



# pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

## Answers to Your Radon Questions

### What is radon?

Radon is an invisible, tasteless, colorless and odorless radioactive gas that has been found in homes across Pennsylvania. It comes from the natural decay of uranium in soil, rock and water and gets into the air you breathe. Radon typically moves up through the ground to the air above and into your home through cracks and holes in the foundation. Your home can trap radon inside. Sometimes radon enters the home through well water or a public water supply that uses ground water.

Radon is a risk to your health and is the second leading cause of lung cancer after smoking. If you smoke and your home has high radon levels, your risk for lung cancer is especially high.

### How do you know if your home has radon?

Any home can have a radon problem. As a matter of fact, nearly 1 out of every 15 homes in the U.S. is estimated to have elevated radon levels, and this rate is even higher in Pennsylvania where approximately 40% of our radon test results show levels above the federal Environmental Protection Agency (EPA) guideline of 4.0 pCi/L (picocuries per liter). The only way to determine the radon level in your home is by testing. Testing is easy and inexpensive.

In Pennsylvania, radon testing may be performed by the homeowner of the building or by a tester certified by the Pennsylvania Department of Environmental Protection (DEP). If the homeowner wishes to perform the test, a test kit may be purchased at most hardware stores or home centers. If you wish to hire a DEP-certified tester, please contact DEP at 1-800-23-RADON for a current copy of the Radon Services Directory, which is a list of DEP-certified testers, mitigator and laboratories or visit DEP's website at [www.depweb.state.pa.us](http://www.depweb.state.pa.us), keyword "Radon" to view an electronic copy of the document. The average cost of a do-it yourself test is \$20 to \$30 and it costs about \$100 to \$125 for a DEP-certified tester to test your home.

### At what radon level should I fix my home?

There is no known safe level of radon. However, DEP, EPA and the Surgeon General all recommend fixing your home if your test results are at or above 4 pCi/L. How do I know if the source of my radon is from my water or from the soil around my home? Radon that enters your home through the soil around your home and becomes airborne is the more common source of radon in Pennsylvania.

However, if your drinking water is supplied from a private well or a public water supply system that uses ground water, it is possible that radon may be coming from your water supply. Radon in your home's water is usually not a problem when its source is surface water.

If you have tested the air in your home and found a radon problem, and your water comes from a well, have your water tested. If your water comes from a public water supply system that uses ground water, contact your water supplier. The devices and procedures for testing your home's water supply are different from those used for measuring radon in air.

If you have tested your private well and have a radon-in-water problem, it can be easily fixed. You may either install a point-of-entry treatment system (which uses a granular activated charcoal filters or an aeration system) or a point-of-use treatment system. A point-of-use treatment system removes radon only from the water you drink and therefore point-of-use devices are not effective in reducing the risk from breathing radon released into the air from all water used in the home.

### How can I reduce or mitigate my radon levels?

Since there is no known safe level of radon, there can always be some risk. But the risk can be reduced by lowering the radon levels in your home.

A variety of methods are used to reduce or mitigate radon in your home. A simple system of pipes and fans, paired with the sealing of cracks in floors and walls, is usually highly effective and can reduce radon levels in your home up to 99 percent. These systems known as soil suction or sub-slab depressurization systems do not require major changes to your home. These systems remove radon gas from below the basement floor and the foundation before it can enter the home. The right radon mitigation system depends on the design of your home and the characteristics of the material below your floor slab.

In Pennsylvania, you, the homeowner, may reduce your radon levels yourself or you may hire a DEP-certified mitigator to reduce your radon. Anyone conducting radon mitigation in the state who is not the homeowner must be certified by the department. The cost to use a DEP-certified mitigator is approximately \$800 to \$1000. Your costs may vary depending on the size and design of your home and which radon reduction methods are used.

Ways to reduce radon in your home are discussed in "Pennsylvania's Consumer's Guide to Radon Reduction." Free copies of this document and a Do-It-Yourself Mitigation Information Packet may be obtained by calling DEP at 1-800-23RADON. The "Pennsylvania's Consumer's Guide to Radon Reduction" may also be viewed online at [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (keyword: Radon).

### What should I know if I am selling my home?

EPA and DEP recommend that you test your home before putting it on the market and, if necessary, lower your radon levels. If you have tested your home, you are required by Pennsylvania law to provide those test results to any prospective buyers of the property.

What should I know if I am buying a home? EPA and DEP recommend that you obtain the indoor radon level in a home you are considering buying. The seller is required by Pennsylvania law to provide the buyer with any known radon test results performed on the property. If the home has a radon reduction system, ask the seller for all information about the system, including any warranties and associated documentation.

DEP recommends that one's very first test be two short-term passive devices within four inches of one another or one short-term active device in the lowest livable level of the home. Initial short-term testing is recommended so as to catch potentially high radon levels that may otherwise go undetected. DEP considers the basement (if there is one) to be the "lowest livable level" if it can be used as a living area without major structural change -- even if it has not been renovated into a "finished" living space.

The radon testing guidelines in the "Pennsylvania's Home Buyer's and Seller's Guide" document has been developed specifically to deal with the time sensitive nature of home purchases and sales and the potential for radon device interference. For a copy, please contact DEP at 1-800-23RADON or visit [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (keyword: Radon).

### Who should I contact if I have further questions?

For any questions about radon or Pennsylvania radon certification requirements please contact DEP's Radon Division at 1-800-23RADON (or visit our website at [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (keyword: Radon)).