

Radon Facts

Radon Defined



Radon is a radioactive gas which is difficult to detect because it can't be seen, smelled, or tasted. It comes from the decay of radium and exists in varying amounts in most soils, including those in Iowa.

The radon in soil is gaseous, so it can move through fissures and cracks in the soil. It then reaches the atmosphere or enters a home. In outdoor air, radon is diluted to such low concentrations that it is relatively harmless. Inside a building, the level of radon depends on the type of construction and the concentration of radon in the underlying soil. Levels can vary greatly from house to house on the same street or in the same town. Homes with high levels have been found everywhere in Iowa.

Health Concern



Unlike many indoor air pollutants, radon does not cause headaches, nausea, or other similar symptoms. Prolonged exposure to high levels of radon can lead to lung cancer, which is radon's only known adverse effect.

Radon is considered to be the leading cause of lung cancer among nonsmokers in the United States. Scientific studies have estimated that radon is linked to about 13,000 lung cancer deaths each year in the U.S. Based on population, Iowa would be expected to have approximately 150 radon-linked lung cancer deaths annually.

Radon is one part of a long chain of radioactive atoms. Radon gas in the air decays into solid decay products, which are also radioactive. These can attach to dust particles that can be inhaled and then remain in the lungs to release tissue-damaging radiation. The solid-decay products are actually more dangerous than the radon gas itself.

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Certain groups of people are at higher risk from long-term exposure to elevated levels of radon. Young children are at particular risk because their lungs are still developing and the sensitive tissue is more easily damaged. Cigarette smokers face a risk about 10 times greater than that of nonsmokers because radon decay products cling to smoke particles in the air and are inhaled.

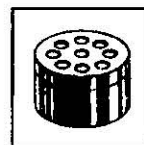
Radon in Homes



Although radon's existence in the air has been known for a long time, its presence in homes was not detected until about 1970, when houses in Colorado that were built over waste from old uranium mines were found to have very high levels of radon. Since then, cases of high indoor radon levels have been found in most parts of the U.S.

Radon can enter a house in several ways. It moves from the soil into the basement or lowest level of the house through openings such as cracks, loose-fitting pipes, sumps, exposed dirt floors, slab joints, or porous block walls. Although much less important in Iowa, water supplies and building materials are two other possible points of entry.

Testing for Radon



It is recommended that all Iowa homes be tested for radon. Only individual testing of houses can determine which houses may have a radon problem. Even a radon expert cannot determine by inspection whether a building has a high radon level. Radon gas concentrations can be measured with a simple monitoring device. Two types are commonly used. Both are inexpensive, easy to use and can be used only once.

A short-term detector (such as a charcoal canister or pouch) is left in place for two to seven days. This type of detector is useful for a quick screen of the radon level, which can indicate the potential for a problem and the need for additional testing. A short-term detector should be placed in the lowest livable level of the house, preferably during the winter months.

