VERMONT
DEPARTMENT OF HEALTH

Fixing Radon in Your Home

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Radon is a naturally occurring radioactive gas that you cannot see, smell or taste. It may be present in both soil and water, and levels can build up inside homes. Radon problems in homes can be fixed.

What are the health effects of being exposed to radon in a home?

Everyone is exposed to some radon in indoor and outdoor air. Breathing air with radon increases your risk of getting lung cancer. Radon is the leading cause of lung cancer among people who do not smoke. Radon is estimated to cause 21,000 lung cancer deaths every year in the United States.

Your risk of getting lung cancer from radon depends on the level of radon in the air you breathe and for how long you have been exposed to it. If you smoke and your home has high levels of radon, your risk of getting lung cancer is especially high.

Over a lifetime, drinking water with radon also poses a risk of stomach cancer. However, the major danger posed by radon in water is the risk of lung cancer when you breathe in the radon that is released from the water.

What does the radon test result mean?

Radon in Air

The Environmental Protection Agency (EPA) action level for radon in air is 4.0 pCi/L (picocuries per liter). If your radon in air test result is:

- **At or above 4.0 pCi/L** – Contact a certified radon mitigation contractor to help reduce radon levels in your home. If your water comes from a well, test your water for radon.
- **Between 2.0 and 4.0 pCi/L** – Consider mitigation to reduce radon levels in your home since radon levels in this range can still pose some risk.
- **Below 2.0 pCi/L** – Test your home again in five years.

Radon in Water

To fully understand your radon risk, it is important to know your home's radon in air results too. If the air in your home has not been tested, test your home for radon in air before considering how to reduce radon levels.

The Health Department has set an advisory level for radon in water at 4,000 pCi/L. If your radon in water test result is:

- **At or above 4,000 pCi/L –** Take action to reduce radon levels in your home. Use the radon contribution calculator at www.HealthVermont.gov/radon to help you determine the best fix for your home. If you decide to treat your water, contact a

Water Quality Association (WQA) certified treatment provider at www.wqa.org/find-certified-professionals.

- **Less than 4,000 pCi/L** – Test your water again in five years.

How can I fix (mitigate) a radon problem?

Radon in Air

There are two common types of radon in air mitigation systems.

Active Soil Depressurization (ASD): An ASD system is very common. It can be installed in many homes with varying foundation types. In most cases, this system involves installing a vent pipe and a fan to reduce the amount of radon that enters the home. The estimated cost of installation is $1,500 to $2,500.

Heat Recovery Ventilator or Energy Recovery Ventilator (HRV or ERV): HRVs and ERVs exhaust air from a home and replace it with fresh outdoor air. Because supplying too much outdoor air can impact comfort and increase energy use, HRVs and ERVs are best used for moderate radon levels or to supplement an ASD system. HRVs and ERVs can also improve the air quality inside a home. The estimated cost of installation is around $7,000 when no additional ducting or electrical work is needed.

To find a certified radon in air mitigation contractor based in Vermont visit: nrpp.info/pro-search or nrsb.org/find-a-pro.

Radon in Water

There are two types of water treatments systems to remove radon in water.

Aeration system: An aeration system uses a fan to reduce radon in water. This system mixes your water with air inside a tank or well casing and then vents the air and radon outdoors, away from the home. The estimated cost of installation is around $7,000.

Granular Activated Carbon (GAC): This filtration system uses a charcoal filter to remove the radon from the water. The use of GAC systems to remove radon is discouraged because the radon collected on the filter can pose a radiological hazard to both the homeowner and the technicians who service the system. For this reason, GAC is best suited for moderate radon in water levels, around 5,000 pCi/L or less. The estimated cost of installation is around $2,000.

Contact a Water Quality Association (WQA) certified treatment provider at www.wqa.org/find-certified-professionals for more information.

Where can I get more information?

Contact the **Vermont Radon Program**:

- Call: (800) 439-8550
- Email: radon@vermont.gov
- Visit: www.HealthVermont.gov/radon