

Residential Radon in Vermont

Guidance • Support • Prevention • Protection

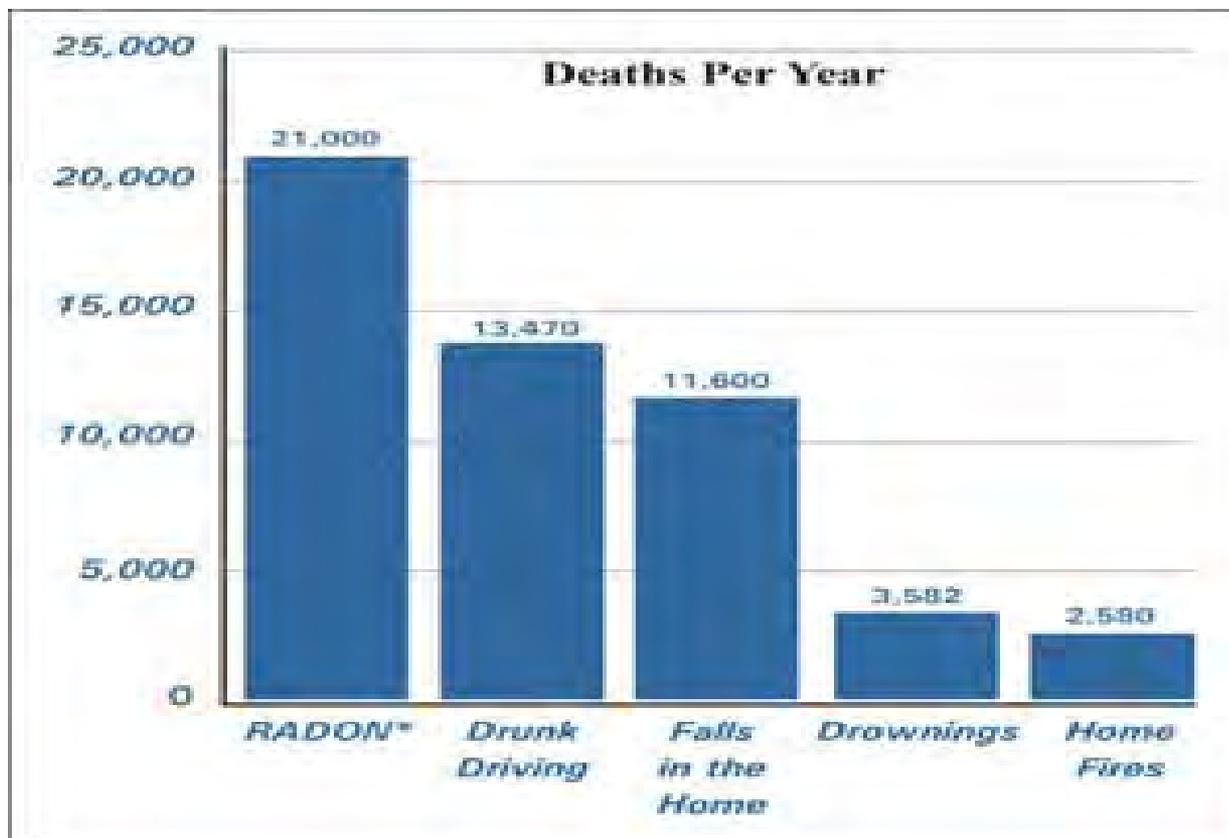
Amanda LaScala

Wednesday, January 6, 2010

What is radon?

- A radioactive gas produced by the breakdown of naturally occurring uranium in rocks
 - Radon gas comes from soil and water
- Colorless, odorless, and tasteless
- Class A carcinogen
- Second leading cause of lung cancer

Radon vs. other causes of death



* Radon is estimated to cause about 21,000 lung cancer deaths per year, according to [EPA's 2003 Assessment of Risks from Radon in Homes \(EPA 402-R-03-003\)](#). The numbers of deaths from other causes are taken from the Centers for Disease Control and Prevention's 2005-2006 National Center for Injury Prevention and Control Report and 2006 National Safety Council Reports.

US Surgeon General Health Advisory

**SURGEON GENERAL'S
WARNING:
Radon Causes Lung Cancer.
You Should Test Your Home.**

The U.S. Surgeon General recommends that your home be tested for Radon. Radon is the second leading cause of lung cancer. If you have never smoked, Radon is the number one cause of lung cancer. Radon is an invisible radioactive gas that seeps into your home from underground, and the only way you can tell if you have dangerous levels of Radon in your home is to test for it. Radon problems can be easily fixed. For testing information, call or visit:

1-800-439-8550

www.epa.gov/radon



FREE long-term radon test kits are available at **healthvermont.gov**

Radon in homes

- Residential radon exposure is a concern
- Radon points-of-entry
 - Cracks in floors
 - Gaps around service pipes
 - Cracks in walls
 - Joint between floor and wall



Radon in homes

- Buildings create partial vacuums – draw in soil gas
- Likelihood of radon problem cannot be predicted by home's style, age, or location
- One in every seven homes in Vermont has elevated radon
- Approximately 10% of Vermont homes have been tested

How do I know if radon is in my home?

TEST FOR IT!



Long-term radon tests

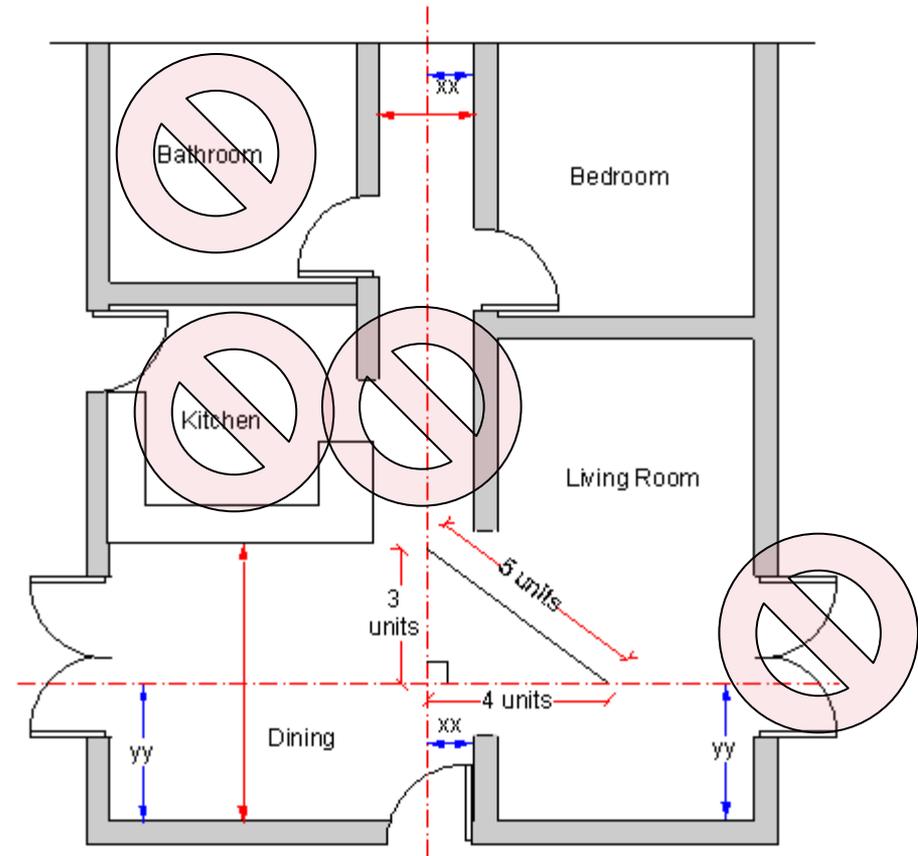
- Free from the Health Department
 - Must be a Vermont resident
- Takes 91 days to 1 year
 - Should include a heating season
- Used to evaluate radon exposure
 - daily, weekly, and seasonally radon fluctuations
- Email radon@vdh.state.vt.us, put “Radon Test Kit” in subject line and include your mailing and physical address
- Call the Health Department at 800-439-8550

Short-term radon tests

- Used to check for elevated radon concentrations
- 2-7 days to complete
- Not free- \$25/apiece from the Public Health Laboratory (800-660-9997)
 - Two tests, side by side, are recommended for quality assurance
- Generally used in real estate transactions

Where to test for radon gas

- Place kit in lowest occupied level of home, in a regularly-used room, but not a kitchen, bathroom, laundry room, or hallway



Who conducts a radon test?

- The homeowner
- Qualified Radon Professionals (contact the Health Department for a list of qualified contractors)

Interpreting test results

- Results reported as picoCuries/Liter (pCi/L)
- Concentrations ≥ 4.0 pCi/L warrant mitigation
 - Not a protective number
 - Mitigation should be considered between 2.0-3.9 pCi/L
- World Health Organization Radon Handbook recommends mitigation at 2.7 pCi/L

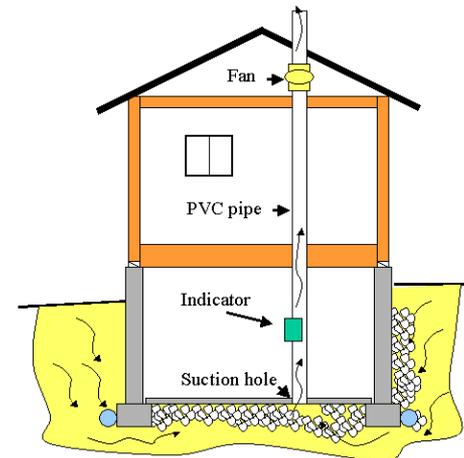
When to test for radon

- If you've never tested, or...
- If you're occupying a lower level of your home
- After major renovations
- Every 4-5 years
- When you are considering selling your home



Installing a radon-reduction system

- Visit the Health Department website for a list of certified radon mitigators
 - www.healthvermont.gov



Radon in well water

- Released when water is used in the home
- Rule of thumb:
 - EPA recommendations (not a drinking water standard) 4000 pCi/L in water = 0.4 pCi/L in air
 - Soil gas remains the #1 source of indoor radon
- Contact the Health Department for information about water testing and reduction techniques

The role of the Town Health Officer

- Information resource for the public



The role of the Town Health Officer

- Complaint-based rental housing inspection
 - Has radon testing been done?
 - *If not, recommend that they call the Health Department for a free long term test kit*
 - What was the result?
 - If elevated concentrations were detected, has a reduction system been installed?
 - *The Health Department and EPA recommend a radon reduction be installed*
 - **Document everything adequately**

Summary

- Chronic exposure to high concentrations of radon can cause lung cancer, but...
- Radon testing is inexpensive and easy, and...
- If high concentrations of radon are detected, a radon reduction system may be installed
- Rental property owners are encouraged to install a reduction system if elevated concentrations of radon are detected.

For more information, contact...

- The Vermont Department of Health 800-439-8550 or www.healthvermont.gov
- The Environmental Protection Agency at www.epa.gov

Questions?