

NEWS YOU CAN USE

The Facts About Radon Gas

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Recent research has linked radon gas exposure to lung cancer and has resulted in the lowering of allowable levels of radon gas. As of June 2007, Health Canada recommends:

“Remedial measures should be undertaken in a dwelling whenever the average annual radon concentration exceeds 200 Bq/m³ in the normal occupancy area.”

This represents a 75% reduction in the previous guideline of 800 Bq/m³. The lung cancer research and the change in allowable levels is resulting in increased awareness about radon gas levels in homes, schools, hospitals and office buildings.

Radon is an invisible and odorless radioactive gas which is emitted from decaying uranium in the earth's surface. The gas rises and dissipates (outdoor concentrations typically 10-30 Bq/m³) unless it accumulates in an enclosed area such as a basement. Radon gas rises through the soil and seeps through cracks, holes, clay basements and drain pipes in the foundations of homes and buildings. Since your home is typically at a lower pressure than outdoors, it tends to attract the gas through openings. In areas with limited ventilation, concentrations can increase beyond allowable limits; Health Canada reports that typical levels in homes and buildings should be 75 Bq/m³.

According to the U.S. Environmental Protection Agency (EPA) 1 out of every 15 homes in the United States has high levels of radon gas. Radon gas contains radioactive particles which get trapped in your lungs when you breathe in contaminated air. Long term exposure leads to lung damage and lung cancer. The odds of developing cancer greatly increase when smokers are exposed to high concentrations of radon gas.

Buildings susceptible to radon gas build up are those with:

- Cinder-block, brick or rock wall construction
- Exposed soil (clay, dirt or crushed gravel) in the basement
- Cracks in the basement wall or foundation
- Open holes or drains in the basement
- Spaces between walls and floors
- Exposed pipes or loose pipe fittings

It is relatively easy to test for radon gas. A common approach is the use of a radon detector kit that employs electrets. The electrets are exposed in the target test area for a specified period of time (3-5 days for a short term test or 1-3 months for a long term test) and then returned to a lab for analysis and reporting of radon levels. The laboratory cost for provision of the kit and completion of the analysis is typically \$50 per test.

If high levels of radon gas (greater than 200 Bq/m³) are detected, there are some straight-forward approaches to rectifying the problem. Most often, sealing or caulking entry areas (cracks and openings) and increasing the air exchanges through ventilation and/or an air exchanger will address the issue. A more costly remedy is placing an exhaust system under the concrete floor.

For more information about radon gas, refer to the Health Canada web site http://www.hc-sc.gc.ca/iyh-vsv/environ/radon_e.html, or contact Thelma Green at 506.452.0586.

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