



# Extension News Column

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You can't see it, smell it or taste it; however, radon is the second leading cause of lung cancer in the United States. Radon is a radioactive gas formed as a result of natural breakdown of uranium in the soil. January is Radon Action Month. It is a perfect time to think about radon testing and mitigation. Radon testing is easiest and most effective in the winter months when houses are closed up for winter heating.

Radon occurs naturally in the soils and is more likely to appear in the hills and ridges around Fairbanks. Many homes have elevated levels of radon in the indoor air because of how they are built and how they operate in our climate. One important factor is that many homes have basements that are used as living spaces.

As uranium breaks down in the soil, it releases radon. Because it is a gas, it is able to move through spaces in the soil or fill material around a home's foundation. That radon works its way into small cracks and holes in the foundation to infiltrate your home.

Radon can enter a home through the floor and walls — anywhere there is an opening between the home and the soil. Examples of such openings include dirt floor crawl spaces, unsealed sumps, cracks in slab-on-grade floors, utility penetrations, and the tiny pore spaces in concrete block walls. A basement, of course, provides a large surface area that contacts soil material.

Once radon enters a home it moves freely throughout the indoor air and people can breathe it into their lungs where it can cause cell damage that may lead to lung cancer. Radon is particularly deadly when combined with cigarette smoke. A high level of radon and a smoker in the house combine to multiply the chances of residents contracting lung cancer.

A radon test is the only way to find out how much radon is in your home. Performing a radon test on your own is easy, inexpensive and can be done privately. Every home is unique due to its local soil, construction details, maintenance and degree of depressurization. Results of your neighbor's radon test cannot tell you if you have a radon problem. In addition, if you remodel your home, weatherize it, change heating systems or even add an exhaust fan, the radon level in your home may change.

Since we spend most of our time indoors during the winter months here in Alaska, it is the best time to test.

Testing is the only way to determine if you are at risk. Tests come in two types — short term or long term. Short term tests are done with an activated charcoal canister and take two to three days. These tests can give you an idea, but are not as accurate as longer term tests. Since the level of radon is variable, we recommend using a longer testing period — usually from 3 weeks to 3 months. Cooperative Extension sells these longer term tests in the Tanana District office at 1000 University Drive for \$25 each or two tests for \$45.

Testing is simple and convenient, taking only a few minutes of your time. The EPA recommends installing radon reduction systems in homes with concentrations of 4 picocuries per liter (pCi/L) or greater. However, radon levels less than 4 pCi/L still pose a risk and may be reduced through radon reduction systems.

Radon levels can be reduced by up to 99 percent with proven methods that can be as simple as sealing cracks in your foundation and other openings.

More information on this topic may be found on the CES website at [www.uaf.edu/ces](http://www.uaf.edu/ces). Download the publication titled “Radon Information Pamphlet” for general information about radon and testing procedures, or drop by our office and we’ll give you a copy.

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