

# The Burden of Non-Melanoma Skin Cancer due to Occupational Solar Ultraviolet Radiation

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## Did you know?

In Canada, solar ultraviolet (UV) radiation is the most common occupational exposure and contributes to the largest number of cancers each year.<sup>1</sup>

### What is UV radiation? <sup>1,2</sup>

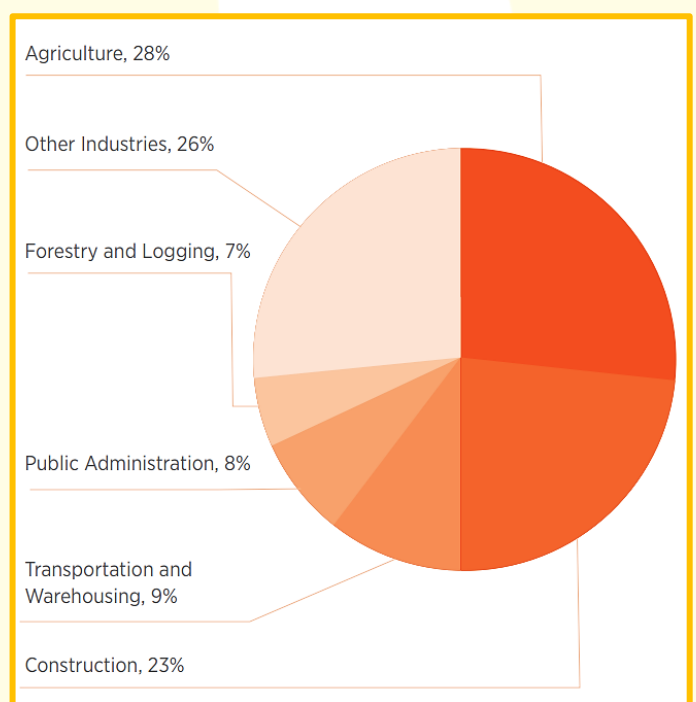
- It is a form of radiation with a wavelength of 100 – 400 nanometres
- There are three types: UVA, UVB, and UVC
- The main source is from the sun, though artificial sources like tanning beds also emit UV radiation
- Intensity of solar UV radiation depends on geography, time of day, season, and weather

### What does it cause?

- UV radiation can increase the risk of developing skin cancer
- There are two main types: melanoma and non-melanoma skin cancers (NMSC)<sup>3</sup>
- NMSC cases are far more common; approximately 95% of skin cancer diagnoses in Canada are NMSCs<sup>4</sup>
- The risk of developing NMSC is attributed to intermittent and cumulative exposure to UV radiation<sup>4</sup>
- UV radiation may also cause sunburns, heat stress, cataracts, and eye cancer<sup>5</sup>

### Outdoor workers are at risk

- The internationally recommended UV radiation limit is 1.3 standard erythemal doses (SED)<sup>6</sup>
- A study with over 400 workers from British Columbia, Ontario, and Nova Scotia working in power utilities and municipalities, found that the average UV radiation exposure value was almost 6x the recommended limit (6.1 SED)<sup>6</sup>
- At least 1.5 million Canadians are exposed to UV radiation at their workplace, and over 60% are exposed for more than 75% of their workday<sup>4</sup>
- The burden of NMSC due to occupational solar UV radiation exposure in Canada is about 6.3% of all NMSC diagnoses each year (~4560 cases of NMSC attributable to occupational exposure annually, based on the number of cases in 2011)<sup>4</sup>
- NMSC cases are most prevalent in the agriculture and construction industries<sup>4</sup>



The total NMSC cases attributable to solar occupational UV radiation exposure by industry in Canada, 2011.<sup>1</sup>

### Ways to protect yourself while working in the sun:

- ☀ Stay under the shade when possible
- ☀ Wear sunscreen and reapply often
- ☀ Wear clothing that covers your body and head
- ☀ Avoid working during midday, when UV radiation is the strongest

### These protection strategies can be applied all year round.<sup>2</sup>

Solar UV radiation exposure remains a risk even during the winter months as it can reflect off snowy surfaces. So as snow fast approaches in Montreal, don't forget your sunscreen!

## Sources

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