

Radon

Radon, a colorless, odorless, and tasteless radioactive gas, has become a significant public health concern in recent years. It is the leading cause of lung cancer among non-smokers and the second leading cause overall, accounting for around 21,000 lung cancer deaths each year in the United States. Greenwich, Connecticut, is no exception to this threat, and residents need to be aware of the dangers associated with radon exposure and the steps they can take to detect and mitigate it in their homes.

Radon is a naturally occurring radioactive gas produced as a byproduct of the radioactive decay of uranium in soil, rock, and water. It can infiltrate homes through cracks and other openings in the foundation or basement, and once inside, it can accumulate to dangerous levels. Prolonged exposure to high levels of radon can cause damage to lung tissue, leading to lung cancer.

Detecting Radon in Air

Radon levels vary from one home to another, even within the same neighborhood. Therefore, it's crucial for homeowners and renters to test their homes for radon. Radon levels should be tested before buying a new home and after major renovations, especially if the basement is changed to accommodate another bedroom or another use. See <https://www.greenwichct.gov/DocumentCenter/View/3156/Radon-Testing-PDF>
The average indoor radon level in the Town of Greenwich has been found to be 4.5 pCi/L or greater, which is above the EPA recommended action level of 4.0 pCi/L. The average concentration of radon in outdoor air is 0.4 pCi/L.

There are two primary methods for radon testing: short-term and long-term tests.

Short-term tests are the quickest way to assess radon levels, lasting from 2 to 90 days. These tests can be purchased from Greenwich Hardware on Railroad Avenue or Feinsod Hardware in Old Greenwich. Radon tests kits for air and well water can also be purchased from the Greenwich Health Department Laboratory, on the ground floor of town Hall (203.622.7843 or 203.622.7838), <https://www.greenwichct.gov/661/Laboratory-Services>

They are easy to use and provide a general idea of radon levels in your home. However, they may not provide a complete picture of your radon exposure, as levels can fluctuate over time.

Long-term tests, on the other hand, can last from 91 days to a year and provide a more accurate measurement of radon levels. These tests account for seasonal fluctuations and provide a better understanding of your average exposure to radon. The Connecticut Department of Public Health recommends using long-term radon tests for more reliable results. www.ct.gov/dhp/radon (860-509-7367). Pillar to Post, can do a long term test or short term test for you. <https://pillartopost.com/radon>

Mitigating Radon in Air Exposure

If radon levels in your home are found to be at or above the Environmental Protection Agency's (EPA) action level of 4 picocuries per liter (pCi/L), it's essential to take steps to reduce your exposure. See www.epa.gov/radon. Radon mitigation systems, also known as radon reduction systems, can be installed to decrease radon levels in your home. These systems generally consist of a vent pipe and fan that help to remove radon from beneath your home and expel it outside. It is crucial to hire a qualified radon mitigation professional to ensure that the system is properly installed and effectively reduces radon levels. Contact Matt Bednarz at Connecticut Radon and Well Water Solutions, 203.903.6665, <https://www.ctradonandwellwater.com>

In addition to radon in the air, radon can also be found in water, particularly in well water. When radon-contaminated water is used for drinking, cooking, or showering, it can pose a risk to human health. While radon in water contributes to a lower risk of lung cancer compared to radon in indoor air, it can still lead to an increased risk of developing stomach cancer if ingested in high concentrations over an extended period.

Detecting Radon in Water

Homeowners who rely on well water should test their water supply for radon, especially if elevated levels of radon have been detected in the air. To test for radon in water, you can purchase a water testing kit from a reputable laboratory or contact the Health Department Lab on the ground floor of Town Hall for information on available testing services, 203.622.7834. <https://www.greenwichct.gov/660/Laboratory> The lab is open Monday-Friday 8am-3pm.

The EPA recommends taking action to reduce radon levels in water if they exceed 4,000 pCi/L.

Reducing Radon Levels in Water

If your water supply has high levels of radon, there are two primary methods to reduce it:

Aeration: Aeration systems remove radon from water by spraying the water into the air, allowing the radon gas to escape. The treated water is then collected in a storage tank, and the released radon gas is vented safely outside the home. Aeration is considered the most effective method for reducing radon in water.

Granular Activated Carbon (GAC) filters: GAC filters use activated carbon to adsorb radon from the water. While GAC filters are generally less expensive than aeration systems, they can become less effective over time as the carbon becomes saturated with radon. Additionally, the filters may require proper disposal as they become radioactive waste after prolonged use.

Conclusion

The dangers of radon exposure, both in the air and water, are serious concerns for residents of Greenwich, CT, and should not be taken lightly. Regular testing of both indoor air and water sources, as well as appropriate mitigation measures when necessary, can significantly reduce the risk of lung and stomach cancer caused by radon exposure. Safeguard your family's health by staying informed, testing your home and water for radon, and taking appropriate action if high levels are detected.