

Radon



A Guide for Homeowners

What is radon?

Radon is a naturally occurring radioactive gas released in rock, soil and water from the natural decay of uranium. While levels in outdoor air pose a relatively low threat to human health, radon can accumulate to dangerous levels inside buildings. You can't see, smell or taste it, but an elevated radon level in your home may be affecting the health of your family.

How can radon affect my family or I?

Exposure to radon is the second leading cause of lung cancer in the United States and the No. 1 cause among non-smokers. The U.S. Environmental Protection Agency estimates that radon causes more than 20,000 lung cancer deaths in the United States each year, second only to smoking. If you smoke and your home has radon, your risk of lung cancer can be higher.

How does radon enter a home?

The gas enters through cracks and openings — such as sump pump lids and plumbing features — on the lower levels of your home. Hot spots include basements, first-floor rooms and garages, but radon can be found anywhere in your house. Radon has been found in elevated levels in homes in every state. Even two homes right next to each other can have vastly different radon levels. Just because your neighbor's house does not have an elevated level of radon does not mean that your house will have a low radon level.

How do you know if radon is present in your home?

The U.S. Surgeon General recommends that all homes in the U.S. be tested for radon. Testing your home for radon is as easy as opening a package, placing a radon detector in a designated area and after a set number of days, sending the detector back to a lab for analysis. The lab will then inform you of your radon test results.

Where can I get a test kit?

Radon test kits are available at local home improvement or hardware stores and the Douglas County K-State Research and Extension Office. You can also order them from the National Safety Council (NSC) or radon testing companies. Another option is to hire a qualified tester to do a radon test for you. Contact Douglas County K-State Research and Extension Office **(785) 843-7058** to obtain a list of qualified testers. Information about testing your home for radon and finding a test kit is also available by calling **1-800-SOS-RADON**.

What Can **YOU** Do?

How is radon measured?

Radon is measured in picocuries per liter of air (pCi/L), a measurement of radioactivity. The EPA and the Centers for Disease Control and Prevention recommend that homes with radon levels at 4 pCi/L or higher should be fixed. The EPA also recommends that Americans consider fixing their homes for radon levels between 2 pCi/L and 4 pCi/L. Based on a national residential radon survey completed in 1991, the average indoor radon level is about 1.3 pCi/L in the United States. The average outdoor level is about 0.4 pCi/L.

How are high radon levels mitigated?

The cost of making repairs to reduce the radon level depends on several factors, including how your home was built. Most homes can be fixed for about the same cost as other common home repairs, like painting or having a new hot water heater installed. The average cost for a contractor to mitigate radon levels in a home is about \$1,200, although costs can range from \$800 to approximately \$2,500. Contact Douglas County K-State Research and Extension Office at **(785) 843-7058** to find local radon mitigators.

How can new homes be built to resist radon?

A gas permeable layer, plastic sheeting, sealing and caulking, installing a vent pipe or junction box are all radon-resistant construction methods. Every new home should be tested after occupancy, even if it was built using radon-resistant construction methods. If radon levels at or above the EPA's action level of 4 pCi/L are detected, it is easier and less expensive to reduce radon levels in homes that have been built with radon-resistant construction techniques.

