

FAQ

What is radon?

Radon is created by the decay of uranium; another element that occurs naturally in trace amounts in stone, soil and water. Outside, radon concentrations are typically negligible. Background levels of radiation have been a part of life on earth since humans first took to shelter in caves. However, when radon is trapped in a closed-in space, such as a basement, it can build up to unsafe levels and be repeatedly breathed into the lungs by building occupants.

Why is radon a serious health risk?

Indoor radon gas is the leading cause of lung cancer among non-smokers, and estimated to be responsible for up to 16 per cent of lung cancer cases in Canada. Among those who both smoke and are exposed to radon, lung cancer rates jump to a staggering one-in-three.

What amount of indoor radon is safe?

Radon exposure guidelines exist to guide personal and regulatory decision making on which combination of building techniques, materials and technologies can best achieve the goal of minimizing radon exposure versus the guideline. In Canada, Health Canada published a radon exposure guideline in 2007 of 200 Bq/m³, above which action should be taken to reduce radon levels. In the United States the radon exposure guideline is 148 Bq/m³ and the World Health Organization sets its radon guideline for action at 100 Bq/m³. This suggests strong international scientific consensus within a narrow guideline range that action should be taken to reduce radon levels to as low as reasonably practicable.

Why do both a short and long-term radon test?

While accurate short-term tests are available and an accurate method for determining radon potential at any given time, radon levels can and will vary from one point in time to another. The BC Lung Association recommends (as does Health Canada) a long-term test be deployed after any short term measurement has been taken. A long-term test measures radon concentrations over a minimum of three months to obtain a person's average level of exposure.

Where and when should radon tests be deployed?

Tests should be deployed on the lowest lived-in level of the building (closest to the soil). It is preferred if tests are conducted over the cooler, winter months. By testing in the winter, the detector is able to measure radon concentrations at their highest, when homes and buildings are sealed up and ventilation air from the outside to the inside is likely at a minimum. Once the test is complete, detectors are sent to a lab for analysis. Results are typically sent by email or in the mail. If there is any error in the data sent to the lab, the participant may be phoned to clarify the information provided is accurate.

What if my radon test result is high?

Should your home have radon levels that exceed the Health Canada safety guideline, radon remediation services are available from trained and certified contractors. Generally, a home radon mitigation system, also known as a Sub-slab Active Depressurization System, can cost anywhere from \$1,500 to \$3,500.

Why should I test my residential well water for radon?

Radon dissolves readily into water and as such can be transported into your home when you use water from a well. The radon trapped in your well water is off-gassed when the water is aerated within the home's plumbing fixtures. The water is then released when a shower or faucets is turned on, the toilet is flushed, or the dishwasher or washing machine started. The radon gas is then inhaled by building occupants.

What can I do if I have elevated radon levels in my well water?

Radon can be mitigated from residential well water by installing a system within the body of the well itself, so that no radon-contaminated water enters the building. This system can be installed by a licensed well technician and typically costs between \$3500 and \$4500 depending on the depth of the well.