

# Radon Testing (Ohio License # RT1207)

Exposure to radon is the second leading cause of lung cancer after smoking. The EPA estimates that about 20,000 lung cancer deaths each year in the U.S. are radon-related. Radon gas is produced by the decay of naturally occurring uranium in soil and water and is odorless, tasteless and invisible. Radon is a form of ionizing radiation and a proven carcinogen. Lung cancer is the only known effect on human health from exposure to radon in air. Thus far, there is no evidence that children are at greater risk of lung cancer than are adults.

Radon is found in outdoor air and in the indoor air of buildings of all kinds. The EPA recommends mitigation if the radon level is 4 pCi/L (picocuries per liter) or more. Because there is no known safe level of exposure to radon, the EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L. The average radon concentration in the indoor air of America's homes is about 1.3 pCi/L. It is upon this level that the EPA based its estimate of 20,000 radon-related lung cancers a year upon. It is for this simple reason that EPA recommends that Americans consider fixing their homes when the radon level is between 2 pCi/L and 4 pCi/L. The average concentration of radon in outdoor air is .4 pCi/L or 1/10th of EPA's 4 pCi/L action level.

## OHIO - EPA Map of Radon Zones

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

<http://www.epa.gov/radon/zonemap.html>

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

*All homes should be tested, regardless of zone designation.*

**IMPORTANT:** Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of Ohio" (USGS Open-file Report 93-292-E) before using this map. <http://energy.cr.usgs.gov/radon/grpinfo.html>. This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.



zones

Zone 3 (0 counties)

Zone 2 (39 counties)

Zone 1 (53 counties)

Highest Potential: counties have a predicted average indoor radon screening level greater than 4 pCi/L (pico curies per liter) (red zones)

Moderate Potential: counties have a predicted average indoor radon screening level between 2 and 4 pCi/L (orange zones)

Low Potential: counties have a predicted average indoor radon screening level less than 2 pCi/L (yellow zones)

For smokers the risk of lung cancer is significant due to the synergistic effects of radon and smoking. For this population about 62 people in a 1,000 will die of lung-cancer, compared to 7.3 people in a 1,000 for never smokers. Put another way, a person who never smoked who is exposed to 1.3 pCi/L has a 2 in 1,000 chance of lung cancer; while a smoker has a 20 in 1,000 chance of dying from lung cancer. Smokers are at a much higher risk than never smokers, e.g., at 8 pCi/L the risk to smokers is six times the risk to never smokers.

The radon health risk is underscored by the fact that in 1988 Congress added Title III on Indoor Radon Abatement to the Toxic Substances Control Act. It codified and funded EPA's then fledgling radon program. Also that year, the Office of the U.S. Surgeon General issued a warning about radon urging Americans to test their homes and to reduce the radon level when necessary (U.S. Surgeon General).

Unfortunately, many Americans presume that because the action level is 4 pCi/L, a radon level of less than 4 pCi/L is "safe". This perception is altogether too common in the residential real estate market. In managing any risk, we should be concerned with the greatest risk. For most Americans, their greatest exposure to radon is in their homes; especially in rooms that are below grade (e.g., basements), rooms that are in contact with the ground and those rooms immediately above them.

**It's never too late to reduce your risk of lung cancer.** Don't wait to test and fix a radon problem. If you are a smoker, stop smoking. Consider quitting. Until you can quit, smoke outside and provide your family with a smoke-free home.