

Understanding Metro East Radon Risks and Effective Mitigation Strategies

If you live in Metro East Illinois, you have probably heard neighbors mention radon at some point. Maybe during a home inspection, or when a friend in Belleville Illinois mentioned testing their basement. It is one of those topics that sounds technical but actually matters a lot for your family's everyday health. Radon is a radioactive gas that comes from the natural breakdown of uranium in soil and rock. It moves up through the ground and can enter your home through cracks in the foundation, gaps around pipes, or even through the water supply. You cannot see it, smell it, or taste it. The only way to know if it is present is to test for it.

Why Metro East Illinois Homes Are at Risk

The geology in this region, particularly around Belleville, Edwardsville, O'Fallon, and Collinsville Illinois, includes limestone and glacial deposits that can produce significant radon levels. The US EPA has mapped much of this area in Zone 1, meaning predicted average indoor radon levels are above the action level of 4 picocuries per liter. That is not a scare tactic. It is simply a reason to take the issue seriously and act thoughtfully.

Many homeowners assume that because their house is newer, or because they have a crawl space instead of a basement, they are safe. Neither assumption holds up. Radon can enter any home regardless of age, construction type, or foundation style. The only reliable way to know your exposure is to perform proper radon testing. And if levels are high, radon mitigation is the solution.

Radon Testing: Short-Term vs. Long-Term

Radon testing comes in a few forms. The simplest and most common are charcoal canisters. You place one in the lowest livable area of your home, leave it for two to seven days, then send it to a lab. These are inexpensive and give you a quick snapshot. But radon levels vary by season, weather, and even time of day. A short-term test might miss a high spike that happens after a heavy rain or during a cold snap when windows stay shut.

For a more complete picture, you can use a continuous radon monitor. These electronic devices plug into a wall and record radon levels over days or weeks. They are more expensive but give you a real-time readout and a better sense of average exposure. Many homeowners in Metro East Illinois start with a charcoal test and follow up with a continuous monitor if the first result comes back borderline. That is a smart approach. It balances cost with accuracy.

Regardless of which method you choose, the Illinois Radon Awareness Act requires that sellers disclose known radon hazards and provide test results to buyers. If you are buying a home in Edwardsville Illinois or anywhere else in the region, you should ask for those records. If they do not exist, request a test before closing.

What the Numbers Mean

The US EPA recommends fixing your home if the radon level is 4 pCi/L or higher. Levels below 2 pCi/L are generally considered low risk. Between 2 and 4, there is no requirement, but some homeowners choose to mitigate anyway. The risk is cumulative. Living at 4 pCi/L for a lifetime gives you a lung cancer risk roughly comparable to dozens of chest X-rays per year. It is not an emergency, but it is a real concern that deserves attention.

The good news is that radon mitigation is well understood and highly effective. The most common system is called sub-slab depressurization. That is a fancy term for a simple idea. A pipe is installed through the foundation into the gravel layer beneath the slab. A radon fan creates suction that pulls radon-laden air from under the house and vents it safely above the roofline. This prevents the gas from ever entering your living space.

Radon Mitigation: How It Works

Sub-slab depressurization is the gold standard for most homes in Metro East Illinois. It works because the soil under your slab is usually porous enough to allow air movement. The radon fan runs continuously and quietly. It uses very little electricity, typically less than a 60-watt light bulb. Once installed, a manometer on the pipe shows whether the system is working. You can check it at a glance.

In some cases, soil suction can also be used in crawl spaces or around basement walls. The principle is the same. You create negative pressure beneath the foundation and redirect the gas outside. Basement sealing is often part of the job as well. Cracks in the floor or walls are sealed with polyurethane caulk. Large gaps around utility lines are filled. This is not a substitute for the fan system, but it helps the system work more efficiently.

Some homeowners ask whether they can do the mitigation themselves. In theory, yes, but in practice, it is tricky. You need to understand soil dynamics, know where to place the suction point, and avoid making the situation worse. A professional team like Air Sense Environmental has seen hundreds of homes in this area and knows what works. They use calibrated instruments to verify the system is reducing levels to below 2 pCi/L. That kind of assurance is worth the investment.

Metro East Radon: A Community Issue

One reason I find the topic of [metro east radon](#) so important is that it is not just an individual problem. It is a community issue. When one house in a neighborhood tests high, the neighbors often do too. The geology does not stop at property lines. Sharing test results and mitigation stories helps everyone make better decisions. I have seen entire blocks in O'Fallon Illinois decide to test after one family found levels above 10 pCi/L. That kind of neighborly awareness is powerful.

Schools and public buildings in the region are also subject to testing requirements. The Illinois Radon Awareness Act encourages testing in daycares and schools. Parents can ask their child's school for test results. If the school has not tested, that is a legitimate concern worth raising at a board meeting. Children breathe more rapidly than adults and are more susceptible to radon's effects.

NFA and HERA: What They Mean

You might see the acronyms NFA and HERA in radon literature. NFA stands for National Radon Proficiency Program. It is a credential that shows a radon professional has passed exams and follows industry standards. HERA is the Home Energy Rating Association, which sets guidelines for energy efficiency. When you hire someone for radon mitigation, you want someone who holds current certifications. It gives you confidence that they understand both the science and the local building codes.

In Metro East Illinois, the combination of clay soils and seasonal weather can make mitigation design more complex than in other parts of the country. A good contractor will test the soil permeability before deciding on the pipe diameter and fan size. They will also check for other sources of indoor air pressure, like clothes dryers and exhaust fans, that could interfere with the system. That is the kind of detail that separates a reliable installation from one that barely works.

Radon and Real Estate Transactions

If you are selling a home in Collinsville Illinois or anywhere nearby, you will likely be asked about radon. Buyers are more educated now than they were a decade ago. A home that has already been tested and mitigated is actually a selling point. It shows the seller was responsible and that the home is safe. If you have not tested, consider doing it before listing. A low result gives buyers peace of mind. A high result gives you time to fix it before negotiations start.

On the buying side, never waive a radon test just to make your offer more attractive. You can ask for the test to be done quickly and include a contingency that the seller pays for mitigation if levels are high. That is standard practice and protects both parties.

The Bottom Line on Metro East Radon

Living in this part of Illinois means living with a real but manageable risk. The science is clear. The solutions are proven. The cost of testing is small compared to the peace of mind it provides. And if mitigation is needed, the expense is a fraction of what you might spend on other home repairs.

I have talked to dozens of homeowners in Edwardsville Illinois who put off testing for years because they thought it was complicated or expensive. Almost all of them said the same thing afterward: "I wish I had done this sooner." That is the pattern I see with metro east radon. It is one of those things that seems like a hassle until you actually do it, and then you wonder why you waited.

If you have not tested your home yet, start there. Buy a charcoal canister kit or borrow a continuous radon monitor. Follow the instructions carefully. If the result comes back above 4 pCi/L, call a certified radon mitigation contractor. If it comes back below 2, you can relax and test again in a couple of years. Either way, you are taking control of your indoor air quality. That is a good feeling.