# An Invisible Gas

Radon is a colorless, odorless radioactive gas that occurs naturally in certain types of bedrock and soils.

## What Are Sources of Radon?

Radon gas is produced when small amounts of uranium break down in the ground. Usually, the gas rises through the soil and escapes into the outside air where it has little effect on people. However, when the rising gas enters into a house or other building, the radon builds up to dangerously high levels.

Radon enters buildings through cracks and holes in the foundation, drains in the floor, or holes around pipes that go through the floor or wall. Sometimes even well water can carry radon and release the gas into a house. Several things help radon to enter a building. Fans in kitchen ranges, bathrooms, and clothes dryers force air out of the house, creating a small suction that can draw radon into the house from the ground. Also, as warm air rises in a building, a draft forms, which can draw radon up through foundation cracks or holes.

## How Does Radon Affect Health?

Radon gas forms tiny radioactive particles. Breathing carries the particles deep into the lungs. These particles then release small bursts of energy that can damage the lung tissue. This damage can lead to lung cancer later in life.

Breathing air with high radon levels is in some ways like smoking cigarettes. The more smoke or radon you breathe in, the higher your risk of getting lung cancer.

People who smoke and are exposed to radon have higher health risks than do nonsmokers exposed to radon, says the Environmental Protection Agency (EPA). While scientists do not agree on exactly how great the health risk from radon is, there is little debate that the risk is serious. The longer the time and the higher the radon level a person is exposed to, the greater the risk of developing lung cancer. According to the EPA, testing your home is the only way to know if your health is threatened by radon.

## How Widespread Is the Radon Risk?

The EPA estimates that millions of homes have high radon levels. Studies have also shown that radon is a problem in many school classrooms.

Since radon is found almost everywhere in our country, the EPA urges all homeowners and schools to test for radon. Although a house may have a low radon reading, each neighboring house should still be tested, because levels may vary widely from house to house even in the same neighborhood.

## How Can You Deal with Radon?

Radon is a serious problem in many homes, but high levels of radon can be easily lowered. Experts are available who specialize in reducing high radon levels. The cost is usually comparable to the cost of many other home repairs.

The important first step is to test your home for radon to find out if there is a problem. For more information about how to test, call 1-800-SOS-RADON or 1-800-767-7236.

## How Is Radon Detected?

Since you cannot see or smell radon, you need special equipment to detect it.

- Radon can be detected using small devices that measure radon in the air. These devices are called “radon detectors” and are sold in hardware or retail stores and by mail.
- The detector is left in a room for several days and is then sent to a laboratory to be analyzed. A picocurrie [PEAK-oh-cue-ree] or pCi is a measure of radioactivity. If the laboratory tests show a level of radon above 4 pCi per liter, remedial action is called for.
- The two most popular, commercially available radon detectors are the charcoal canister and the alpha track detector. Both devices are exposed to the air in your home for a specified period of time and sent to a laboratory for analysis.
- Other techniques used to measure radon levels may require operation by trained personnel, and such techniques may be more expensive than the devices shown above.