

The kits are simple to use and are deployed in the lowest occupied level of your home. Follow the directions on the package and return the entire kit to the manufacturer for analysis. If the radon level is at or above 4pCi/L, information about corrective measures is typically included with the results.

Some homeowners purchase and use continuous radon monitors which continuously monitor radon where they are placed.

You can also hire a radon measurement professional to test for radon in your home. For a list of certified radon professionals contact the DEQ Radon Control Program by calling 800-546-0483 or visit our website at <http://deq.mt.gov/Energy/EnergizeMT/radon>.

If you decide to hire a qualified company to test for or mitigate radon, contact the National Radon Safety Board (NRSB); National Radon Proficiency Program (NRPP); the Montana Department of Environmental Quality (DEQ) or public health official for a list of certified (trained) radon professionals. To make sure you are getting a fair price, get estimates from at least two contractors, compare cost estimates and the tasks they propose to do, contact their past customers to see if they were satisfied with the work, and have a written contract with the selected contractor. After work is completed, either buy another do-it-yourself test kit or have a different company test the home to see if radon levels are below 4pCi/L.

Radon Mitigation

Reducing or eliminating elevated radon levels in your home is do-able. Radon mitigation includes ventilating rooms, sealing foundation and slab cracks, covering exposed soil, installing a sub-slab depressurization system, and other actions. Radon mitigation can cost between \$500 and \$2000 depending on project details. Get involved in the details of testing for and mitigating radon in your home.

Toll-free Hotlines & Websites

DEQ Radon Control Program Hotline
• (800) 546-0483
• www.deq.mt.gov/Energy/EnergizeMT/radon

Kansas State University National Radon Program Services Hotline
• (800) 767-7236
• <http://sosradon.org/>

Environmental Protection Agency
• (800) 227-8917
• www.epa.gov/radon

National Radon Safety Board (NRSB)
• (866) 329-3474
• <http://www.nrsb.org/>

National Radon Proficiency Program (NRPP)
• (800) 269-4174
• <http://aarst-nrpp.com/wp/>

EPA Safe Drinking Water Hotline
• (800) 426-4791 • www.epa.gov/sdwa

State of Montana
Department of Environmental Quality
Air, Energy, and Mining Division
Radon Control Program
Toll-free Hotline: (800) 546-0483
www.deq.mt.gov/Energy/EnergizeMT/radon

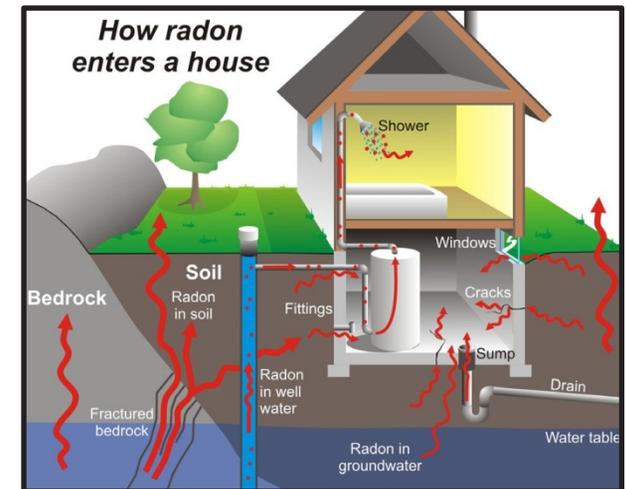
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Protect Your family from...

Radon



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Information About Radon . . .

What is radon? When should I take action?

Radon is a naturally occurring radioactive gas that you can't see, taste, or smell. It is produced by the breakdown, or decay, of uranium in soil, rock, and water.

Radon is measured in picocuries of radon per liter (pCi/L) of air. The Department of Environmental Quality (DEQ) and the U.S. Environmental Protection Agency (EPA) recommend that action be taken to reduce radon levels if the long term average found in your home is 4 pCi/L or higher.

Where is radon found?

Most rocks contain uranium. Certain types of rocks contain more uranium than others. In Montana, uranium and radon are common. Rocks break down into soil and radon found in rocks and soil can enter a home or building through dirt floors, hollow-block walls, cracks in foundation floors and walls, and openings around floor drains, pipes, and sump pumps.

Radon is typically more concentrated in the lower levels of the home (that is, basements, ground floors, and first floors). Elevated radon levels have been identified throughout Montana and in every state. The EPA estimates that almost half of the homes in Montana have an elevated radon level (4 pCi/L or more). You can't know if radon is present unless you test for it.

What are the health effects?

Radon gas decays into radioactive particles such as alpha particles that can get trapped in your lungs when you breathe. As they break down further, these particles release small bursts of energy. This can damage lung tissue and possibly lead to lung cancer over the course of your lifetime.

According to the National Academy of Sciences, exposure to radon is the second

leading cause of lung cancer, estimated to cause between 15,000 and 22,000 lung cancer deaths in the U.S. every year; smoking tobacco is the leading cause of lung cancer. Not everyone exposed to radon will develop lung cancer, and the amount of time between exposure and the possible onset of lung cancer may be many years.

Like other environmental pollutants, there is some uncertainty about the magnitude of radon-related health risks. However, we know more about radon risks than risks from most other cancer-causing substances. This is because the data on radon comes from studies of cancer in people exposed to radon in homes and in mines.

Smoking combined with radon is an especially serious health risk. Smoking compromises the lungs' ability to function properly. Not smoking and preventing exposure to radon are the best ways to help minimize your future risk of contracting lung cancer.

Does radon in drinking water pose a risk?

Radon gas can enter the home through well water. Radon can be released into the air you breathe when water is used for showering and other household uses. Research suggests that swallowing water with high radon levels may pose risks, too, although risks from ingesting water containing radon are believed to be much lower than those from breathing radon-contaminated air.

In most cases, radon entering the home through water presents a smaller source of risk compared with radon in air. EPA estimates that indoor radon levels increase by about 1 pCi/L for every 10,000 pCi/L of radon in water. Only about one to two percent of indoor radon in air comes from drinking radon-contaminated water.

Because radon in indoor air is the larger health concern, EPA and DEQ recommend that you first test the air in your home for radon before testing for radon in your drinking water.

How do you test for radon?

The Surgeon General, EPA, and DEQ recommend testing all homes for radon. Testing for radon is simple and takes only a few minutes of your time. Radon test kits are placed in the lowest lived-in level (not crawlspaces) of the home and left for the kit's specified period of time. After that time, the kit is sent to the laboratory for analysis.

There are two common types of commercially available do-it-yourself radon test kits:

1. Short-term tests remain in your home for two to 90 days. Charcoal canisters and charcoal liquid scintillation devices are most commonly used for short-term testing. Charcoal canister and liquid scintillation devices absorb radon particles which are measured at a lab using a special detector. If the result of a short-term test is 4pCi/L or higher, conduct a follow-up test to verify results before fixing your home.
2. Long-term tests are generally conducted if the short term test is 4pCi/L or more. Long term tests remain in your home for more than 90 days. Alpha track and electret ion detectors are most commonly used for long term testing. Alpha track detectors contain a plastic film that is etched by alpha particles; a lab then analyzes the etches. Electret ion detectors contain a statically charged Teflon disk and when exposed to radon change electrical charge. A long-term test will give a reading that is more likely to estimate your home's average radon level.