



## RADON: Home Warranty Providers and the Law

### What Is Radon Gas?

Radon occurs naturally when uranium breaks down in rock and soil. It is an invisible, odourless and tasteless gas.

When radon leaves the ground it is usually diluted in air and is relatively harmless. However, radon can seep into peoples' homes through small cracks and openings where the building contacts the soil. In some homes it can accumulate in higher concentrations, posing a health risk.

Health Canada has set a National Radon Guideline of 200 becquerels per metre (Bq/m<sup>3</sup>) About 7% of homes in Canada have radon over the National Radon Guideline of 200 Bq/m<sup>3</sup>. In some communities in British Columbia more than half of homes have high radon. Radon testing is easy and techniques to lower radon levels are effective and can save lives.

## BRITISH COLUMBIA LUNG ASSOCIATION

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Home warranty insurance providers in BC need to be aware of radon. High radon should be considered a defect in homes and claims concerning high radon are likely to be successful under the New Home Warranty.

### Radon and Human Health

Radon is naturally occurring radiation and when breathed in it can cause lung cancer. Radon gas is the #1 cause of lung cancer in non-smokers. High radon causes approximately 3,360 deaths per year in Canada. Health Canada research estimates that with lifetime exposure at 800 Bq/m<sup>3</sup>, the lifetime lung cancer risk would be one in 20 for non-smokers, and one in three for smokers.

For radon test results between 200 and 600 Bq/m<sup>3</sup>, Health Canada recommends taking steps to reduce the radon level within two years. If results are greater than 600 Bq/m<sup>3</sup>, Health Canada recommends to reduce the level within one year.

### Testing for Radon

Radon levels can be very different from home to home even within the same community. The only way to know the radon level in a home is to test. It doesn't matter if a home is new—it can still have high radon levels.

Health Canada has developed a [radon risk map](#) but more data is still needed to estimate radon risks for each community.

It is easy and inexpensive to test for radon using home testing kits that cost \$20 to \$60. These hockey-puck sized units come with instructions and are available at leading retailers or from the British Columbia Lung Association at our [website](#), by email:

info@bc.lung.ca or by phone: 604.731.LUNG (5864).

We also run a [library lending program](#) in many communities. Libraries also stock digital radon detectors which people can borrow to learn about radon.

### Avoiding High Radon: New Homes

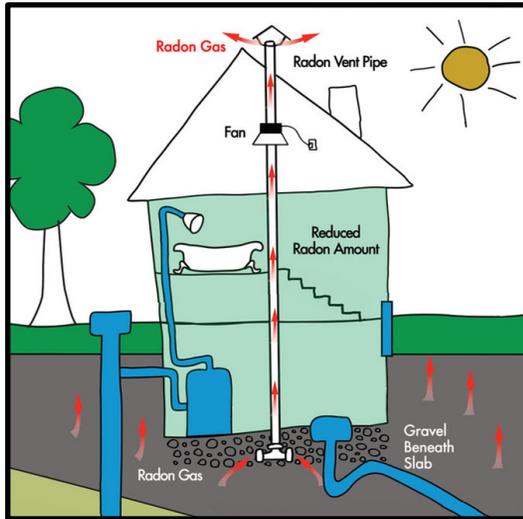
If a homeowner is having a new home built, the building professionals that they hire need to understand and comply with the BC Building Code. The BC Building Code has provisions for radon prevention in select municipalities, mostly east of the Coast Mountains (s. 9.13.4).

Building professionals are supposed to be aware of high radon and how to avoid it. They should know that elevated radon can be avoided in new construction. The best systems use "sub-slab depressurization". A hole in the building foundation and a vent pipe ensures low pressure on the ground floor does not result in radon being sucked into the space. A complete system is not necessary under the Building Code, but if radon levels remain high after testing, professionals should

#### Division B Appendix C Climatic and Seismic Information for Building Design in British Columbia. Table C-4 -Locations in British Columbia Requiring Radon Rough-Ins

100 Mile House Abbotsford Ashcroft Atlin Barriere Burns Lake Cache Creek Castlegar Carmi Chetwynd Clearwater Cranbrook Crescent Valley Dawson Creek Dease Lake Dog Creek Duncan Elko Fernie Fort Nelson Fort St. John Genelle Glacier Golden Grand Forks Greenwood Hope Invermere Kamloops Kaslo Kelowna Kimberley Lillooet Little Fort Lytton Mackenzie McBride McLeod Lake Merritt Montrose Nakusp Nelson Osoyoos Penticton Prince George Princeton Quesnel Revelstoke Rossland Salmon Arm Sechelt Smith River Smithers Stewart Taylor Terrace Trail Valemont Vaverby Vernon Whistler Williams Lake

section 1.1.3.3 (2) allows other towns to be added if they choose



complete the subfloor depressurization system by adding a fan. Best practices in radon mitigation are described in Canadian General Standards Board (CGSB) [Radon control options for new construction in low-rise residential buildings, CAN/CGSB-149.11-2019](#)

## Fixing High Radon

If the radon level in a home turns out to be higher than 200 Bq/m<sup>3</sup> professional radon mitigators can put a system in place in one or two days. The [Canadian National Radon Proficiency Program](#) (C-NRPP) has lists of certified radon mitigation professionals by community,

## High Radon is a Defect

As warranty providers are well aware, the New Home Warranty is an insurance policy that covers homes constructed since July 1, 1999 by residential builders who are licensed with BC Housing.

In our view, it is only a matter of time until homeowners make successful claims under the New Home Warranty for high radon.

Courts would most likely find high radon to be a defect in materials or structure for a number of reasons including:

- The National Radon Guideline provides a clear standard for health in a home.
- High radon is considered to be a latent defect by the Real Estate Council of BC.
- What counts as a defect for a real estate transaction should also count as a defect under BC's *Homeowner Protection Act*.

## Comparison With Tarion's Radon Coverage

In Ontario, Tarion (the province's only home warranty insurance provider) agrees that high radon is a defect. After analyzing Ontario's New Home Warranties Plan Act and Regulations, which are very similar to BC's Homeowner Protection Act and Homeowner Protection Act Regulations, Tarion determined that high radon is a major structural defect. Tarion explicitly warrants construction against levels of radon exceeding 200 Bq/m<sup>3</sup> for seven years.

In BC, radon would most likely fit into the five-year coverage for building envelopes. This categorization is supported by the BC Building Code sections on radon. In the Code, radon is viewed as a building envelope issue meant to separate and protect the interior space from the outside.

Funding for this project has been made possible by:

## Implementing Radon Policies

Warranty providers should be prepared to deal with claims concerning high radon. As radon awareness increases, homeowners who believe there is a problem with high radon in their home will contact warranty providers to notify them of the defect. As with other claims, warranty providers must be prepared to conduct an evaluation of the radon issue and if needed arrange for repairs to be done.

If the warranty provider rejects a homeowner's claim, they need to issue justification in writing. If a homeowner disagrees with the warranty provider's decision, the parties can proceed to a mediation process.

## Further Information

This is an abridged version of a more detailed legal opinion, titled **Radon: Liabilities in Construction Law** which includes further information, resources, and legal analysis. To learn more please visit our website on [Radon: Rights and Duties](#) or contact us at [healthyindoor@bc.lung.ca](mailto:healthyindoor@bc.lung.ca)

