

**Do you have radon  
in your home?  
Testing is the only way  
to find out.**

Nearly one out of every 15 homes in the U.S. is estimated to have elevated radon levels. The prevalence in New Hampshire is even greater – one out of every three homes. While elevated levels are found more often in buildings located in the eastern and southeastern portions of the state, excessive levels have been detected in homes in every county.

**The U.S. Surgeon General recommends that all homes be tested for radon. Testing is the ONLY way to determine if your family is at risk from radon exposure.**

### **Health Risks**

Almost all risk from radon comes from breathing air with radon. Exposure to radon gas is the second leading cause of lung cancer in the United States, with more than 21,000 deaths attributed annually to radon-related lung cancer. There is no safe level of radon. Any exposure poses some risk of cancer. Smokers have an increased chance of developing lung cancer in a home where radon gas is found.

**Radon is the leading cause of lung cancer in non-smokers.**



### **For More Information**

For information on radon and indoor air quality in New Hampshire:

Environmental Health Program  
N.H. Department of Environmental Services  
PO Box 95  
Concord, NH 03302-0095  
(603) 271-6845  
owen.david@des.nh.gov  
[www.des.nh.gov](http://www.des.nh.gov)

For additional information on radon:

U.S. Environmental Protection Agency  
[www.epa.gov/radon/](http://www.epa.gov/radon/)

For information on certified radon contractors:

National Environmental Health Association  
[www.radongas.org](http://www.radongas.org)  
National Radon Safety Board  
[www.nrsb.org](http://www.nrsb.org)



[www.des.nh.gov](http://www.des.nh.gov)

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# **Radon**

## **What New Hampshire Home Owners Should Know**



- **What is it?**
- **What are the health risks?**
- **What can be done about it?**

NH Department of Environmental Services  
Air Resources Division  
Environmental Health Program

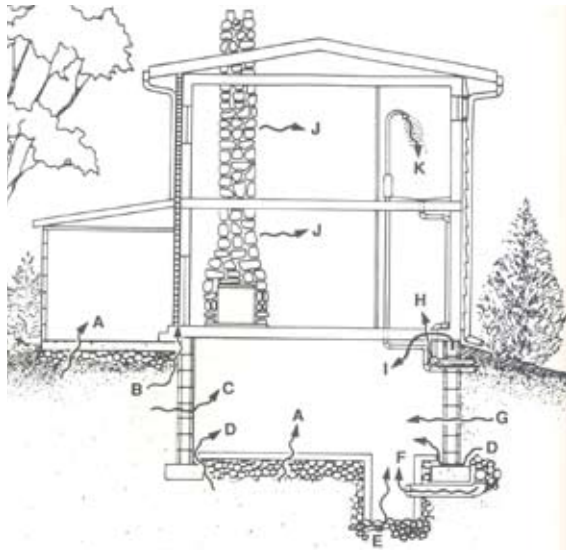
## What is Radon?

**R**adon is a tasteless, odorless, colorless, naturally occurring radioactive gas. It comes from the breakdown of uranium in rocks and soil. Radon is a carcinogen. When radon accumulates in indoor air, it poses an increased health risk of developing lung cancer.

Radon enters buildings through cracks and seams in foundation floors and walls, and openings around floor drains, pipes and sump holes. Sometimes radon enters buildings through well water.

Building materials can also give off radon.

**Testing is the only way to find out if you have radon in your home.**



Major Radon Entry Routes

- |   |   |
|---|---|
| A. Cracks in concrete slabs   | to open sump                            |
| B. Spaces behind brick veneer walls that rest on uncapped hollow-block foundation | G. Mortar joints                        |
| C. Pores and cracks in concrete blocks  | H. Loose fitting pipe penetrations      |
| D. Floor-wall joints  | I. Open tops of block walls             |
| E. Exposed soil, as in a sump   | J. Building materials such as some rock |
| F. Weeping drain tile, if drained   | K. Water (from some wells)              |

Source: EPA, Radon Reduction Techniques for Detached Houses, 1988

## How Do I Test for Radon?

The N.H. Department of Environmental Services recommends that both the interior air of all homes and private drinking water wells be tested for radon. There are “do-it-yourself” radon test kits you can get through the mail and in hardware stores and other retail outlets. If you prefer, or if you are buying or selling a home, you can hire a nationally-certified radon measurement professional.

There are two types of interior air tests:

**Short-term test** – This test remains in your home for two to 90 days, depending on the device used. Closed-house conditions (i.e., windows closed and doors used for normal entry and exit) must be maintained.

**Long-term test** – This test remains in your home for more than 90 days so it is more representative of actual lived-in conditions. Closed-house conditions are not required.

Testing for radon in the water can be done any time of the year with a special sample collection bottle. The water sample must then be tested by a certified laboratory.

## What Do the Test Results Mean?

Radon is measured in picocuries per liter (pCi/L) of air or water, a measurement of radioactivity. The U.S. Environmental Protection Agency recommends that if your initial air test result shows a level of 4 pCi/L or higher, you should confirm the result with a follow-up test. For these homes, EPA recommends that you have a radon mitigation system installed to lower the radon levels.

There is no federal drinking water standard for radon in public water supplies. For private wells, the state recommends that homeowners consider taking steps to lower radon in water if the level exceeds 2,000 pCi/L.

## Radon Problems Can be Fixed!

There are various methods of reducing radon levels in your home. In some cases, sealing cracks in floors and walls may help to reduce radon levels temporarily. For a long-term solution, a radon mitigation system should be installed. Radon mitigation systems remove radon gas from below the foundation or concrete slab before it can enter your home. Radon gas can be removed effectively from drinking water, preferably by using an aeration process.

Consult a certified radon mitigator to discuss your options when it comes to radon mitigation in your home.

The cost of reducing radon levels varies. The general cost is \$1,000 to \$2,000 for air mitigation and \$3,500 to \$5,000 for water mitigation.

## Radon Disclosure & Real Estate Transactions

New Hampshire law does not mandate radon testing or mitigation during real estate transactions. It is recommended to test for radon prior to buying or selling a home. Finding elevated concentrations of radon does not mean you should walk away from purchasing a home. Radon levels can be reduced.

## Building a New Home?

Consider building with “radon resistant new construction techniques.” These techniques can be effective in preventing radon entry, and incorporating them at the time of construction is easier and less expensive than retrofitting an existing home.

