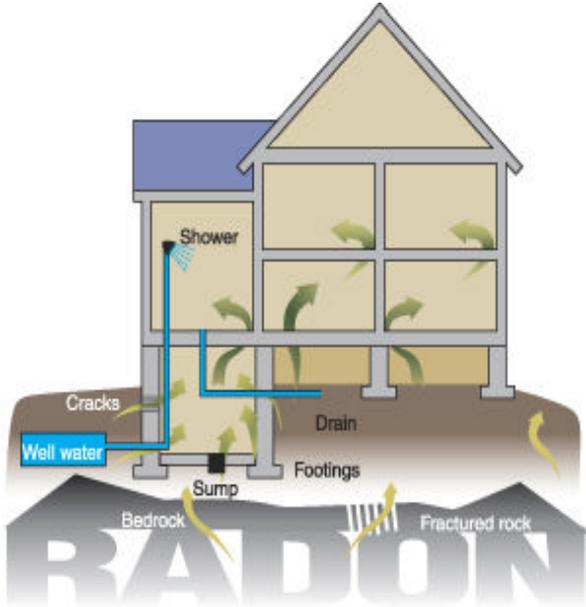




RADON & YOUR HEALTH

by the Huron County Public Health

WHAT RADON IS AND WHERE IT COMES FROM...



Graphic by Southface.org. Information taken from the Environmental Protection Agency (EPA), Ohio Department of Health (ODH), National Institutes of Health (NIH).

- + Radon is a colorless, odorless, tasteless radioactive gas that occurs naturally in soil and rock. Radon is a by-product when radium, uranium, radium and thorium decay.
- + Ohio's geology (the make-up of the ground) provides a steady supply of radon. Much of the soil in Ohio contains radium and uranium, which breaks down and releases radon gas.
- + High radon levels are usually found in areas with deposits of light-colored volcanic rock, granite, dark shale, and sedimentary rock containing phosphate.
- + Some of Huron County's geology has radon-producing rock and soil, as well as underground formations that allow radon gas to escape the soil efficiently.
- + The amount of radon that escapes the soil depends on the chemistry of that soil. So **radon levels can vary from one house to the next or even within the same piece of property.**
- + Radon is found in indoor and outdoor air and in groundwater.
- + Because air pressure in a home is generally lower than the air pressure underground, indoor air pressure acts as a vacuum that draws gas (including radon) from below the home into the home through cracks and other openings in the foundation.

- + Once inside your home, radon gas becomes trapped and builds up. Radon levels are usually highest in basements and on ground levels. Radon gas can be found in both new and old homes, with or without a basement.
- + Radon can also be found in groundwater. The amount of radon in drinking water that it would take to make you sick is hundreds of times higher than it would take in the air because the health risk from radon is greatest when it is inhaled. Radon in water can off-gas into the air (like during a shower). Radon gas entering your home from below is a bigger threat than radon released from running water.

For more information on this and other health topics, visit www.huroncohealth.com

THE HEALTH EFFECTS OF RADON...

- + Radon is the 2nd leading cause of lung cancer (behind smoking). Radon is responsible for between 15,000 and 22,000 U.S. deaths per year.
- + Smokers exposed to radon are at even higher risk of developing lung cancer.
- + Radon decays quickly, releasing tiny radioactive particles. When inhaled, these radioactive particles can attach to and damage the cells that line the lung.
- + **Long-term exposure to radon can lead to lung cancer, the only known harm to human health from radon exposure.**
- + If you do or have smoked, your risk of developing lung cancer from sustained radon exposure is: 260/1,000 for a level of 20 pCi/L; 150/1,000 at 10 pCi/L; 62/1,000 at 4 pCi/L; 32/1,000 at 2 pCi/L; 20/1,000 at 1.3 pCi/L. (See back on radon measurement.)
- + If you have never smoked, your risk of developing lung cancer from sustained radon exposure is: 36/1,000 for a level of 20 pCi/L; 18/1,000 at 10 pCi/L; 7/1,000 at 4 pCi/L; 4/1,000 at 2 pCi/L; 2/1,000 at 1.3 pCi/L.
- + Radon can affect people in the same home differently depending upon many variables like: exposure to other cancer causers (e.g. tobacco and other radiation), individual biology, and time spent in areas of the house with high radon.



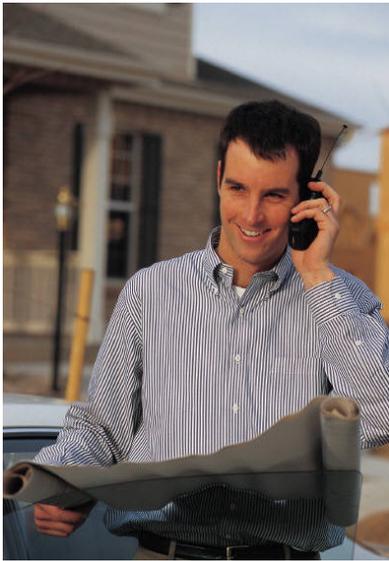
TEST FOR RADON IN YOUR HOME...

- + Radon levels are measured in picocuries per liter of air or “pCi/L.”
- + There are both short-term and long-term tests for radon levels. Short-term tests take 2 to 90 days depending upon the type of detector used.
- + Rain or snow, barometric pressure, and other influences can cause radon levels to vary from month to month or day to day.
- + For a short-term test, the best time of year to run the test is in the winter months when your house is closed up and the ground is wet.
- + If you get a result of 4 pCi/L or higher with a short-term test, you should follow up with a long-term test.
- + A long-term test remains in your home for longer than 90 days. This reading will give you a reading of your year-round average radon level.
- + The average indoor radon level is estimated to be 1.3 pCi/L. The average outdoor radon level is normally 0.4 pCi/L.
- + Action should be taken to lower indoor radon levels if they are above 4.0 pCi/L. Most homes can be reduced to 2.0 pCi/L or below.
- + **You can get a free radon test by calling the Huron County Public Health at 419-668-1652 ext: 239.**



Huron County Public Health

Simon says, "Test Your Home for Radon!"



REDUCE RADON IN YOUR HOME...

- + Find a contractor that specializes in radon reduction systems because this work requires technical knowledge and specialized skills. They will study *your* radon problem and help you pick the right treatment method.
 - + Check with the Ohio Department of Health Indoor Radon Program at 614-644-2727 or visit www.epa.gov/radon/wherelive.html for information or a list of qualified or state certified radon contractors in the area.
 - + Install a vent pipe system and fan that pulls radon from below the home to vent it to the outside. This system does not require major changes to your home.
 - + Seal foundation cracks and openings.
 - + Retest your home's radon levels after radon reduction work is completed to ensure that the work has reduced the radon in your home to a safe level.
 - + Retest your home if you complete a significant remodel or weatherization, make changes to your heating, cooling or ventilation systems, or if you experience a major earth movement (like an earthquake), as they can effect radon entering or building up in your home.
- + When building a new home, consider radon resistant construction features. It is more cost effective to include radon resistant features when building than it is to retrofit an existing home.

RADON IN HURON COUNTY...

- + Huron County, and 52 other Ohio counties, are classified as Zone 1 radon areas by the EPA. Zone 1 areas are those with the highest *potential* for elevated average indoor radon levels (>4 pCi/L).
- + Huron County does have a number of homes with higher radon levels, so testing your home makes sense.
- + According to a study by the University of Toledo, Huron County had the 18th highest average indoor radon level. Huron County had the 3rd highest rate (at 3% of the 856 tests submitted) of radon tests with a very high average indoor radon level of over 100 pCi/L. Roughly 44% of Huron County homes tested in this study were within the acceptable range, below 4 pCi/L, for indoor radon level; 56% were in the unacceptable range above 4pCi/L.
- + **Because radon levels vary so much from house to house, your neighbor's radon level is not necessarily predictive of your radon level. To know how much radon is in your home, you must test *your home!***