

Hidden costs of skin cancer caused by workplace sun exposure revealed

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Skin cancer cases attributable to work-related sun exposure could be costing millions of dollars, and must be better addressed by policymakers.

A new study, published today in the *Journal of Occupational and Environmental Hygiene*, has estimated the total and per-case [costs](#) of newly diagnosed non-melanoma [skin](#) cancers (NMSCs) in Canada in 2011 caused by workplace [sun exposure](#).

Using a range of secondary sources, including official government records and health surveys, researchers revealed the true economic burden of NMSCs, which cost \$34.6 million in 2011 Canadian dollars.

These costs were made up of a range of lifetime costs, including healthcare treatment, the impact of time away from work, out-of-pocket expenses, and poor life quality.

Further analyses highlighted the sizeable cost per patient for the two most common types of non-melanoma skin [cancer](#): basal-cell and squamous-cell carcinoma. The figure stood at \$5,760 per case for basal-, and \$10,555 per case for squamous-cell carcinoma.

One of the few cancers that are increasing in incidence, skin cancers are the most common form of cancer in Canada and other countries with large fair-skinned populations. Roughly one in ten Canadian workers are exposed to solar ultraviolet (UV) radiation at work, and the majority of

these spend six hours or more outdoors each day.

With solar UV radiation the main cause of skin cancer, the researchers hope that their landmark findings can persuade policymakers to give greater attention to reducing workplace sun exposure—both within and outside of Canada. The occupations deemed most at risk—construction, farming, and landscaping—are not exclusive to Canada.

As the study's principal investigator, Dr. Emile Tompa, a senior scientist at Canada's Institute for Work & Health, commented: "The findings suggest that policy-makers might give greater priority to reducing sun exposure at work by allocating occupational cancer prevention resources accordingly."

"The results can also raise awareness among policymakers, employers, unions and workers about the significant contribution of workplace sun exposure to skin cancers. These groups can now make a strong cost-benefit argument for inexpensive exposure reduction interventions, such as shade structures, hats and loose clothing, sunscreen, and shift scheduling to reduce the amount of time workers spend in the sun."

The study, which was funded by the Canadian Cancer Society, is the first to comprehensively estimate the economic burden of workplace NMSCs caused by sun [exposure](#) in Canada. It is hoped that the approach can be adapted to carry out similar [economic burden](#) estimates in other countries.

More information: Amirabbas Mofidi et al, The economic burden of occupational non-melanoma skin cancer due to solar radiation, *Journal of Occupational and Environmental Hygiene* (2018). [DOI: 10.1080/15459624.2018.1447118](https://doi.org/10.1080/15459624.2018.1447118)

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