

## Solar Radiation (Sun Exposure)

Sunlight exposure is the second most common occupational carcinogen exposure in Canada. According to the Occupational Cancer Research Centre, there are over 80,000 new cases of skin cancer diagnosed in Canada, leading to approximately 1500 deaths each year. This number continues to rise making it the most common type of cancer in Canada.

Employers must take appropriate steps to protect outdoor workers as damage from sunlight exposure can accumulate over time, potentially causing skin cancer. Outdoor workers, who may be exposed to the sun for prolonged periods of time, are at a much higher risk for developing skin cancer than indoor workers. Workers must be aware of the dangers of sunlight exposure and take reasonable measures to reduce their risk.

### Who is at risk?

Ultraviolet (UV) radiation is part of the natural energy produced by the sun. UV radiation includes both UVA and UVB rays which are two types of light that are proven to contribute to skin cancer. Not all workers are exposed to the same levels of UV radiation. The *Occupational Cancer Research Centre (OCRC)* has divided outdoor workers into three categories; low-level, moderate-level and high-level exposure groups.



**Low-level exposure** occurs in jobs where the duration of outdoor work is less than two hours per day or less than 25% of the time. This may include truck drivers and courier service drivers.

**Moderate-level exposure** occurs in occupations where the duration of outdoor sun exposure is between 2-6 hours and less than 75% of their workday outdoors. This may include heavy equipment operators.

**High-level exposure** occurs when workers are expected to be outside for beyond 6 hours, or 75% or more of the workday. These workers may include landscapers, construction workers, and farmers.

### Ultraviolet (UV) Index Scale

The UV Index Scale is a guide used to measure the strength of the sun's rays. The scale rates the intensity of UV radiation produced by the sun. The scale ranges from 0 (where there is no sunlight) to 11+ (extreme). It is recommended that any time the UV Index is 3 or higher, that one protects their skin as much as possible.

Color	Exposure Category	UV Index
Green	Low	0-2
Yellow	Moderate	3-5
Orange	High	6-7
Red	Very High	8-10
Fuchsia	Extreme	11+

It is also important to remember that the amount of UV you receive can also depend on other factors, such as the surface you are standing on and the amount of time you spend in the sun. Workers must be aware of any reflective surfaces they are working on or near and be cautious of the amount of time spent outdoors. Surfaces such as snow, water, concrete, and sand all reflect between 25% and 80% of UV rays.

For example, if you are working on a ski hill on a spring day, the UV index may only be 4, but because of reflection from the snow, you may experience a UV index of 7.

## What can I do to protect myself and reduce my risk?

The following practices can limit the risk from sunlight exposure on workers.

- Implement a sun safety program that includes:
  - Sun protection control measures and sun protection training and awareness for workers.
- Seek shade, bring your own shade or reduce exposure to sunlight.
  - If natural sources are unavailable, shade structures should be an option for protection. Schedule shifts to minimize time spent in the sun's peak UV hours, which are typically 11am to 3pm in PEI.
- Wear close fitting or wraparound sunglasses to protect eyes.
  - Choose a pair of sunglasses or lenses that block 99-100% of UVA and UVB rays.
- Wear a hat with a wide brim to protect skin and eyes. These areas need extra protection, as most cancers occur on the face and neck.
- Wear tightly woven, loose fitting clothing to protect arms and legs.
- Apply sunscreen on exposed skin.
  - Choose a sunscreen with a rating of 30 sun protection factor (SPF) or higher and reapply every 2 hours, even on cloudy days, as the UV index can still be high.



Source(s): Occupational Cancer Research Centre. (2019). Burden of Occupational Cancer in Canada: Major Workplace Carcinogens and Prevention of Exposure

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