

Radon in Your Water

Radon in your water can increase your risk of developing cancer.
Read this fact sheet to decide if you should test your water for radon.

What is radon?

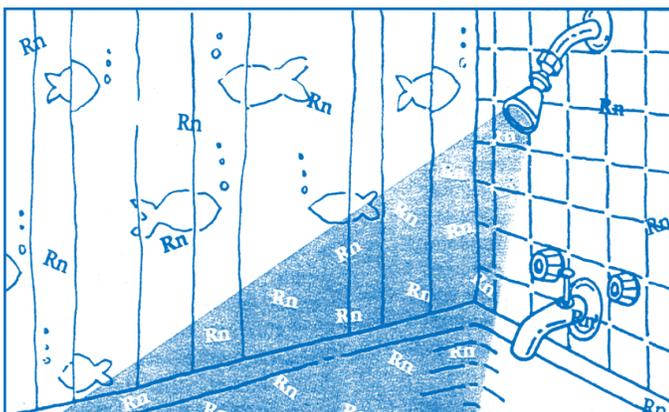
Radon is a natural element. It is found in soil and rocks all over the world.

Radon:

- is a gas
- has no color, smell or taste
- is radioactive
- results from the decay of uranium, another natural element

Why is radon a health concern?

Radon is the leading cause of lung cancer in nonsmokers. If you breathe air that contains radon, your risk of developing lung cancer increases. If you smoke and are exposed to radon, then your risk of developing lung cancer is magnified. Radon in the water you drink can also contribute to a very small increase in your risk of stomach cancer. However, this risk is almost insignificant compared to the risk of lung cancer from radon in air.



Radon from your water can enter the air you breathe.

How can radon get into my water?

Radon can enter homes through openings in the basement and, in some cases, through the water supply. Radon gas can dissolve and build up in water from underground sources.

- If your water comes from a well, it may contain radon.
- If your water comes from a lake, river or reservoir, radon is not a concern. The radon is released into the air before it reaches your home.

Radon in water can enter the air in your home when you use water for household activities such as showering, washing clothes and cooking.

Radon laboratory results are reported in picocuries per liter (pCi/L). Picocuries per liter is a measure of radioactivity. For every 10,000 picocuries per liter (pCi/L) of radon in your water, 1.0 pCi/L is added to your radon in air level. This is just an estimate.

Should I test my water for radon?

The Connecticut Department of Public Health (CTDPH) recommends that you test your home's indoor air first. An elevated radon level in your indoor air is a greater health risk than the radon level in your water. The most significant source of radon gas in your home comes from soil. Consider testing your water for radon if your home is served by well water.

What is the radon level in my indoor air?

The U.S. Environmental Protection Agency (EPA) has established an action level of 4.0 pCi/L for radon in indoor air. Any level of radon poses some health risk.

- If the average level of two radon tests in your air is **equal to or greater than 4.0 pCi/L**, then you should fix or “mitigate” your home’s indoor air. Hire a radon mitigation professional to install a radon reduction system in your home.
- If the average radon level is **between 2.0 pCi/L and 3.9 pCi/L**, consider testing again in the future, especially if testing was performed in the summer. Radon levels in air tend to be higher in the colder months. You may want to consider mitigation if the average level is between 2.0 pCi/L and 3.9 pCi/L.

It is possible to have elevated radon levels in your water even if the radon level in your indoor air is low. The only way to know for sure is to test for radon in both air and water.

What is the radon level in my water?

Currently, there are no set standards or laws concerning radon in water. The CT DPH has established a guidance level of 5,000 pCi/L for radon in water. The CT DPH recommends that you reduce radon in your water if the average radon level of two tests is equal to or above 5,000 pCi/L.

It is recommended that you perform two water tests at different times before determining the average radon concentration in water. Ideally, collect and analyze the second water sample at least three months after the first sample.

For more information on radon, please contact:
Connecticut Department of Public Health
Radon Program
Telephone: 860-509-7367
www.ct.gov/dph/radon

How can I reduce radon in my water?

There are two options used to reduce radon levels in your water. If the average of two radon test results is 5,000 pCi/L or higher, one of the following systems is recommended.

Granular Activated Carbon (GAC) System

GAC systems can reduce radon effectively when levels are below 10,000 pCi/L. This system uses special charcoal filters inside a tank to remove radon from the water. Radon and other contaminants shorten the life of the charcoal filter. You will need to contact a professional to replace the filter in this system annually or according to the manufacturer’s recommendations. Replacement of GAC filters adds significant cost to the maintenance of this system. The average cost for a GAC system is between \$2,000 - \$3,000.

Aeration System

Aeration systems are the only effective method for reducing radon levels that are at or above 10,000 pCi/L. This system bubbles air through the water so that radon is released into the air and vented up to the roof line away from your home. The system requires annual service. The average cost for an aeration system is between \$3,500 - \$6,000.

How can I find a radon professional?

The CT DPH maintains lists of radon professionals on the Radon Program website. The individuals or companies listed are trained according to EPA radon protocols and are nationally certified in radon measurement or radon mitigation. Mitigation professionals are qualified to install systems to reduce radon in air and water. Measurement professionals are able to take water samples from your well to submit to state-approved labs for analysis.

Please visit the Radon Program website for current lists of nationally certified radon professionals: www.ct.gov/dph/radon