

Radon Facts

WHAT IS RADON?

- Radon is a naturally occurring radioactive soil gas that is colorless, odorless and tasteless.
- Through decay, radon breaks down into hazardous particles which can be inhaled.
- Radon levels are measured by units of radioactivity per volume of air called picoCuries per liter (pCi/L).

WHERE IS RADON FOUND?

- Radon is found outside and indoors. Outdoor levels are typically below the EPA's recommended action level.
- Higher concentrations of radon are found in homes, schools, and office buildings, entering through cracks in the basement or foundation.

HOW IS RADON CONNECTED TO HEALTH?

- Radon exposure is the second leading cause of lung cancer, following cigarette smoking.¹
- Radon decays into sticky radioactive particles that get trapped in the lungs when inhaled. As they are broken down further, these particles release small bursts of energy that damage lung tissue over time.²
- If you smoke and your home has high levels of radon, the risk of getting lung cancer is especially high.²

WHY SHOULD I TEST MY HOME FOR RADON?

- Living in a home with a radon level of 4 pCi/L is like getting 200 chest x-rays per year.²
- Living in a home with a radon level of 20 pCi/L is like smoking two packs of cigarettes per day.²
- If you are around secondhand smoke and have high levels of radon, you are at risk of developing lung cancer.²

WHO PROVIDES RADON INFORMATION, TESTING, AND MITIGATION?

- Many local health departments have radon programs and provide free radon test kits.
- The Kentucky State Radon program offers free radon test kits if you are in a county that does not have a radon program.
- Radon test kits also can be purchased at local home improvement stores.
- Certified mitigators can test for radon and mitigate, or fix, a home with high levels of radon.

For more information, please contact:

Clean Indoor Air Partnership
Radon Awareness Project
University of Kentucky
College of Nursing
509 CON Building
Lexington KY 40536-0232
859-323-4587

<http://www.mc.uky.edu/TobaccoPolicy/ProjectTeam/radon.HTM>

¹ Alberg AJ & Samet J. (2003). The epidemiology of lung cancer. *Chest*. 123,442-451.

² U.S. Department of Health and Human Services, Public Health Service, ABDR. (1990). *Toxicological profile for radon*. Atlanta, GA: Agency for Toxic Substances and Disease Registry.

Secondhand Smoke Facts

WHAT IS SECONDHAND SMOKE (SHS)?

-A mixture of smoke given off by the burning end of tobacco products and the smoke exhaled by smokers.

WHERE IS SHS FOUND?

-Everywhere! Inside businesses, homes, and restaurants.

-Heating, ventilation, and air conditioning systems can distribute secondhand smoke throughout a building.

-Outside when someone is smoking.

HOW IS SHS CONNECTED TO HEALTH?

-Cigarette smoke contains more than 4,000 chemical compounds.³

-250 of the chemicals in SHS are known to cause cancer in humans.³

-Concentrations of many cancer-causing chemicals are higher in SHS than in the smoke inhaled by smokers.⁴

-SHS can have immediate adverse effects on the cardiovascular system increasing the risk of heart attacks.⁴

-SHS is the 3rd leading cause of lung cancer, responsible for an estimated 3,000 lung cancer deaths every year.⁴

-Brief exposure to SHS can trigger coughing, wheezing, and breathlessness.⁴

-In children with asthma, brief exposure to SHS can trigger an asthma attack.⁴

-SHS can cause new cases of asthma.²

WHAT CAN BE DONE ABOUT SHS?

-Make your car and home 100% smoke free.

-Ask people not to smoke around you and your family.

-Insist that your child's day care and school is smoke free.

-Visit only restaurants and businesses that are smoke free.

-Teach children not to smoke and to stay away from tobacco smoke.

-Write to your local policymakers (city council, fiscal court) about making your community smoke free.

WHAT IS THE CONNECTION BETWEEN SHS AND RADON?

-Radon attaches to SHS particles which are small enough to be breathed directly into the lungs.²

-Radon and SHS are the number one and number two causes of lung cancer among non-smokers, respectively.⁵

³ National Toxicology Program. (2005). *11th report on carcinogens*. Research Triangle Park, NC: U.S. Department of Health and Human Sciences, National Institute of Environmental Health Sciences.

⁴ U.S. Department of Health and Human Services. (2006). *The health consequences of involuntary exposure to tobacco smoke: A report of the surgeon general*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

⁵ Lubin JH, Boice JD Jr, Edling C, et al. (1995). Lung cancer in radon-exposed miners and estimation of risk from indoor exposure. *Journal of the National Cancer Institute*, 87, 817-827.