



Occupational
Cancer
Research
Centre



[ABOUT](#)

[RESEARCH](#)

[OCRC RESOURCES](#)

[BURDEN STUDY](#)

[EVENTS](#)

[NEWS](#)

[CONTACT](#)

SURVEILLANCE

CAUSATION

INTERVENTIONS

KNOWLEDGE SYNTHESIS

RESEARCH AGENDA

[Home](#) > [Research Type](#) > [Hazard](#) > [Asbestos](#) > The human and economic burden of occupational cancer in Canada

THE HUMAN AND ECONOMIC BURDEN OF OCCUPATIONAL CANCER IN CANADA

Status: complete



Asbestos abatement during construction

Purpose:

This study estimated the number of cancers and cancer deaths occurring in Canada due to occupational exposure to carcinogens. The term 'burden' is used to refer to the human impact (e.g. deaths, illness) and the economic costs (e.g. health care, productivity) associated with a cause or group of causes.

Background:

Millions of Canadians are exposed to a wide range of known and suspected carcinogens in the workplace. These include industrial chemicals (e.g. benzene), metals (e.g. nickel, chromium), fibres and dusts (e.g. asbestos, silica), radiation (e.g. solar UV radiation, ionizing radiation), complex mixtures (e.g. diesel engine exhaust), and exposure circumstances (e.g. shiftwork, painting, welding). However, the impact of these exposures is less clear. Researchers

have estimated the number of work-related cancers that occur in other countries, but a study of this type has not previously been undertaken in Canada on a national scale.

Methods:

To derive occupational cancer estimates specific to the Canadian context, we made use of national and provincial cancer statistics, literature reviews on the cancer risks associated with workplace exposures, and estimates of historical exposures in Canada (developed by [CAREX Canada](#)). This allowed us to develop a series of robust province- and sex-specific estimates for the cancers caused by 33 occupational carcinogens affecting 22 cancer sites. Economic cost estimates for these cancers were developed by the Institute for Work & Health.

Results and Resources:

More results and resources related to burden are available on our [Burden Page](#).

- Fact sheets: [Burden of Occupational Cancer in Canada](#)
- Report: [Burden of Occupational Cancer in Ontario](#)
- [Burden of lung cancer attributable to occupational diesel engine exhaust exposure in Canada](#)
- [The economic burden of lung cancer and mesothelioma due to occupational and para-occupational asbestos exposure](#)
- [The economic burden of occupational non-melanoma skin cancer due to solar radiation](#)
- [The economic burden of bladder cancer due to occupational exposure](#)
- In November 2015, OCRC hosted a meeting on *Preventing the Burden of Occupational Cancer in Canada*. The meeting brought together stakeholders and scientists to share interim findings from the burden study and to begin discussing how to use these findings to promote prevention. [Please click here to see materials from the meeting, and a report highlighting the major themes that arose from the discussion.](#)

Implications:

The results of this study will help raise awareness of occupational exposure as an important causal factor in cancer etiology. We will target our results towards primary care physicians and their professional associations to raise awareness in the medical community and improve early recognition of disease.

These results will be useful in highlighting priority areas for prevention activities. Burden estimates will direct attention to industries, occupations, and workplaces where the greatest impact can be achieved, and data produced on economic costs will provide added importance for policy makers.

Funding:

This study received a four-year, \$1 million team [grant](#) from the Canadian Cancer Society, covering 2012-2016.

Investigators:

Paul Demers (OCRC)
Hugh Davies (CAREX Canada, University of British Columbia)
Anne-Marie Nicol (CAREX Canada)
Cheryl Peters (CAREX Canada, Alberta Health Services)
Chris McLeod (University of British Columbia)
France Labrèche (IRSST)
Martin Lebeau (IRSST)
Jérôme Lavoué (Université de Montréal)
Emile Tompa (Institute for Work & Health)
Christina Kalcevich (Institute for Work & Health)
Victoria Arrandale (OCRC)
Joanne Kim (OCRC)
Chaojie (Daniel) Song (OCRC)
Manisha Pahwa (OCRC)
Desre Kramer (OCRC)
Lesley Rushton (Imperial College London)
Sally Hutchings (Imperial College London)

Trainees (current and former):

Alex Hill (OCRC, MPH Occupational and Environmental Health)
Roseanna Presutti (OCRC, MPH Epidemiology)
Melissa Ramprashad (OCRC, MPH Epidemiology)
Amanda Veglia (OCRC, MPH Occupational and Environmental Health)
James Spencer (IWH, PhD Economics)

Partners:

Canadian Cancer Society, Ontario Division
Canadian Cancer Society, National Division

[Home](#) > [Research Type](#) > [Hazard](#) > [Asbestos](#) > The human and economic burden of occupational cancer in Canada

[TERMS OF USE](#) [SITEMAP](#)

© 2017 Occupational Cancer Research Centre. All rights reserved.

