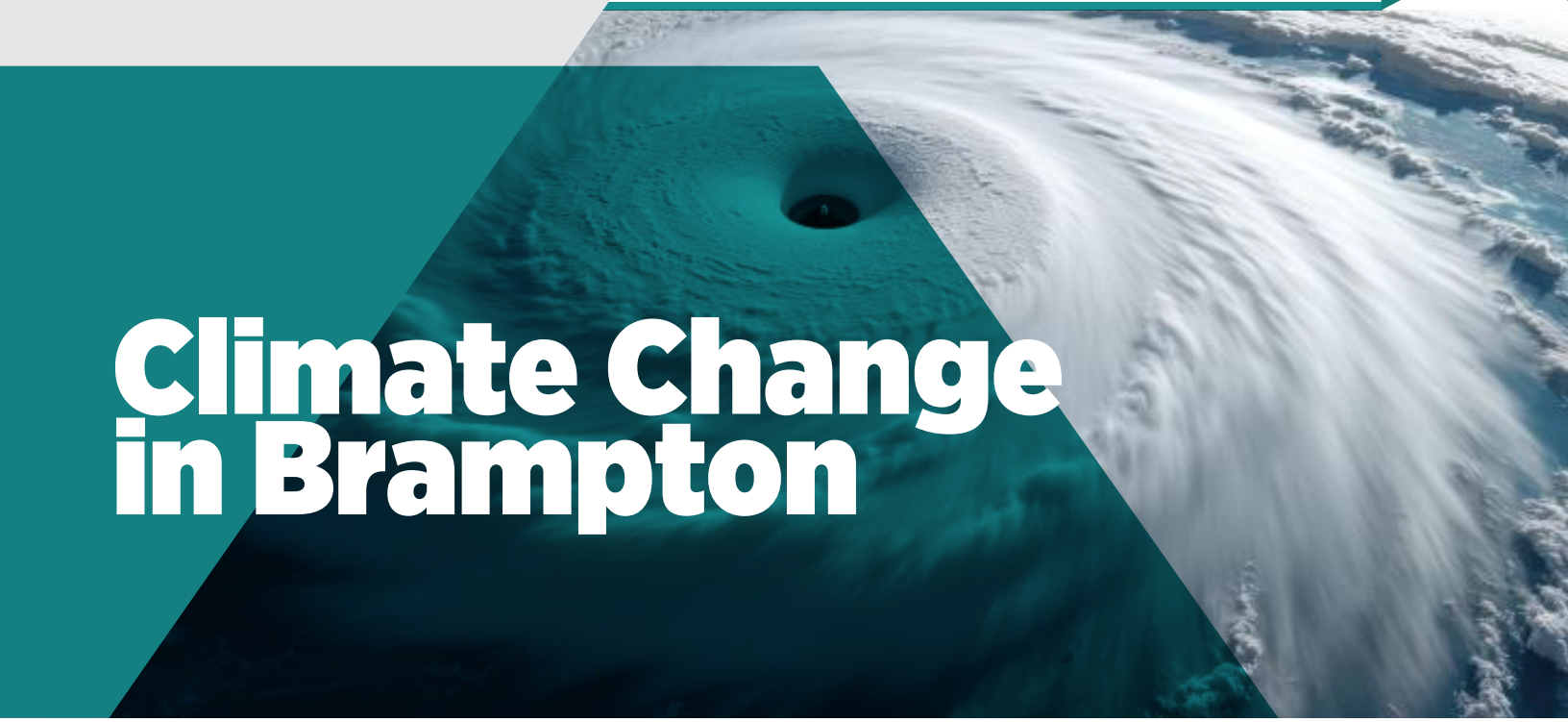
BRAMPTON



Climate Change in Brampton

What is Climate Change?

Climate change refers to extreme weather events and long-term shifts (e.g., a period of 30 years or greater) in average weather conditions for a given area, such as the typical temperature, rainfall, and wind patterns and other aspects of our climate system.

Climate change is already being felt across the globe, including right here in Brampton. Global temperatures have been rising, mainly due to human activities such as the burning of fossil fuels.

What is the difference between Weather and Climate?

Weather: the actual atmospheric conditions being experienced currently, including changes that are forecast over the next few days, such as temperature

Climate: the kind of weather conditions typically expected in a region

Key Terms

- **Climate Mitigation:** refers to actions we take that decrease the amount of greenhouse gas emissions going into our atmosphere
- **Climate Adaptation:** refers to actions that help us adjust to future changes in climate and reduces our potential risks (e.g., flooding, extreme heat)

Climate Trends in Brampton

Climate modelling forecasts what our future climate will look like. In 2017, the Region of Peel projected what the short (2040), medium (2070), and long-term climate (2100) trends would be. Based on these results, Brampton is expected to see:

- Warmer air temperatures
- More extreme heat days with temperatures above 30°C
- Less extreme cold days below -20°C
- Increasing precipitation, particularly during winter/spring
- More extreme weather events, especially intense storms

How will these climate trends impact Brampton?

Changes in Brampton's climate can cause increases in impacts such as:

- Flooding, including both river and basement flooding
- Extreme Heat
- Extreme Weather Events (e.g., storms)
- Impacts to our Natural Systems
- Pests and Diseases, including invasive species

These climate change effects will not impact everyone equally. Equity-deserving groups (e.g., seniors, children, outside workers, etc.) are more greatly affected by climate change. Climate action must ensure efforts are equitable and provide benefits to those who need it most.

Climate Change Harms the Health of Children

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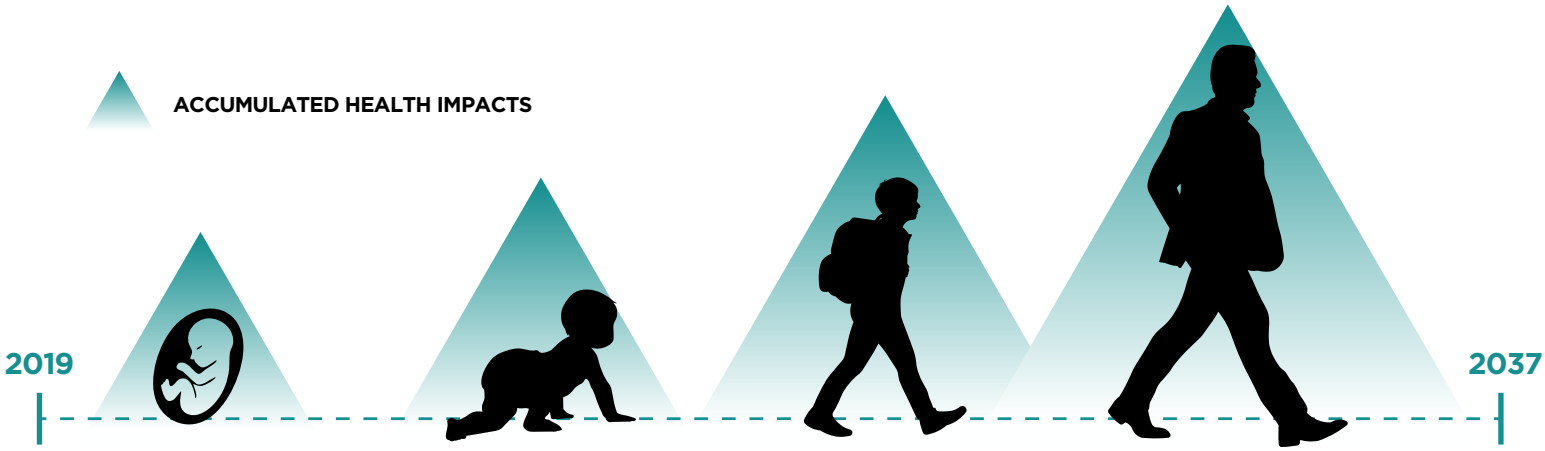
Climate change poses risks to children throughout their development. Here we present a few examples of how climate change harms health from before birth to adolescence.



Prenatal

- **Poor pregnancy outcomes** like low birth weight and pre-term delivery
- Increased risk of **low birth weight** and **neonatal death**

Infancy

- **Higher risk for heat-related illness** because developing bodies are less able to control temperature
- Heightened risk of **water- and food-borne infections** while immune system is developing

Childhood

- Long-term **lung problems** and more frequent **asthma attacks**
- Outdoor exposure increases risk of diseases from insects, like **Lyme disease**

Adolescence

- **Post-traumatic stress** and **anxiety** in survivors
- Negative impacts on **ability to think, outdoor recreation** and the **ability to play sports**

Source: Lancet Countdown on Health and Climate Change, 2019

Sample Ways that Climate Change Harms Health

Extreme Heat (e.g., heatwaves): Becoming more frequent and severe.

Health Risks: deadly heatstroke, trouble thinking, increased injury risk, worsening of heart and lung diseases, dehydration

Extreme Weather Events (e.g., hurricanes, floods): Becoming more intense and some types more frequent.

Health Risks: injuries, drowning, water and food-borne illnesses, anxiety, depression,

Poor Air Quality (e.g., particulate matter from coal burning or wildfires, ground-level ozone, increased pollen): Declining air quality resulting from carbon pollution and rising temperatures.

Health Risks: preterm birth, low birth weight, asthma, poor school performance and school absence, seasonal allergy flares, damage to developing brains, displacement from wildfire damage

Tick and Mosquito-borne Disease (e.g., Lyme Disease and Dengue): Growing risk of diseases transmitted by insects, like ticks and mosquitoes, spreading to new places and remaining active longer.

Health Risks: Lyme – heart, brain, and joint problems; Dengue – trouble breathing, bleeding, organs shutting down with severe dengue