

Some homeowners purchase and use continuous radon monitors which continuously monitor radon where they are placed. They work similarly to a carbon monoxide detector and can be plugged into a wall socket, or are battery operated.

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 1-800-546-0483 or visit our website at deq.mt.gov/Energy/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.

What is radon mitigation?

Radon mitigation is reducing or eliminating elevated radon levels. Radon mitigation may include ventilating rooms, sealing foundation and slab cracks, covering exposed soil, installing a sub-slab depressurization system in a basement, installing a sub-membrane depressurization system in a crawlspace, and other actions. Radon mitigation can cost between \$500 and \$2,000 depending on project details. Get involved in the details of testing for and mitigating radon in your home.

More Information

Montana DEQ – Radon Control Program

- Toll-free: 1-800-546-0483
- deq.mt.gov/energy/radon

Kansas State University National Radon Program Services

- Toll-free: 1-800-767-7236
- sosradon.org

Environmental Protection Agency (EPA)

- epa.gov/radon

National Radon Safety Board (NRSB)

- 866-329-3474
- www.nrsb.org

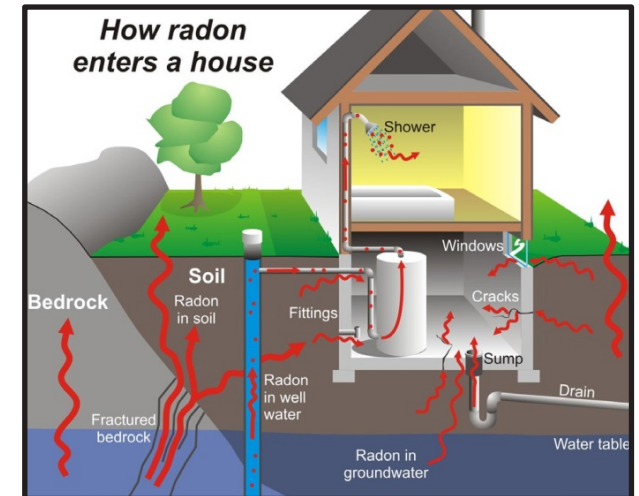
National Radon Proficiency Program (NRPP)

- Toll-free: 1-800-269-4174
- aarst-nrpp.com/wp

EPA Safe Drinking Water

- Toll-free: 1-800-426-4791
- www.epa.gov/sdwa

Defend Your Home and Protect Your Family From RADON



Montana Department of Environmental Quality Radon Control Program

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Radon Frequently Asked Questions

What is radon and when should I act?

Radon is a naturally occurring radioactive gas that you cannot 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 Montana Department of Environmental Quality (DEQ) and the U.S. Environmental Protection Agency (EPA) recommend action be taken to reduce radon levels if the long-term average levels found in your home are 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 the foundation floor or walls, and openings around floor drains, pipes, and sump pumps.

Radon is typically more concentrated in the lower levels of the home (basements, ground floors, first floors). Elevated radon levels have been identified throughout Montana and in every state. The EPA estimates almost half of the homes in Montana have an elevated radon level of 4 pCi/L or more. The only way to know if radon is present in your home is to test for it.

What are the health effects?

Radon gas decays into radioactive particles (alpha particles) and can become trapped in your lungs when you breathe. As the particles break down, they release small bursts of energy. These bursts can damage lung tissue and possibly lead to lung cancer over the course of a lifetime.

According to the National Academy of Sciences, radon exposure 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. 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.

Although some scientists dispute the precise number of deaths due to radon, all major health organizations (Centers for Disease Control, American Lung Association, American Medical Associations) agree with estimates that radon causes thousands of preventable lung cancer deaths every year. This is especially true among smokers since the risk for smokers is much greater than to non-smokers.

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. However, 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 risk compared with radon in the air. EPA estimates that indoor radon levels increase by about 1 pCi/L for every 10,000 pCi/L of radon in water. Approximately one to two percent of indoor radon in air comes from radon contaminated water.

Because radon in indoor air is the larger health concern, EPA and DEQ recommend first testing 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:

Short-Term: Short-term tests remain in your home for 2 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 taking mitigation action.

Long-Term: 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.

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.

Testing for radon continued →