

RADON GAS AND YOUR HOME

Radon Gas

- a radioactive, colorless and odorless gas that occurs from the decay of uranium
- can enter a home any place it finds an opening where the house contacts the soil
- heavier than air and so tends to accumulate in the lower areas of a building

Health Risks

- a wealth of biological and epidemiological evidence and data show the connection between exposure to radon and lung cancer
- The most elaborate case-control epidemiologic radon study, by R. William Field and colleagues, demonstrated a 50% increased lung cancer risk with prolonged radon exposure at the EPA's action level of 4 pCi/L
- drinking water that contains radon is less harmful than breathing radon, however, when that water is agitated (e.g. showering, washing clothes or cooking), radon is released into the indoor air
- while radon gas doesn't discriminate, the very young, the elderly, and those with a weakened immune system are particularly at risk

Testing for Radon Gas

- testing is necessary as radon gas is not detectable by sight or smell, and the effects are not immediate
- radon detectors on the market measure levels for short periods of time, up to 3 months, or gather data over many months
- longer periods of measurement give a more accurate picture of the radon exposure
- testing in winter is preferred as results are more reliable
- radon levels below 200 bequerels per cubic metre (Bq/m³) or 4 picoCuries per Litre (pCi/L) are currently acceptable safe levels
- if extended testing shows higher radon as radon concentration varies over time, levels in your home, remediation is advised



Remediation Actions

- seal all cracks and openings in the walls, floors and drains and pipes of your basement
- if your basement floor has a sub-floor, make sure it is ventilated
- replace an earth floor with a concrete floor
- increase the ventilation in your basement or other enclosed space where radon may accumulate
- paint basement floors and walls. Use a sealant on top of the paint and add polyethylene sheets to basement walls
- measure for radon gas after remediation and every two years to ensure levels are safe and the remedial actions are still effective
- if your water comes from a well, have your water tested
- if there is a high level of uranium in the soil around your house, the soil should be removed and replaced with clean fill.



Radon Detectors and Measurement Services

- radon detectors for short-term testing and long-term can be found on the internet
- www.canadianradontesting.com is a Canadian source for testing
- for more information on testing and radon gas contact the CMHC (Canadian Mortgage and Housing Corporation) 1-800-668-2642 to receive a copy of RADON A Guide for Canadian Homeowners and
- Health Canada hc-sc.gc.ca 1 866-999-7612.



