

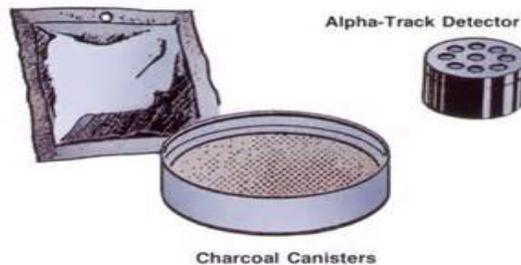
### What is an Acceptable Level of Radon?

Radon concentration is measured in picoCuries/Liter (pCi/L) of air. The outdoor radon level normally averages about 0.3 pCi/L. The US average indoor radon level is approximately 1.3 pCi/L. Both the USEPA and the Virginia Department of Health (VDH) recommend taking corrective action to reduce your indoor radon levels if your test result is 4.0 pCi/L or higher. Radon levels should be lowered to levels that are As Low as Reasonably Achievable (ALARA) using engineering controls based upon sound radiation protection principles.

### How Can You Test for Radon?

VDH recommends testing your home with a short-term (3-7 day) test between late October and early May. There are many different vendors that offer the kit, shipping and laboratory analysis for a modest price. A test performed in the winter will likely give a higher result while a test conducted in the spring or fall will likely give a result closer to an annual average.

Avoid testing in the summer, during periods of heavy precipitation, or high sustained winds. If your short term result is close to or higher than 4.0 pCi/L, you should perform another short-term test or a long term test. Lists of certified radon testers operating in Virginia are maintained by the National Radon Safety Board ([www.nrsb.org](http://www.nrsb.org)) and the National Radon Proficiency Program ([www.nrpp.info](http://www.nrpp.info)).

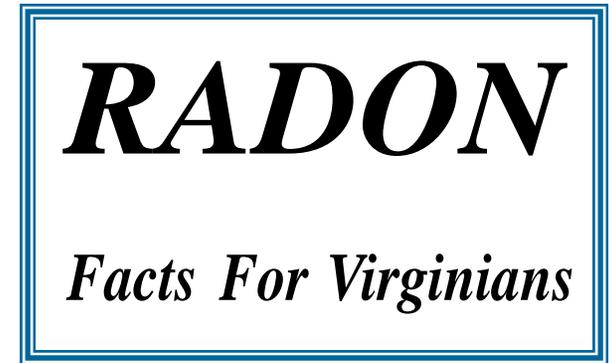


### Where Can You Get More Information on Radon?

VDH Radon Coordinator  
Office of Radiological Health  
109 Governor Street, 7<sup>th</sup> Floor  
Richmond, VA 23219  
Ph: (804) 864-8150  
Toll Free (within VA): 800-468-0138  
Hearing Impaired: 800-828-1120  
Visually Impaired: 800-828-1140  
Fax: (804) 864-8165  
Website: See Indoor Radon Program under "Other Links" at: [www.vdh.virginia.gov](http://www.vdh.virginia.gov)

Further radon information and publications may also be obtained from the following:

- USEPA's website at [www.epa.gov/radon](http://www.epa.gov/radon)
- USEPA's toll-free Radon Hotline at 800-557-2366



### What is Radon?

Radon is a naturally occurring radioactive gas that results from the decay of Uranium which is found in certain types of soil and bedrock.

You can't see, smell or taste it and it can only be detected by testing. Radon is normally reduced to very low levels in outdoor air, but in certain circumstances it can reach much higher concentrations indoors.

### Is Radon a Health Hazard?

Yes, it can be. Radon is considered second only to smoking as the leading cause of lung cancer.

Radon gas and its by-products are inhaled and may become trapped in your lungs. Studies have shown that prolonged exposure to radon and its by-products may cause lung cancer.

The United States Environmental Protection Agency (USEPA) estimates that as many as 21,000 lung cancer deaths per year in the United States may be associated with exposure to radon. Approximately 600 of those deaths occur in Virginia (based on census statistics).

Radon exposure is not known to cause any immediate physical symptoms or reactions.

The higher the radon level and the longer a person is exposed to it, then the greater the health risk.

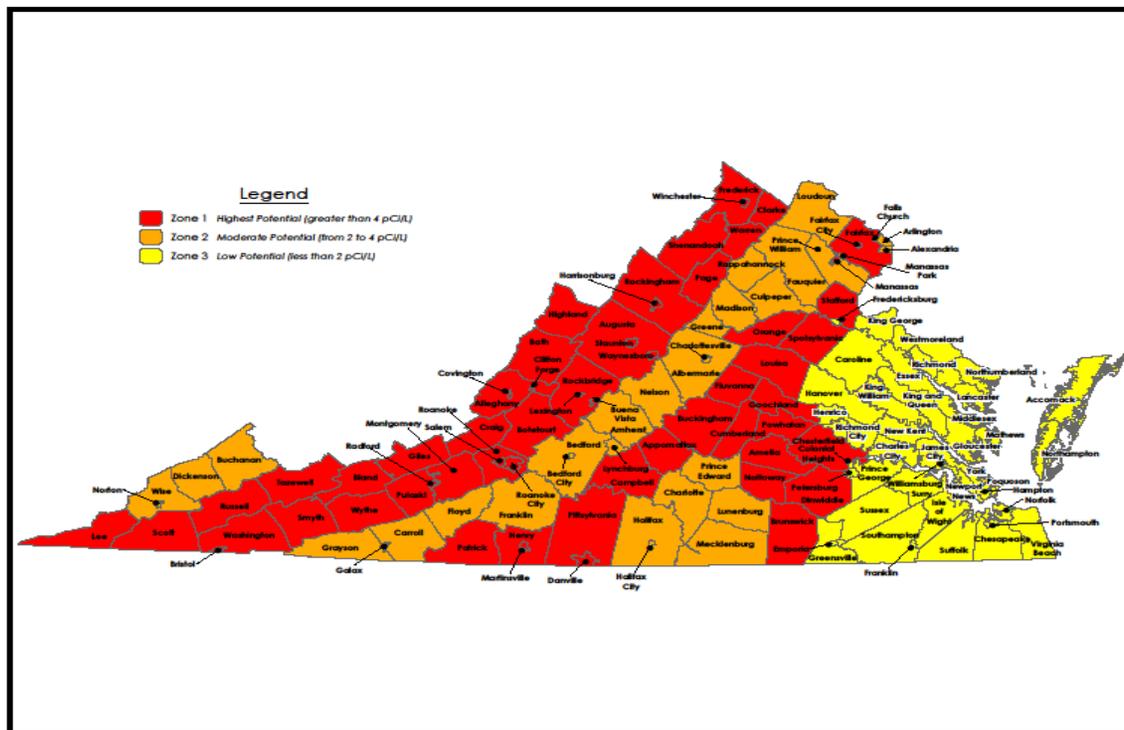
Studies have shown that current and ex-smokers are at a higher risk from exposure to radon than those who have never smoked.

### How Does Radon Get Into Your House?

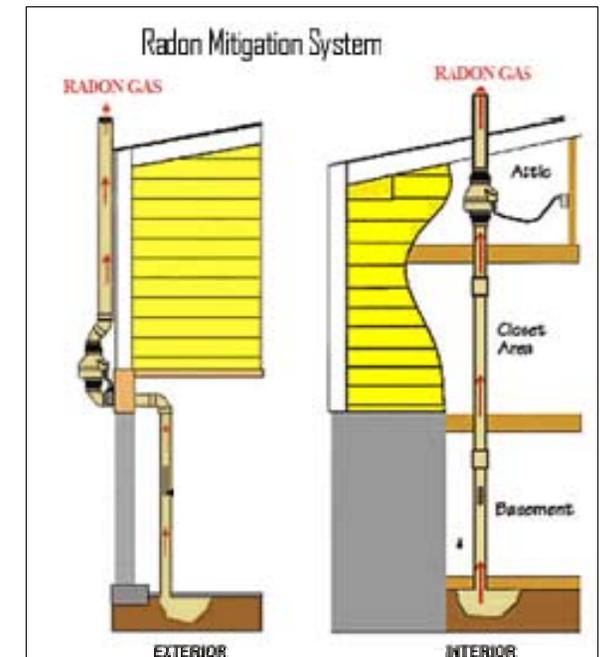
Radon can seep into your home from exposed dirt such as a crawl space, plumbing cut-out or old cellar. It can also pass through openings in your foundation such as unsealed sumps, drains, joints, cracks and open top block walls (see diagram on cover). The highest levels of radon are typically found in the lowest livable areas of the home, such as basements or other rooms in direct contact with the ground.

### Where is Radon Found?

Levels of radon exceeding 4.0 pCi/L have been found throughout most of the United States. Based on radon testing data provided to VDH, we estimate that approximately 20 to 25% of Virginia homes may meet or exceed the recommended action level of 4.0 pCi/L. Radon risk is determined in large part by local geology. The USEPA's Radon Risk Map for Virginia, printed below, shows counties at the highest (red), moderate (orange) and lowest (yellow) risk for indoor radon.



### What Can You Do To Reduce Indoor Radon Levels below 4.0 pCi/L?



It is not possible to reduce the indoor radon level to zero, but it can be reduced to less than 2 pCi/L in most homes. Simply increasing ventilation or increasing the air pressure inside the home may help reduce indoor radon levels. Sealing all possible radon entry points in your foundation may also help. The best approach is to hire a certified radon mitigator to install a radon reduction system in your home.

Lists of certified radon mitigators may be found on the [National Radon Safety Board](http://www.nrsb.org) ([www.nrsb.org](http://www.nrsb.org)) and [National Radon Proficiency Program](http://www.nrpp.info) ([www.nrpp.info](http://www.nrpp.info)) websites. The cost of a radon reduction system can be significant, so it is important to interview several mitigators to understand what they propose to do and what it will cost.