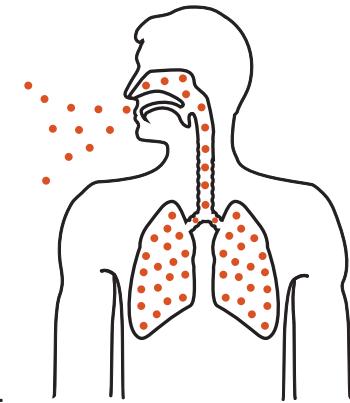


RADON AND THE LUNGS

Radon is invisible and odourless,¹ and radon can kill.²

1 Once radon enters a building, it can break down to produce radioactive particles.



2 Once inhaled, these particles irradiate the lining of the lungs.

3 Irradiation can damage the lungs and result in the development of cancer.

LOWER LEVELS ARE BETTER

Any exposure to radon poses some risk to Ontarians.³ However, there are benefits to reducing exposure to as low as possible.

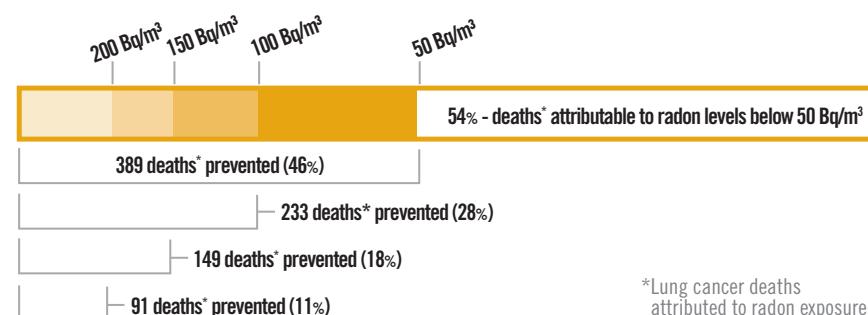
200 Bq/m³

Health Canada recommends action be taken above this level.^{4,5}



Becquerel (Bq) = The unit used to measure the number of radioactive decays of a radon atom

Radon-attributable lung cancer deaths that could be prevented each year if all homes above these levels were at background level (10-30 Bq/m³), Ontario, 2007³



*Lung cancer deaths attributed to radon exposure

RADON RISKS AND REALITIES

Radon is a naturally occurring radioactive gas found in soil, water and outdoor air, and can enter buildings and accumulate in indoor air.¹ Classified as a carcinogen by the International Agency for Research on Cancer, radon is one of the leading causes of lung cancer.² Reducing exposure to indoor radon would result in fewer lung cancers in Ontario.

Lung cancer is the leading cause of cancer mortality in Ontario.^{6,7} Among non-smokers, radon is the primary cause of lung cancer and it is the second leading cause among current or former smokers.¹

A survey conducted in one region of Ontario showed:⁸

51.9%

13.9%

of residents had heard of radon

of residents were aware that radon can cause lung cancer

RADON AND BUILDINGS



Radon can enter a building through cracks and holes in the foundation and will accumulate in enclosed spaces.⁹



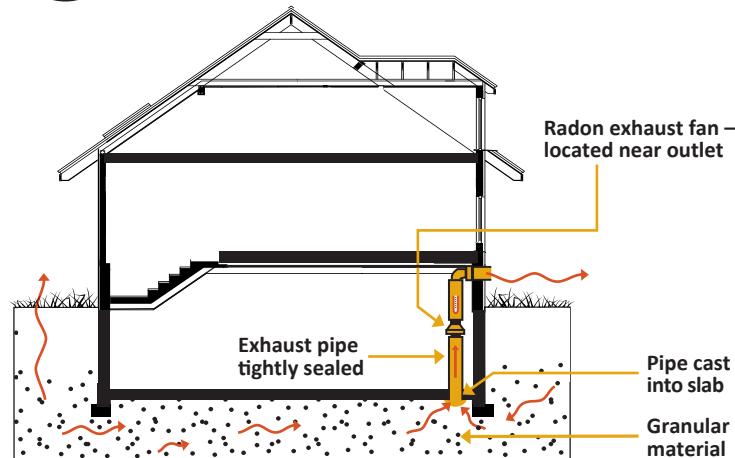
Highest radon concentrations in buildings are found below the second floor.



Changes to building code requirements could produce structures with radon levels well below the current action level.



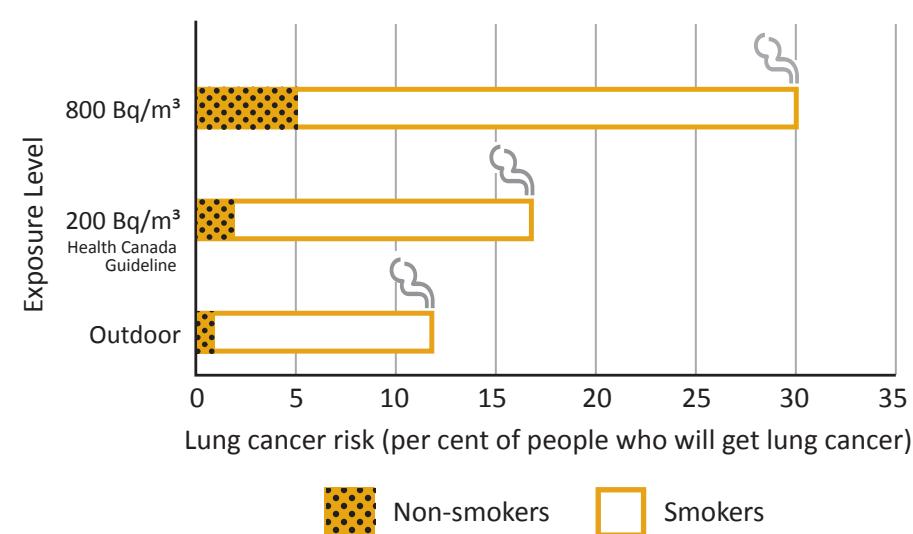
There are effective ways to test for radon and reduce indoor levels.⁹



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SMOKING AND RADON: WORSE TOGETHER

Estimated per cent of people who will get lung cancer by lifetime exposure to radon at the following levels, Ontario, 2006⁵



1. World Health Organization. WHO handbook on indoor radon: a public health perspective. Geneva, Switzerland: WHO; 2009 [cited 2013 Oct 28]. Available from: http://whqlibdoc.who.int/publications/2009/9789241547673_eng.pdf 2. Committee on Health Risks of Exposure to Radon (BEIR VI), National Research Council. Health effects of exposure to radon: BEIR VI. Washington, DC: National Academies Press; 1999 [cited 2013 Oct 28]. Available from: http://www.nap.edu/catalog.php?record_id=5499 3. Peterson E, Aker A, Kim J, Li Y, Brand K, Copes R. Lung cancer risk from radon in Ontario, Canada: how many lung cancers can we prevent? Cancer Causes Control. 2013 [cited 2013 Oct 28];24(11):2013-20. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3824583/pdf/10552_2013_Article_278.pdf 4. Health Canada. Cross-Canada survey of radon concentration in homes: final report. Ottawa, ON: Her Majesty the Queen in Right of Canada, represented by the Minister of Health; 2012 [cited 2013 Oct 28]. Available from: http://www.hc-sc.gc.ca/ewh-semt/alt_formats/pdf/radiation/radon/survey-sondage-eng.pdf 5. Radon Working Group. Report of the Radon Working Group on a new radon guideline for Canada. Submitted to the Federal Provincial Territorial Radiation Protection Committee. Ottawa, ON: Her Majesty the Queen in Right of Canada, represented by the Minister of Health; 2006 [cited 2013 Nov 20]. Available from: http://www.mtpinnacle.com/pdfs/WG_Report_2006-03-10_en.pdf 6. Cancer Care Ontario. Cancer in Ontario: overview, a statistical report. Toronto, ON: Queen's Printer for Ontario; 2010 [cited 2013 Oct 28]. Available from: <https://www.cancercare.on.ca/common/pages/Userfile.aspx?fileid=81843> 7. Canadian Cancer Society's Advisory Committee on Cancer Statistics. Canadian cancer statistics 2013. Toronto, ON: Canadian Cancer Society; 2013 [cited 2013 Oct 28]. Available from: <http://www.cancer.ca/~media/cancer.ca/CW/publications/Canadian%20Cancer%20Statistics/canadian-cancer-statistics-2013-EN.pdf> 8. Data source: Rapid Risk Factor Surveillance System (September 2012 - December 2012). Institute for Social Research, York University. Extracted 2013 Apr 29. 9. Health Canada. Radon: reduction guide for Canadians. Ottawa, ON: Health Canada; 2013 [cited 2013 Dec 23]. Available from: http://www.hc-sc.gc.ca/ewh-semt/alt_formats/pdf/pubs/radiation/radon_canadians-canadiens/radon_canadians-canadiens-eng.pdf

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