



Home Tips®



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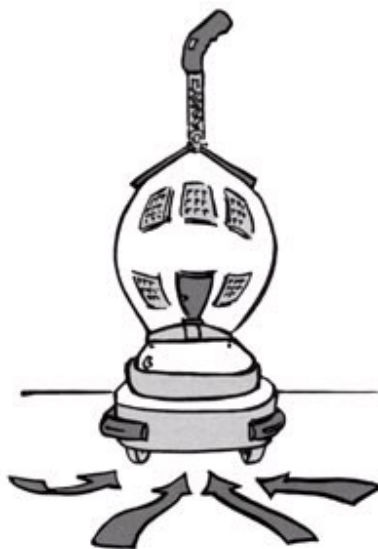
Radon Mitigation?

INTRODUCTION

So, you have tested your home for radon, but now what? This guidance is for people who have tested their home and confirmed that they have elevated radon levels of 4 picoCuries per liter (pCi/L) or higher.

HOW RADON ENTERS YOUR HOUSE

Radon is a naturally occurring radioactive gas produced by the breakdown of uranium in soil, rock, and water. Air pressure inside your home is usually lower than pressure in the soil around your home's foundation. Because of this difference in pressure, your house acts like a vacuum, drawing radon in through foundation cracks and other openings. Radon may also be present in well water and can be released into the air in your home when water is used for showering and other household uses. In most cases, radon entering the home through water is a small risk compared with radon entering your home from the soil. In a small number of homes, the building materials (e.g., granite and certain concrete products) can give off radon, although building materials rarely cause radon problems by themselves. In the United States, radon gas in soils is the principal source of elevated radon levels in homes.



RADON IS A CANCER-CAUSING RADIOACTIVE GAS

Radon is estimated to cause many thousands of lung cancer deaths each year. **In fact, the Surgeon General has warned that radon is the second leading cause of lung cancer in the United States.** Only smoking causes more lung cancer deaths. If you smoke and your home has high radon levels, your risk of lung cancer is especially high.

WHAT DO YOUR RADON TEST RESULTS MEAN?

The lower the radon level in your home, the lower your family's risk of lung cancer. The amount of radon in the air is

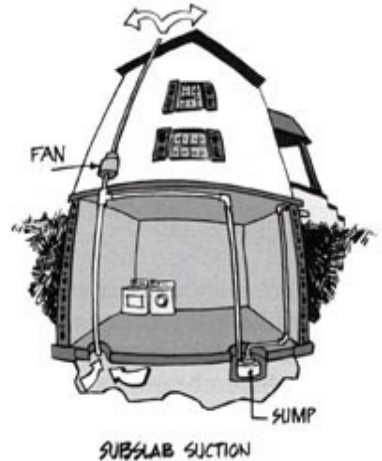
measured in "picoCuries of radon per liter of air," or "pCi/L."

The U.S. Congress has set a long-term goal that indoor radon levels be no more than outdoor levels; about 0.4 pCi/L of radon is normally found in the outside air. EPA recommends fixing your home if the results of one *long-term* test or the average of two *short-term* tests show radon levels of 4 pCi/L or higher. With today's technology, radon levels in most homes can be reduced to 2 pCi/L or below.

RADON REDUCTION TECHNIQUES

There are several methods that a contractor can use to lower radon levels in your home. Some techniques prevent radon from entering your home while others reduce radon levels after it has entered. EPA generally recommends methods which prevent the entry of radon. **Soil suction**, for example, prevents radon from entering your home by drawing the radon from below the house and venting it through a pipe, or pipes, to the air above the house where it is quickly diluted.

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WHY HIRE A CONTRACTOR?

EPA recommends that you have a qualified radon mitigation contractor fix your home because lowering high radon levels requires specific technical knowledge and special skills. Without the proper equipment or technical knowledge, you could actually increase your radon level or create other potential hazards and additional costs. However, if you decide to do the work yourself, get information on appropriate training courses and copies of EPA's technical guidance documents.

WILL ANY CONTRACTOR DO?

EPA recommends that you use a state certified and/or qualified radon mitigation contractor trained to fix radon problems. You can determine a service provider's qualifications to perform radon measurements or to mitigate your home in several ways. First, check with your state radon office. Many states require radon professionals to be licensed, certified, or registered, and to install radon mitigation systems that meet state requirements. Most states can provide you with a list of knowledgeable radon service providers doing business in the state. In states that don't regulate radon services, ask the contractor if they hold a professional proficiency or certification credential, and if they follow

industry consensus standards such as the American Society for Testing and Materials (ASTM) Standard Practice for Installing Radon Mitigation Systems in Existing Low-Rise Residential Buildings, E2121 (February 2003). You can contact private proficiency programs for lists of privately-certified professionals in your area. Such programs usually provide members with a photo-ID, which indicates their qualification(s) and the ID-card's expiration date. For more information on private proficiency programs, visit www.epa.gov/radon/radontest.html or contact your state radon office.

INSTALLATION AND OPERATING COSTS

The cost of a contractor fixing a home generally ranges from \$800 to \$2,500, depending on the characteristics of the house and choice of radon reduction methods. The average cost of a radon reduction system is about \$1,500.

Most types of radon reduction systems cause some loss of heated or air conditioned air, which could increase your utility bills. How much your utility bills will increase will depend on the climate you live in, what kind of reduction system you select, and how your house is built. Systems that use fans are more effective in reducing radon levels; however, they will slightly increase your electric bill.

MAINTAINING YOUR RADON REDUCTION SYSTEM

Similar to a furnace or chimney, radon reduction systems need some occasional maintenance. You should look at your warning device on a regular basis to make sure the system is working correctly. Fans may last for five years or more (manufacturer warranties tend not to exceed five years) and may then need to be repaired or replaced. Replacing a fan will cost around \$200 - \$350, including parts and labor. It is a good idea to retest your home at least every two years to be sure radon levels remain low.

FOR ADDITIONAL INFORMATION

Visit EPA's website and read the Consumer's Guide To Radon Reduction at:

<http://www.epa.gov/radon/pubs/consguid.html#installtable>

If you have a question, comment or home tip, email us at rodharrison@christianbuildinginspectors.com.

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Quote Of The Month

**"IN THE MIDDLE OF DIFFICULTY LIES OPPORTUNITY."
ALBERT EINSTEIN**

A Tip Of The Hat To:

Linda Hagan
Re/Max Metro Atlanta Cityside
1189 S. Ponce de Leon Avenue
Atlanta, Georgia 30306



Thank You

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