

A Practical Guide to Radon Mitigation in Illinois for Metro East Homeowners

Understanding the Radon Risk in Metro East Illinois

If you live in the Metro East area and you have never tested your home for radon, you are not alone. Many homeowners around Belleville, Edwardsville, O'Fallon IL, and Collinsville assume that if they cannot see or smell a problem, it does not exist. But radon is a radioactive gas that comes from the natural breakdown of uranium in soil. It seeps into homes through cracks in the foundation, gaps around pipes, and even through the slab itself. The EPA has long identified radon as the second leading cause of lung cancer after smoking. And Illinois has some of the highest average radon levels in the country, especially in the central and southern parts of the state. That is why understanding radon mitigation illinois is so important for anyone who owns a home here.

The Illinois Department of Public Health recommends that every home be tested, regardless of the age of the structure or whether your neighbor has low levels. Radon concentrations vary from house to house, sometimes dramatically, even on the same street. A friend of mine in Edwardsville tested his basement and got a reading of 8.2 picocuries per liter, well above the EPA action level of 4.0 pCi/L. His next-door neighbor tested at 1.5. That is the reality of radon: it is local and unpredictable. So the first step is always testing, and the second step, if needed, is a properly designed radon mitigation system.

Testing First: Short-Term vs. Long-Term

Before you can think about fixing a radon problem, you have to know whether one exists. The most common approach is a short-term radon test. These typically run from two to seven days and use a small device containing activated carbon that absorbs radon from the air. You place it in the lowest livable level of your home, leave it undisturbed, and then mail it to a lab. The results come back fast, often within a week. That is the good part. The trade-off is that short-term tests can be influenced by weather, open windows, or recent storms. A single high reading should prompt a follow-up test rather than an immediate panic.

For a more reliable picture, many experts recommend a long-term radon test. These run for 90 days to a full year and capture seasonal variations. A long-term test gives you an average exposure level, which is what really matters for health. Companies like Air Sense Environmental in the Metro East area can provide both types of testing and help you interpret the numbers. I have also used a continuous radon monitor in my own home when I wanted to see day-to-day swings. These electronic devices plug into a wall and give you real-time readings. They cost

more, but they are useful if you suspect intermittent spikes or if you want to track the impact of weather on your indoor levels.

When the Numbers Say It Is Time for Action

If your test results come back at 4.0 pCi/L or higher, the EPA says you should fix your home. The Illinois Department of Public Health echoes that guidance and adds that even levels between 2.0 and 4.0 should be considered for mitigation, especially if you spend a lot of time in the basement. The good news is that radon levels can be reduced reliably. The most effective method is sub-slab depressurization, also called soil suction. This involves drilling a small hole through your basement floor, creating a cavity underneath the slab, and installing a pipe that runs from that cavity up through the roof. A radon fan, usually mounted in the attic or outside the home, creates a constant vacuum that pulls radon-laden soil gas from under the house and vents it safely above the roofline.

I have seen systems that work beautifully and a few that were poorly designed. The difference often comes down to the details: sealing sump pits, caulking the joint where the floor meets the wall, and making sure the radon fan is sized correctly for the square footage. A manometer is a simple gauge that shows whether the fan is actually creating negative pressure under the slab. Every mitigation system should have one installed. It tells you at a glance whether your radon mitigation system is still working. If the manometer reads zero, you know the fan has failed or the pipe is blocked.

Radon Mitigation in Illinois: What Makes It Different

[Radon mitigation illinois](#) must account for the region's soil types and climate. In the Metro East area, we have a mix of clay and loess soils that can shift and crack with freeze-thaw cycles. If your foundation has settled over time, the gaps under the slab can be larger than in newer homes. That is why a thorough inspection by a certified professional is so important. Air Sense Environmental has done dozens of mitigations in Belleville, Edwardsville, O'Fallon IL, and Collinsville, and they know exactly where to look for entry points. They also understand local building codes and health department guidelines, which can vary by municipality.

One common question I hear from homeowners is whether they can install a system themselves. It is possible for a very handy person, but I would caution against it unless you have prior experience with radon work. The fan must be sized correctly. The pipe must be routed to avoid blocking your attic vents or creating a fire hazard. And the sub-slab suction point must be placed where the soil is permeable enough to pull air through. If you miss one of these details, you can spend hundreds of dollars on equipment and still have high radon levels. I have seen diy jobs where the fan ran but the manometer never moved, meaning the system was doing nothing.

Radon-Resistant Construction: A Smarter Approach for New Homes

If you are building a new home in the Metro East area, you have an opportunity to skip the mitigation headache altogether. Radon-resistant construction techniques can be built into the foundation from day one. This typically includes a layer of gravel under the slab, a vapor barrier, a sealed sump pit, and a rough-in for a future pipe that can be connected to a fan if needed. The cost is minimal compared to retrofitting a system later. Some builders in Edwardsville and O'Fallon IL have started including these features as standard, but not all do. It is worth asking your builder specifically whether the home will be built to radon-resistant standards. The EPA and the Illinois Department of Public Health both publish guidelines for new construction that are easy to follow.

Maintenance and Peace of Mind

Once a radon mitigation system is installed, it does require occasional attention. The radon fan itself typically lasts five to ten years, depending on the model and whether it is exposed to weather. The manometer should be checked monthly. If the fluid levels change, something is wrong. I also recommend retesting every two years, especially after major foundation work or a significant earthquake. The soil under your home can shift, and a system that worked perfectly a few years ago might need adjustments.

There is a real peace of mind that comes from knowing your family's radon exposure is under control. I have spoken with homeowners in Collinsville who were worried about their children playing in the basement after they got a high test result. After a proper mitigation, their levels dropped to around 1.0 pCi/L. That is a change that directly reduces the risk of lung cancer over a lifetime. Radon mitigation illinois is not just about following guidelines. It is about taking a concrete step to protect the people who live in your home.

If you are in the Metro East area and you have not tested yet, start there. A short-term radon test is cheap and easy. If the results are high, call a certified mitigation contractor like Air Sense Environmental. They know the local soils, the climate, and the health department guidelines. They can design a system that fits your house and your budget. And once it is installed, you can stop worrying about radon and start enjoying your home.