

Q: What is radon?

A: Radon is a naturally occurring radioactive gas that you can't see, smell or taste. Because radon is a gas, it can seep up through the soil and enter buildings, like homes, schools and workplaces. There are high levels of naturally occurring radon in several locations throughout Portland.

Q: How is radon measured?

A: Radon in the air is measured in units of picocuries per liter (pCi/L). The Environmental Protection Agency (EPA) strongly recommends you take steps to reduce radon if levels are higher than the action level of 4.0 pCi/L. Radon risk reduction in buildings is also known as mitigation.

PPS used short-term (2-7 days) and long-term (greater than 90 days) radon test kits to measure radon levels in schools as per Oregon Health Authority best practices. Initial tests are short-term and are always followed by a second measurement to confirm initial results, unless those results are less than 4.0 pCi/L. These are the same best-practice testing procedures that are used to test a private residence. Radon levels are influenced by a large number of variables that vary from building to building and room to room. Best-practice testing is necessary to clearly identify the need for mitigation.

Q: What are the health effects?

A: The risk of exposure to radon is lung cancer. Radon is the second leading cause of lung cancer in the U.S. There are no immediate health effects. The risk of developing lung cancer increases when an individual is exposed to high levels of radon over a long period of time. The risk also depends on many other factors such as genetic disposition, family history, smoking, presence of other indoor air quality issues (at home, school or work), radon levels, the type and condition of building and ventilation systems, seasonal and weather variations, etc.

While radon is a proven carcinogen, not everyone exposed to elevated radon levels will develop lung cancer. For those who do, the onset of lung cancer usually occurs years after exposure.

Smoking is the leading cause of lung cancer in the U.S. If you live in a home with high radon levels, smoking raises your risk of lung cancer by 10 times.

Q: What prompted PPS to test for radon in the spring of 2016?

A: PPS began district-wide radon monitoring in order to comply with the state legislation, ORS 332.166-167, mandating radon testing in every public school by January 2021.

Q: What are Portland Public Schools doing to ensure classrooms are safe and that all buildings are tested and mitigated if needed?

A: The health and safety of PPS students and staff is top priority. PPS competitively solicited proposals and hired PBS Engineering and Environmental in March 2016 to begin conducting district-wide radon monitoring. A total of 3,362 short-term test kits were deployed. Of those, 106 rooms were equal to or over 4.0 but less than 8.0 pCi/L, while 19 were 8.0 pCi/L or greater. Rooms that tested equal to or over 4.0 but less than 8.0 are currently undergoing long-term follow-up testing that will be completed before the end of the 2016-2017 school year. Long-term testing lasts over 90 days. Those that initially tested over 8.0 pCi/L and still test above 4.0 pCi/L during follow-up testing are then placed under mitigation.

Initial mitigation efforts are typically to ventilate the room(s) by turning on the heating, ventilation and air conditioning (HVAC) 24/7 to provide more outside air, reducing the radon level. This step is an interim measure to quickly reduce radon levels.

Continuous radon monitors (CRM) are used to confirm reduced levels, followed by an investigation of the specific room(s) and building by a radon contractor to design and install permanent mitigation equipment. Additional testing during this process is used to evaluate the impact of the interim and permanent mitigation.

Q: Should students, staff and visitors be allowed in school buildings with rooms that have high levels of radon?

A: Since radon is a naturally occurring substance that seeps up through the ground, it is very unlikely that a person can ever completely get away from it. According to the EPA, radon averages 1.3 pCi/L inside and 0.4 pCi/L outside homes and buildings across the country. The overall goal of radon reduction is risk reduction. So the lower the levels of radon that an individual is exposed to, the better. However, depending on building design, room size, etc., the degree of reduction of the radon level is often influenced by technical limitations.

Large buildings, like schools, have many rooms and the radon levels in each room may vary. The focus of radon testing is not on the school building as a whole. Instead, the goal is to understand radon levels in individual, frequently-used rooms in the building where people may spend long periods of time. If radon levels in an individual room are near 100 pCi/L or greater, school officials will consider relocating until the levels can be reduced.

Because students and other occupants of school buildings spend much of their time at home, the home may be their most significant source of radon exposure. The EPA recommends that all homes AND schools be tested for radon.

Q: Do children have a greater risk of cancer from radon exposure?

A: Children are usually more sensitive to environmental pollutants. However, no current data concludes that children are more at risk than adults from radon exposure.

Q: Can my child be tested for radon?

A: You cannot test an individual for the presence of radon in or its effects on the body. The only way to find out an individual's radon exposure is to test inside of buildings like homes and schools, where the majority of their time is spent.

Children spend more than twice as much time at home as they do in school. While school districts are testing the radon levels within their school buildings, parents should also be testing their homes for radon and take control over that potential exposure pathway.

Q: While my school is performing radon testing and mitigation, what can I do in the meantime to reduce mine or my child's risk?

A:

- Test your home for radon. You can find do-it-yourself (DIY) test kits similar to those being used for testing in schools at a local hardware store. Or you can order one online from the American Lung Association.
- If high levels are found at school or within your home, encourage local residents to test their homes.
- If you are a smoker, stop smoking. Or at least cease smoking inside of the home.

Q: Where can I find the school's radon test results?

A: All test results can be found on the [Radon Monitoring Results](#) page of the PPS Healthy and Safe Schools website.

Q: Where can I find a radon test kit?

A: DIY radon test kits can be found at most local hardware stores for around \$10 to \$30. The following resources also offer DIY radon test kits:

- The [American Lung Association](#) (ALA) sells a short-term kit for \$15 and a long-term kit for \$38.50. You can order online or by phone at 503-718-6141.
- The [National Radon Program Services](#) at Kansas State University sells short-term kits for \$15 and long-term kits for \$25, both available online.
- [Oregon Radon Awareness Program](#) also offers FREE radon test kits to those living in areas where no risk level is assigned on the [Radon Risk by Zip Code Map](#). Please email radon.program@state.or.us to express your interest and find out if you are eligible.
- **Multnomah County Environmental Health** offers FREE radon tests for low-income renters with children. For a free consultation, please contact Jeff Strang at 503-988-7866 to find out if you are eligible.

Q: Is there a hazard from touching/being near the radon tests?

A: No, although kits should be kept away from very young children (toddlers) so they don't eat or chew on them.

Q: How do I find out radon levels in my rental home?

A: You can ask you landlord if the home has already been tested. If so, request a copy of the test results. If not, you can ask the owner to test or you can test yourself using a DIY test kit (see above Q: Where can I find a radon test kit?). At this time, Oregon does not have any specific radon standards or regulations for rental homes.

Q: Where can I learn more about radon?

A:

- Oregon Health Authority: www.healthoregon.org/radon
- Environmental Protection Agency (EPA): www.epa.gov/radon
- EPA – Radon in Schools: www.epa.gov/radon-schools
- Centers for Disease Control and Prevention: www.cdc.gov/radon/
- National Radon Program Services: www.sosradon.org ; 1-800-SOS-RADON