



ENVIRONMENTAL HEALTH FACT SHEET:

RADON in Your Home

What is radon?

Radon is a tasteless, colorless, and odorless radioactive gas. It is formed by the natural decay of uranium in soil and rock. Radon moves through the ground and enters your home through cracks, sump pump pits, crawl spaces, and other holes in the foundation. Your home traps the radon inside, where it can build up to unsafe levels. Radon is also found in outdoor air, but is diluted to such low levels that it's usually not a concern.

Why is radon considered a health risk?

When you breathe radon gas, tiny radioactive particles are trapped in your lungs, damaging the lung tissue. Over time, this tissue damage can lead to lung cancer. **Radon is the second-leading cause of lung cancer in the United States, and is associated with over 20,000 lung cancer deaths each year.** Not everyone who breathes radon will develop lung cancer, but your risk is greatly increased if your home has high levels of radon, and if you smoke or live with someone who smokes.

What is considered a safe level of radon?

Radon is measured in "picocuries per liter," which is a unit of measurement for radioactive materials. Although there is no "safe" level of radon, the Environmental Protection Agency (EPA) recommends taking action to reduce radon levels above 4.0 pCi/L. To put this into perspective, the average indoor radon level in the United States is 1.3 pCi/L, and the average outdoor radon level is 0.4 pCi/L.

Do I need to be concerned about radon in Washtenaw County?

Tests show that over 40% of homes in Washtenaw County are above the EPA's 4.0 pCi/L action level. All homes in Washtenaw County should be tested for radon!

Where can I get a radon test kit?

Radon test kits can be purchased at the Washtenaw County Environmental Health office, at 705 N. Zeeb Road in Ann Arbor. Some hardware and home improvement stores also sell radon test kits. (**Note:** *If you need results within a couple of days because you're buying or selling a home, you will probably want to hire a professional radon testing company that uses a device called a Computerized Radon Monitor, or CRM.*)

Can high radon levels be reduced?

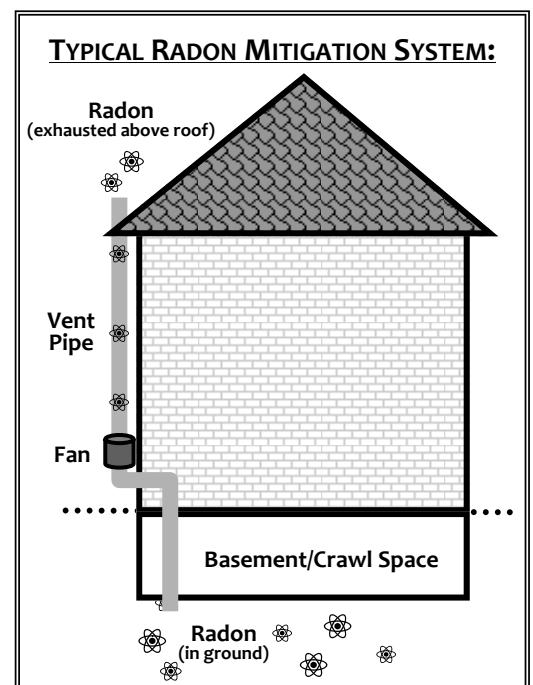
Yes! The radon mitigation method primarily used in Washtenaw County is a vent pipe system and fan, which pulls radon from beneath the house and vents it to the outside. This system, known as soil suction, does not require major changes to your home, is quite effective, and usually costs between \$800 - \$1000. Other options might be available - the right system depends on the home, and each situation is unique.

Where can I get a list of radon contractors?

Two radon certification agencies exist: the National Radon Safety Board and the National Environmental Health Association. Call Washtenaw County Environmental Health at (734) 222-3869 for a list of certified radon testing and mitigation professionals, or visit the following websites:

- National Radon Safety Board: www.nrsb.org
- National Environmental Health Association: www.radongas.org

NOTE: *The EPA, the Michigan Department Environmental Quality and Washtenaw County do not license or otherwise regulate radon measurement or mitigation service providers, nor do they endorse the individuals or organizations included on the lists they provide.*



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How do I know if my home has high levels of radon?

You can't tell if a house has radon just by looking at it. It doesn't matter if the house is new or old, big or small, or if it has a basement or not. Also, it doesn't matter what your neighbors' radon levels are. **The only way to know your home's radon level is to test!** Testing is inexpensive, easy, and should only take a few minutes of your time. The EPA recommends the following steps when testing your home for radon:

STEP 1: TAKE A SHORT-TERM TEST

- A short-term test is a good screening device to see if your home may have a radon problem. Keep in mind that radon levels fluctuate due to many factors, including weather conditions, the time of year, operation of the heating/cooling system, appliance use, and opening/closing windows and doors. As a result, one short-term test should not be used to make decisions on whether or not to mitigate a home.
- Washtenaw County's short-term tests are placed in the home for 3 - 7 days. During this time, you must maintain "closed house conditions," **keeping all exterior doors and windows closed on every floor of the home** (except for normal entry and exit), and limiting use of bath fans, window air conditioners, and attic fans as much as possible. You can operate the furnace or central air conditioner as usual. It is best to do a short-term test during the winter months, since the home is already closed up tight. Once the test is complete, mail it to the lab, and the lab will send you the results in a couple weeks.
- Test the "lowest livable level" of your home, such as a finished basement, or an unfinished basement that could easily be finished. If you don't have a basement, test the main floor of the house. You don't need to test crawl spaces or "Michigan basements" unless people spend a lot of time there.
- If your home has multiple foundations, test each area with a different foundation. For example, if the main part of your home is above a finished basement and a family room is on a cement slab, one radon test should be placed in the basement and one should be placed in the family room.
- If your short-term test result is less than 4.0 pCi/L, your home has radon levels lower than the EPA's recommended action level. Although there may still be some risk from radon, reducing levels this low may be difficult, and sometimes impossible. Test again if you put an addition on your home, if you install a new heating or cooling system, or if you begin using a lower level of your home (such as creating a play room or office in the basement).
- If your short-term test result is 4.0 pCi/L or higher, take a follow-up test to be sure. **See Step 2.**

STEP 2: FOLLOW UP ON YOUR TEST RESULTS

- If you need results quickly, (generally if your first test was 8.0 pCi/L or higher), take a second short-term test to verify the results. Test the same rooms using the same procedures. **See Step 3.**
- To better understand your year-round radon level, (generally if your first test was 4.0 - 8.0 pCi/L), take a long-term test. This time, test **all** livable levels of your home, such as the basement, first floor, and second floor. Washtenaw County's long-term tests must be placed in the home for 90 days up to one year. The longer the test is in place, the better. You do not need to maintain "closed house conditions" during a long-term test. **See Step 3.**

STEP 3: FIX YOUR HOME IF NECESSARY

- If you followed up with a second short-term test, the higher your results, the more certain you can be that you should fix your home. Fix your home if the average of your first and second tests is 4.0 pCi/L or higher.
- If you followed up with a long-term test, fix your home if the result is 4.0 pCi/L or higher.

Where can I get more information?

Angela Parsons, Washtenaw County Environmental Health (734) 222-3869
Michigan Department of Environmental Quality Indoor Radon Program 1-800-RADON-GAS



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