



CLIMATE CHANGE AND HEALTH IN DURHAM REGION

Assessing the Impacts of Solar Ultraviolet Radiation

COMMITTEE OF THE WHOLE

April 9, 2025

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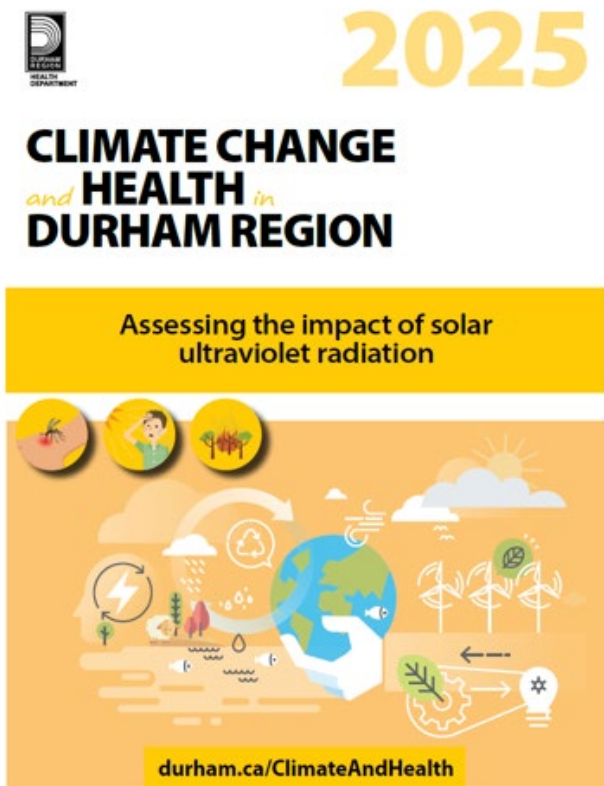
Durham Region Health Department





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

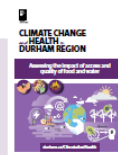


Understanding the local health impacts of climate change

Vulnerability Assessments



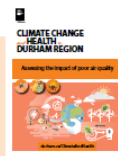
Assessing the impact of extreme heat



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



2025

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ultraviolet radiation



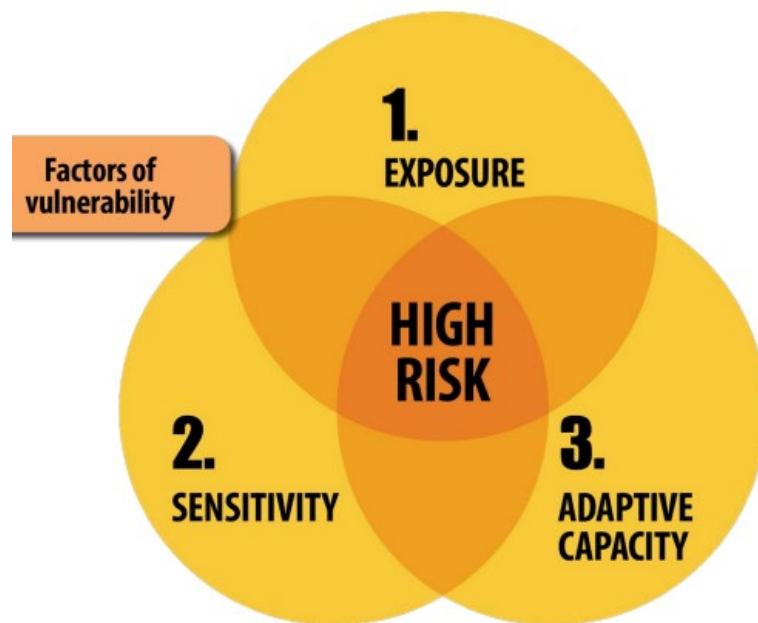


What is solar UVR vulnerability?

Priority Populations

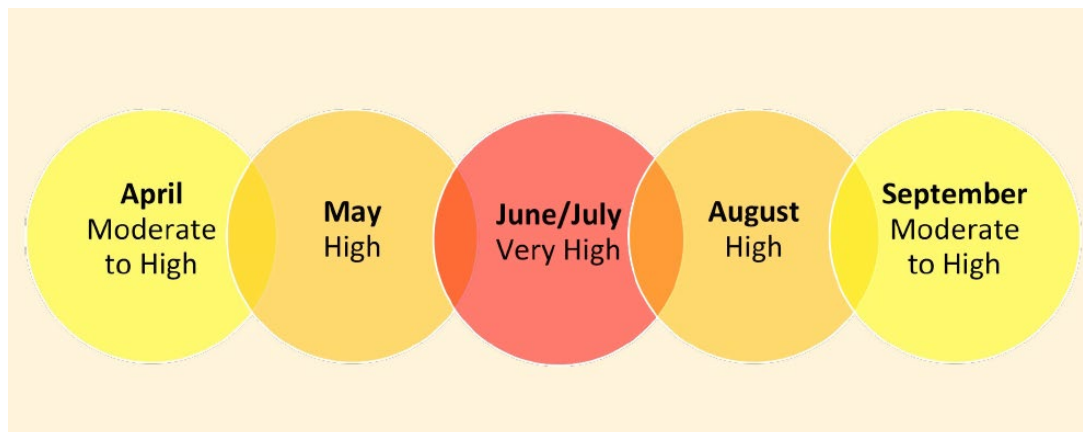
- **Infants** and young **children**
- Individuals who:
 - sunburn easily, or have a **history of sunburn**
 - have a family **history of skin cancer**
 - use certain **medications**
 - **work** or are physically active **outdoors**

Factors of Solar UVR Vulnerability





Overview of solar UVR exposure in Durham Region

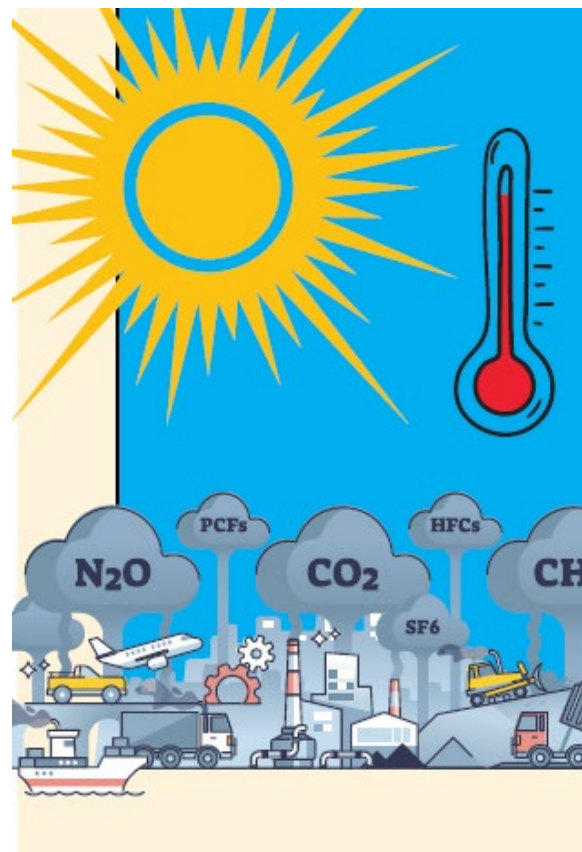


- Solar UVR levels are highest in Durham Region from April to September between the hours of 11 am and 3 pm
- Approximately 60% of the day's total carcinogenic radiation is received before 2 pm



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 increases the 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

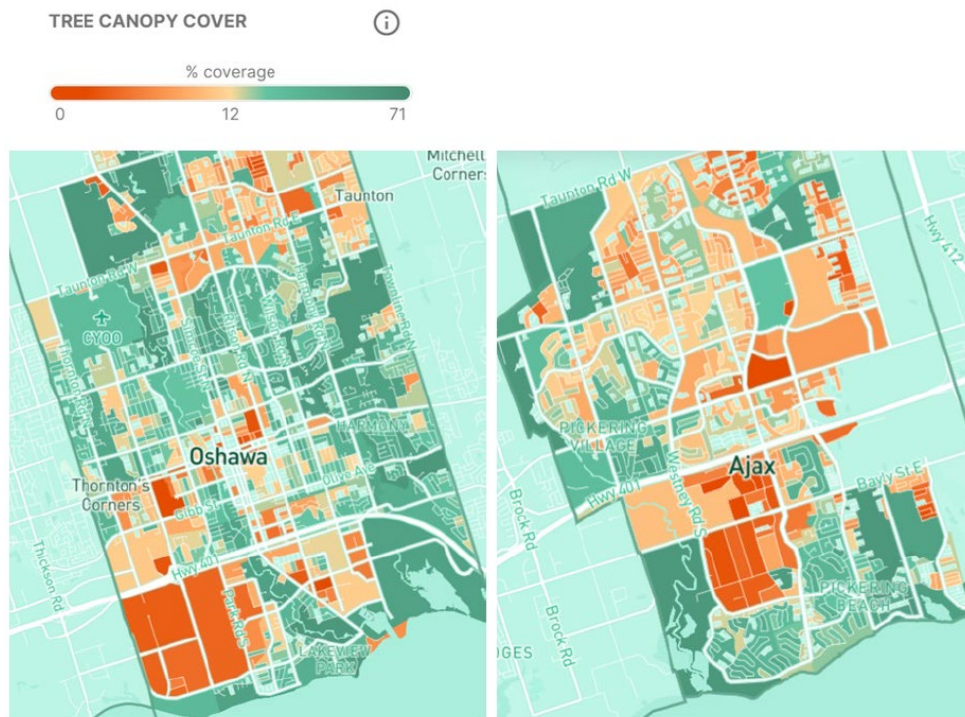


Climate change is expected to increase the incidence of skin cancer in Durham Region in the coming decades



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





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**



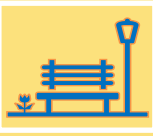
What actions can support sun-protection?



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's health promotion on sun safety
(durham.ca/sunsafety)



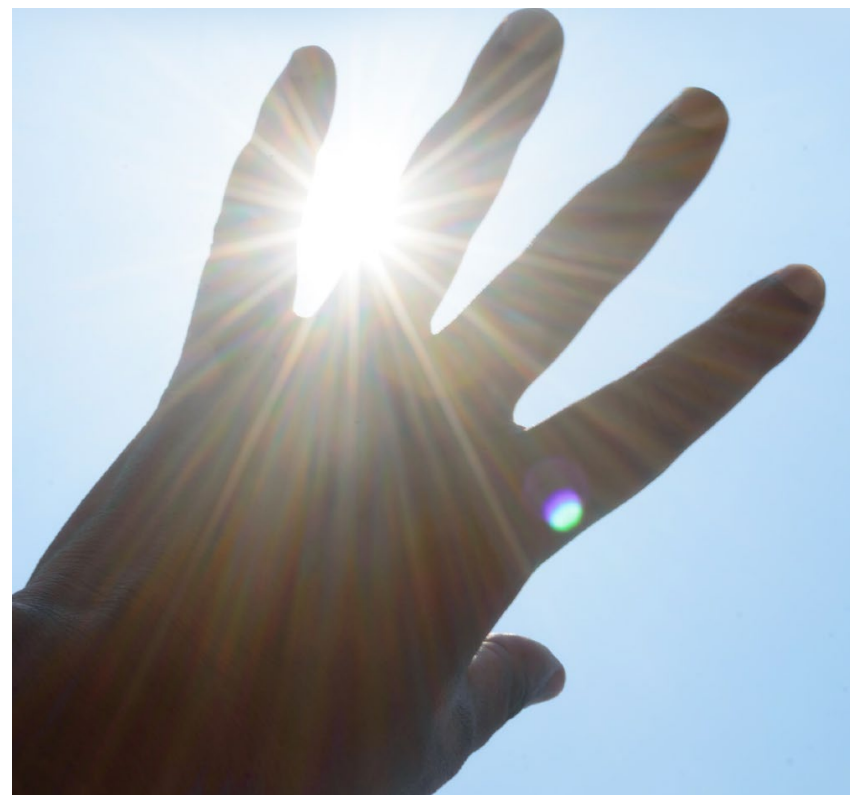
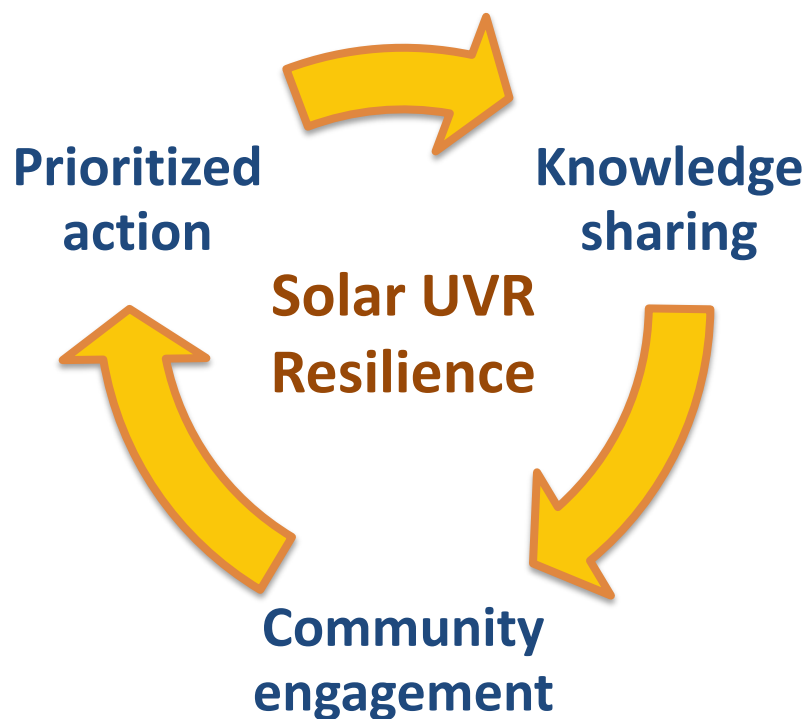
Tree planting incentive programs



Strong shade policies



Next steps





Key messages



Durham Region should be prepared for an increase in solar UVR exposure, 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 can be severe but are often preventable



Extreme heat report key messages



Extreme heat events in Durham Region are expected to more than double in the coming decades and Durham Region should be prepared



Health impacts can overwhelm local health systems



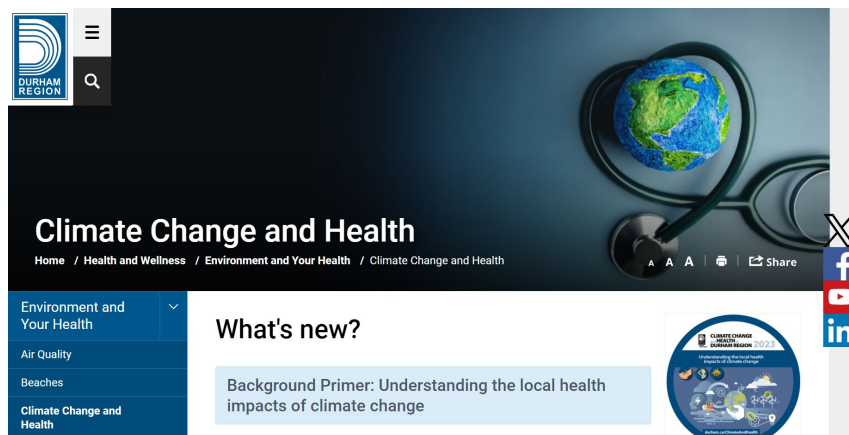
Need to engage with community to support prevention; especially those at risk of indoor overheating



Health impacts are severe but often preventable



Thank you



www.durham.ca/ClimateAndHealth

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