CLIMATE CHANGE AND HEALTH IN DURHAM REGION

Assessing the Impacts of Solar Ultraviolet Radiation

HEALTH AND SOCIAL SERVICES COMMITTEE

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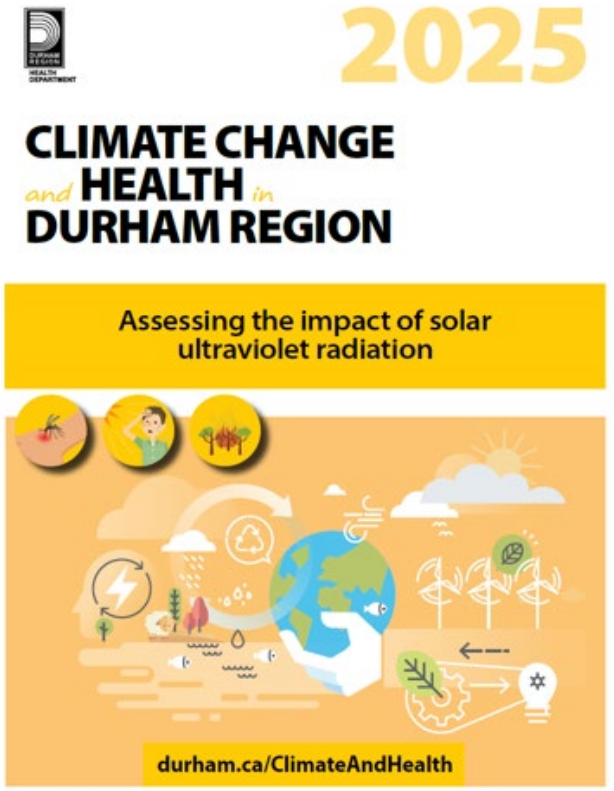
Presentation overview

- Mandate and report series

- Solar UVR report
  - Framework
  - Key findings
  - Needs
  - Regional strengths
  - Next steps



Why assess climate and health vulnerability?

Ontario Public Health Standards mandate

Health impacts of climate change are on the rise

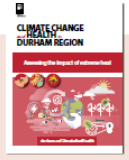
Many health impacts and health inequities are preventable

Report Series: 2024 -2025

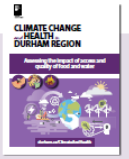
Primer

Understanding the local health impacts of climate change

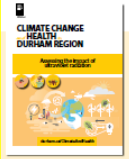
Vulnerability Assessments



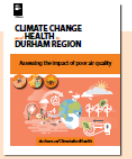
Assessing the impact of extreme heat



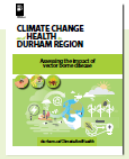
Assessing the impact of access and quality of food and water



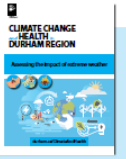
Assessing the impact of ultraviolet radiation



Assessing the impact of poor air quality



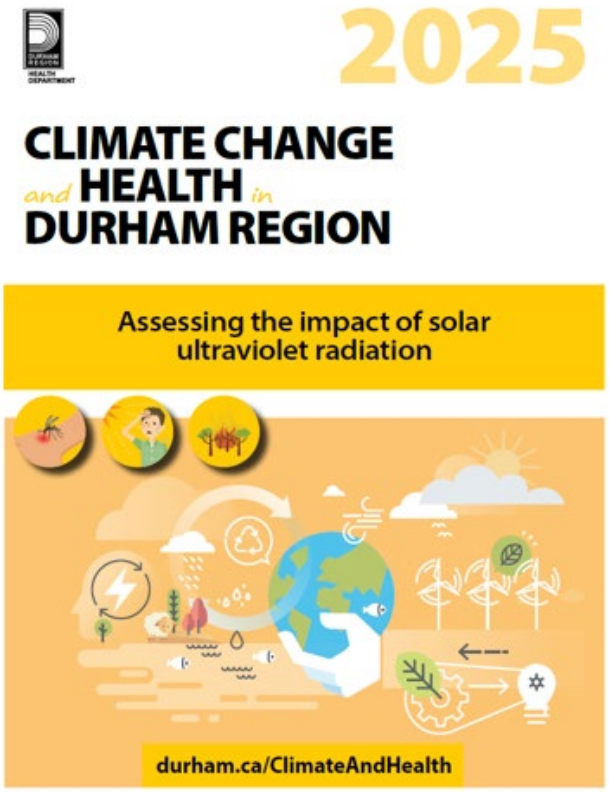
Assessing the impact of vector borne disease



Assessing the impact of extreme weather

What are the report objectives?

- Improve understanding of risk and health impacts
- Report on available data
- Prioritize equity
- Establish baseline

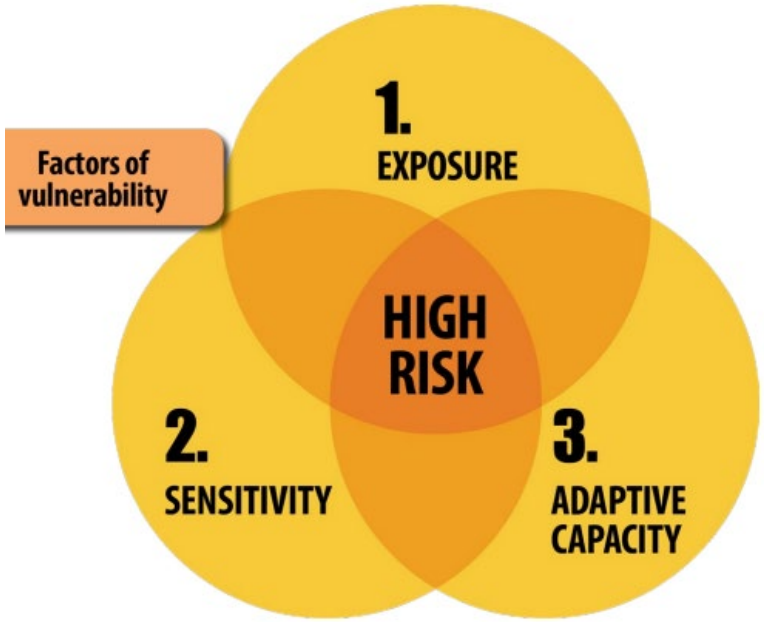


What is solar UVR vulnerability?

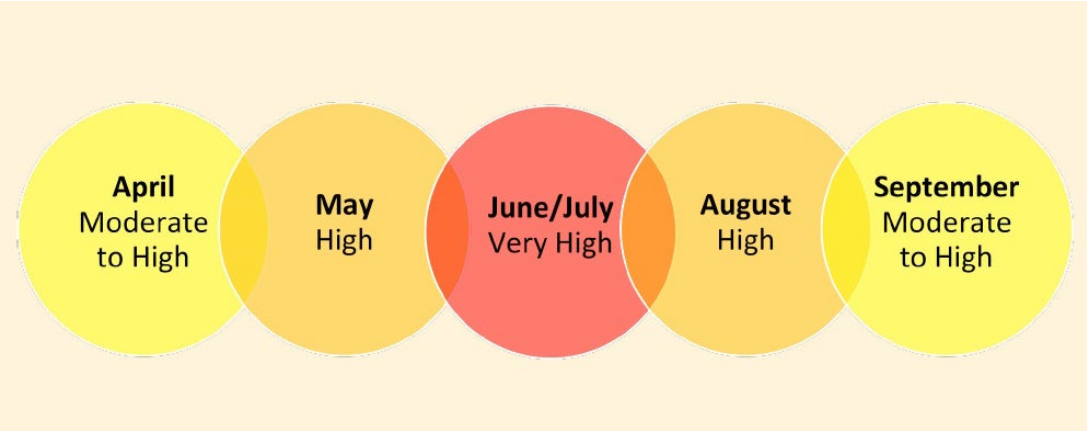
Priority Populations

- **Infants** and young **children**
- Individuals who:
  - sunburn easily, or have a **history of sunburn**
  - have a family **history of skin cancer**
  - use certain **medications**
  - **work** or are physically active **outdoors**

Factors of Solar UVR Vulnerability



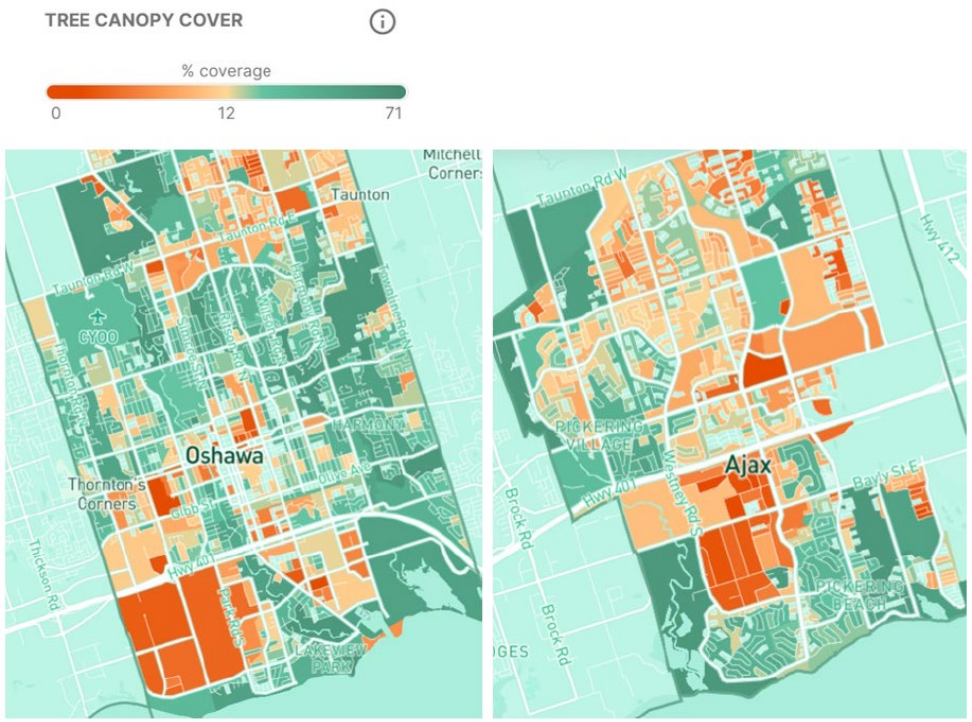
Overview of solar UVR exposure in Durham Region



- Solar UVR levels are highest in Durham Region from April to September between the hours of 11 am and 3 pm
- Approximately 60% of the day's total carcinogenic radiation is received before 2 pm

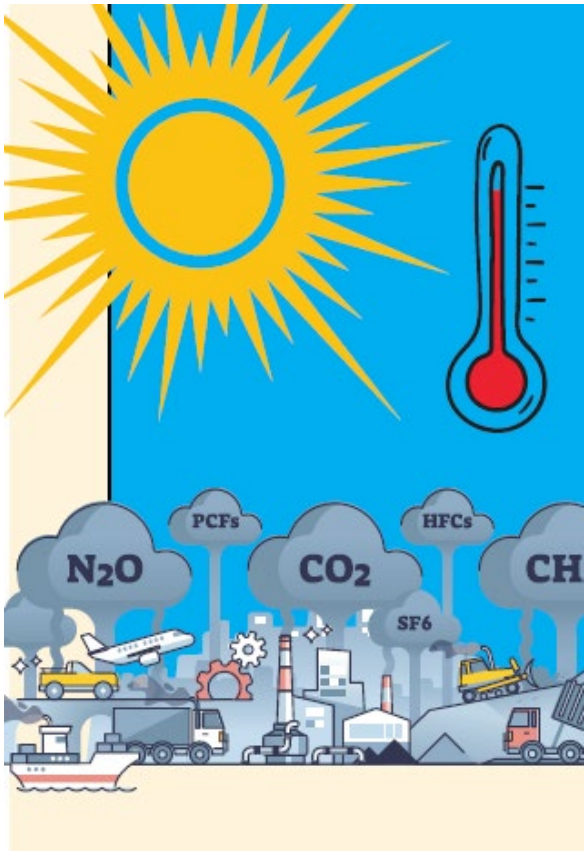
Where are risks of exposure higher?

- Some residents experience greater risk of exposure than others due to unequal access to outdoor shade
- There is evidence that shade provides more reliable protection than sunscreen
- Disparities in local tree canopy cover indicate unequal access to shade and decreased capacity to avoid UVR



Climate change and local solar UVR exposure

- Climate change is expected to increase solar UVR in Durham Region
- Increased concentrations of greenhouse gases are expected to reduce overall protective cloud cover
- Warmer temperatures are expected to increase outdoor time and UVR exposures



What are the health impacts of solar UVR?

UVR exposure is the main cause of sunburns and childhood sunburns and may increase risk of melanoma skin cancer later in life

UVR exposure can cause premature aging of the eye which can lead to the development of cataracts

UVR exposure is the leading cause of skin cancer and the leading cause of environmentally acquired cancer in Ontario

Climate change is expected to increase the incidence of skin cancer in Durham Region in the coming decades

Solar UVR Protections

Provincial policies mainly limited to work settings

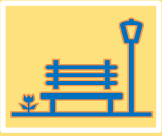
No specific policies to limit UVR exposure in child and youth settings

Both personal and built environment protections are needed

What actions can support sun-protection?

Improve understanding of UVR exposure patterns among youth

Prioritize shade in settings frequented by children and youth



Assess shade access and distribution in high-exposure areas

Establish local tree canopy cover baselines and targets with a focus on equitable access

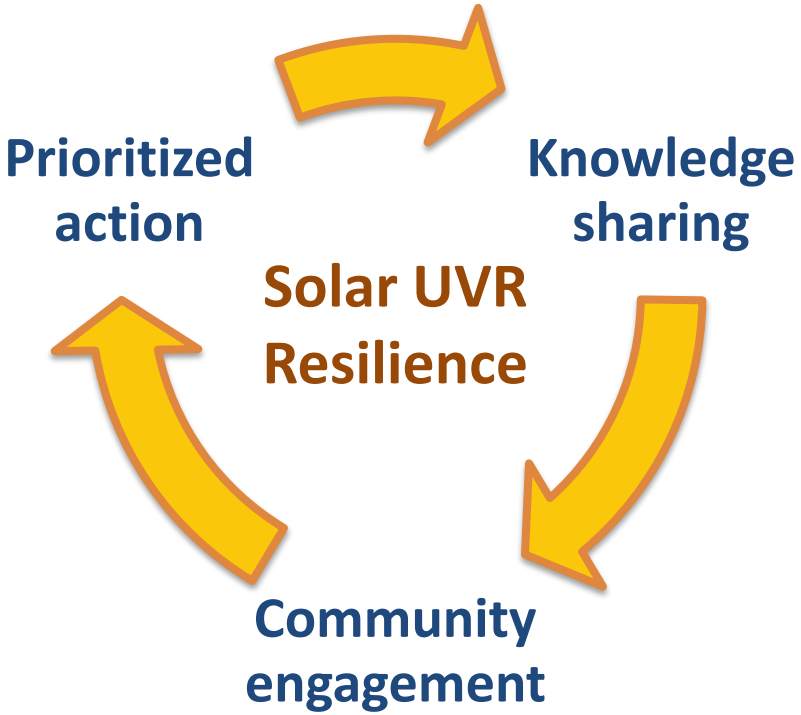
What are our strengths and resources?

Durham Region Health Department's health promotion on sun safety (durham.ca/sunsafety)

Tree planting incentive programs

Strong shade policies

Next steps


Prioritized action
Knowledge sharing
Solar UVR Resilience
Community engagement

Key messages

Durham Region should be prepared for an increase in solar UVR exposure among residents, as climate change intensifies

Sun safety, starting in infancy, can prevent serious health impacts later in life

Equitable shade provision especially in child settings, active transportation routes and transit stops can improve adaptive capacity

Health impacts are severe but often preventable

Thank you

www.durham.ca/ClimateAndHealth

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