

Radon Awareness Event Q&A

Radon: What is it? Why should I care? What can I do about it? Q&A

Updated 2/9/2021

Below are the questions and answers (Q&A) received for the **Radon Awareness** virtual event on **2/3/2021**.

What is radon?

Are radon and radioactivity present in granite countertops?

- Yes, radon can be found in granite used for countertops. However, the EPA has indicated that the radon that emanates from sources such as granite is not significant.

What level of radon exposure is safe?

- There is no safe level of radon exposure.

Are there particular times of the year when radon is more prevalent in my home?

- Cooler months when you are heating your home is when radon levels in your home rise. This is due to what is called the stack effect. As we heat our home, the warm air rises and exits the house. The air that left the house is "made up" with air containing radon coming into the home through cracks, crevices and pipe penetrations in the foundation.
- In addition, radon is more prevalent when there is frost. Frost in the ground causes a "capping effect" which prohibits radon (which is under high pressure) from escaping the ground and is instead directed to the home (which is low pressure).

Do new homes have less issues with radon?

- A newer home does not necessarily mean less issues with radon. We are incorporating more prevention measures into newer homes, but it is always recommended that you continue to test your home regularly regardless of the year it was built. Since 2009 homes built in Minnesota have been required to be built to resist higher radon levels through the use of materials and techniques that help prevent radon from entering the home. This includes sealing radon entry points and installing a vent pipe (passive system) but may not include a fan (active system).

Can radon go into drinking water?

- Yes, radon can be found in water, especially if it is well water. Some cities provide radon levels in their drinking water reports. Drinking water containing radon is not harmful. Radon in water is an issue when the water is aerosolized such as in a shower or other spray. That would allow radon to enter the lungs.

Does the U of MN have a website for radon, maybe at the Extension Service?

- A link to the University of Minnesota's radon page can be found [here](#)

Why should I care?

What is the average level of radon found indoors in US homes?

- According to the EPA, a national residential radon survey completed in 1991 found that the average indoor radon level is about 1.3 picocuries per liter (pCi/L) and the average outdoor level is about 0.4 pCi/L.
[EPA Radon Levels in Homes](#)

A 2.6 level is detected in a room where our 2year old sleeps. Is it too dangerous?

- No level of radon is safe. Ideally the home would be mitigated. With today's technology, radon levels in a home can be reduced to 1 pCi/L or less.

Are US schools required to test for radon?

- Schools are not required to test for radon. However, according to Minnesota Statute 123B. 571, school districts that "receive health and safety revenue to conduct radon testing must conduct the testing according to this 'Radon Testing Plan'".

Should I be concerned about high radon levels while traveling abroad or is risk low for short exposure?

- No, you are not exposed to radon for a long enough period (i.e. 10 or more years).

What is 'health-based standard'? Can you give an example?

- A health-based standard is a standard that is set based off data on what is safest for human health. The radon action level (EPA standard is 4pCi/L) was set using outdated technology-based standards. The means the radon action level was chosen because when radon was discovered in homes in the late 1970's – 1980's, the technology that mitigates radon was only able to mitigate to a level to 4pCi/L. With today's technology, radon levels in a home can be reduced to 1 pCi/L or less. The EPA never changed the action level.

What can I do about it?

How do I know if the radon mitigation is working properly?

- You can look at the manometer used on a radon pipe. It is located below the location of the fan, but above the floor level where the radon pipe goes below the floor. A manometer is a scientific instrument used to measure gas pressures. Open manometers measure gas pressure relative to atmospheric pressure. If atmospheric pressure is greater than the pressure on the other side of the fluid, air pressure pushes the column toward the other vapor.

- Another way to verify a system is working correctly is to retest after the system is installed. This test will verify if a system is effectively lowering the level of radon, if its not speak to a licensed radon mitigator for further troubleshooting or further possible mitigation.

Should I test the soil for radon before building a new home or adding on?

- There is no practical method for testing radon in the soil of a hole dug for a basement of a home. There are ways to do it, but it would be cost prohibitive.

Can you recommend any companies that mitigate radon?

- Hennepin County cannot endorse any one company. However, on the Minnesota Department of Health's (MDH) [radon website](#) you can look up providers near you.

Does radon have to be vented above the house's roofline? Why? Can it be vented out to a side of the house instead of the roof?

- Yes, it must be vented above the roof line of a home. Radon gas must be diverted out and away from the home, so that it does not "re-entrain" or get mixed back into the air in the home.

Can you describe how a mitigation system works?

- There are two parts to this, first is sealing all cracks in the foundation/walls etc. and secondly, installing a mitigation system. This mitigation system effectively draws radon gas out from under the home and vents in above the roof line of the home.

Can I install a mitigation system myself?

- You can, but it is **not** recommended. If installed improperly, there is a risk of introducing carbon monoxide into the home from the back flow of a gas appliance such as a furnace or water heater, if the airflow isn't properly balanced. This is dangerous because it can cause carbon monoxide poisoning. Expertise is also needed when sizing and purchasing a ventilation fan, and permits are required for electrical work.

How often do radon mitigation systems need to be replaced?

- The whole system is good for many years, unless the piping cracks. The vent fan usually will last 10 to 15 years, and then may need replacing.

If my home is treated for radon, is it good forever or do I need to do it again?

- One mitigation usually works, but you should test your home every 3 to 5 years to be sure that it is. If you get a poor test result, you may need to have the current mitigation system adjusted (such as getting a larger fan), or in a very few cases an additional system needs to be added.

Which Radon test is most accurate and reliable?

- They are all accurate and reliable if they are EPA approved (or listed) and the directions on the test are followed completely.

What are the different types of radon tests?

- A short-term "charcoal test" (most typical) should run 2 to 7 days. This is just a snapshot for the time of the test. It is an indication that radon is present. Moisture can adversely affect the test.
- The long-term test "Alpha Track" test should run 91 days up to 1 year. This gives you a year's average exposure level. Moisture does not affect this test, however due to the long test time, it sometimes gets forgotten. If the test is over 1 year, or if it is moved in a major way such as another area or another room, it would be invalid. This test could be done 90 days or less, but it would be considered a short-term test.
- A professional could test your home with an "Electret" or "Continuous Monitor" testing devices.

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Website

<http://www.hennepin.us/radon>