



## Protect Your Family From Radon

Radon is a serious environmental health issue – causing more than 20,000 lung cancer deaths each year, according to EPA – and is second only to smoking as a cause of lung cancer. It is a radioactive gas – colorless, odorless, tasteless and chemically inert. Unless a home is tested, there is no way of telling how much is present, and it is found in high levels in all 50 states. EPA estimates that 1 in 15 homes in the United States have an elevated radon level.

### What is Radon?

Radon is formed by the natural radioactive decay of uranium in rock, soil and water. Radon gas decays into radioactive particles that can get trapped in your lungs when you breathe. As they break down further, these particles release small bursts of energy. This can damage lung tissue and lead to lung cancer during the course of a lifetime.

Most indoor radon enters a building from the soil or rock beneath it. Radon and other gases rise through the soil and become trapped under the building. The trapped gases build up pressure. Air pressure inside homes usually is lower than the pressure in the soil. Therefore, the higher pressure under the building forces gases through floors and walls and into the building.

Once inside, the radon can become trapped and concentrated, especially in the lower levels of the home; that is, basements, ground floors and first floors.

While radon problems may be more common in some geographic areas, any home may have an elevated radon level. In multifamily buildings, homes below the third floor also are at risk.

### Testing Methods

Anyone can use a “do-it-yourself” test kit to check a building. The one-use kits are simple to use and relatively inexpensive. After being exposed to the building air for a product-specified time period, the kits are returned to an analytic laboratory, which will send back results.

If results are greater than 4 picocuries per liter of air, which is the EPA-recommended action level, the lab will send information about additional action that should be taken.

Although do-it-yourself testing is easy and inexpensive, many people prefer to hire a professional when testing is being conducted as part of a real-estate transaction. If professional testing is preferred, a qualified/state-certified professional should be hired.

For homes, EPA recommends initial measurements be short-term tests placed in the lowest lived-in level. This typically represents an area where the greatest radon level may occur. Ideally, the test should be conducted in a regularly used room on that level, such as a living room, playroom, den or bedroom. Avoid testing in a kitchen, bathroom, laundry room or hallway. High humidity and drafty conditions can bias results in some test devices.

The highest indoor levels often are found during the heating season. Weather conditions, operation of furnaces and fireplaces, and opening/closing of windows and doors are among the factors that cause these patterns. Short-term test kits are the quickest way to test, taking from a minimum of two days up to 90 days depending on the device. However, because radon levels tend to vary from day to day and season to season, long-term tests are more likely to reflect the building’s year-round average radon level than a short-term test.



### **Clearing the Air**

The cost of making repairs to reduce radon is influenced by the size and design of the home and other factors. Most homes can be fixed for about the same cost as other common home repairs, like painting or having a new hot water heater installed. The average cost for a contractor to lower radon levels in a home is about \$1,200, although this can range from \$500 to about \$2,500.

Some states have governmental programs that can provide loans for radon reduction work in limited income housing. Some community groups are raising funds from private companies and foundations to pay for radon reduction in limited income homes.

### **National Safety Council offers radon hotline**

The National Safety Council operates a radon hotline at (800) 767-7236, through which callers can order a brochure on radon. The council also offers a helpline at (800) 557-2366. Information specialists are available Monday through Friday from 9 a.m. to 5 p.m. EST to answer specific questions.

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