

## What Do Your Test Results Mean?

The U.S. Environmental Protection Agency (EPA) recommends that if your initial radon test result shows a level of 4 pCi/L or higher, you should confirm the result with a follow-up test. For homes with radon levels of 4 pCi/L or higher, the EPA recommends that you have a radon mitigation system installed to lower the radon levels.

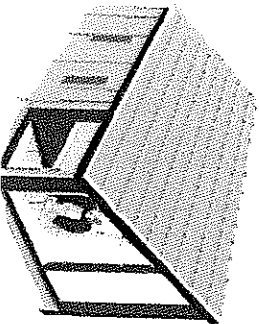
When selling a home, the seller must disclose any known radon test results to the buyer.

## How Can You Reduce Radon Levels?

Radon levels can be reduced by installing a radon mitigation system. The most common type of system uses an arrangement of plastic pipes and a fan to vent the radon gas to the outside air. The typical cost of a radon mitigation system ranges from \$500 to \$2,000 (with an average of about \$1,000).

## Reducing Radon Levels in New Construction

Be sure to consider building with radon-resistant new construction techniques. These techniques can be effective in preventing radon entry, and installing these features at the time of construction is easier and less expensive than retrofitting an existing home.



## For Further Information

**DEP radon website:**

[www.dep.pa.gov/radon](http://www.dep.pa.gov/radon)

**Radon Toll Free Line:**

**800-23RADON**

**EPA radon website:**

[www.epa.gov/radon](http://www.epa.gov/radon)

**EPA Radon Hotline:**

**800-SOS-RADON**

For additional information, the following documents are available free of charge from DEP:

- Pennsylvania Home Buyers' and Sellers' Guide to Radon
- Consumer's Guide to Radon Reduction
- Pennsylvania Citizen's Guide to Radon

**How Does Your Home Measure Up?  
TEST for RADON TODAY!**

**Call: 800-23RADON**

**Pennsylvania Department**

**of**

**Environmental Protection**

**Bureau of Radiation Protection**

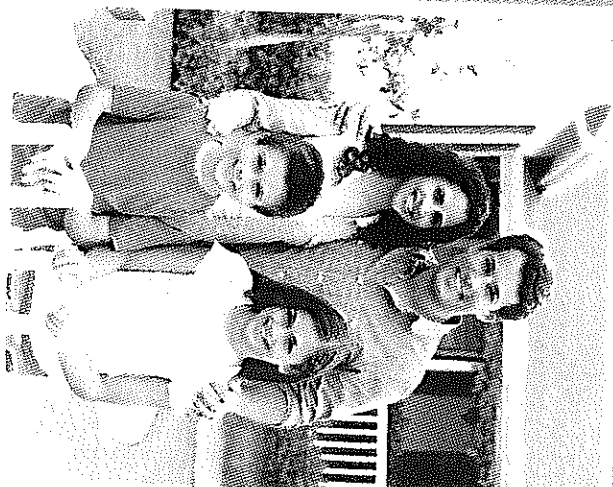
**800-237-2366**

[www.dep.pa.gov/radon](http://www.dep.pa.gov/radon)



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL  
PROTECTION



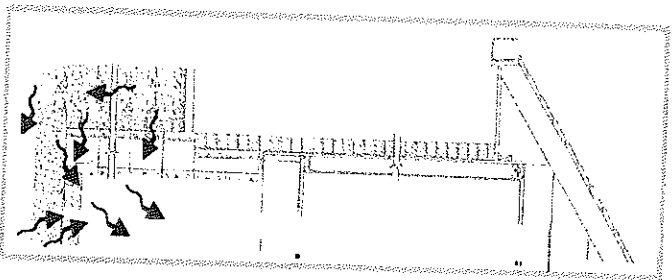
**What  
You  
Should  
Know  
About**

**RADON**

## What is RADON?

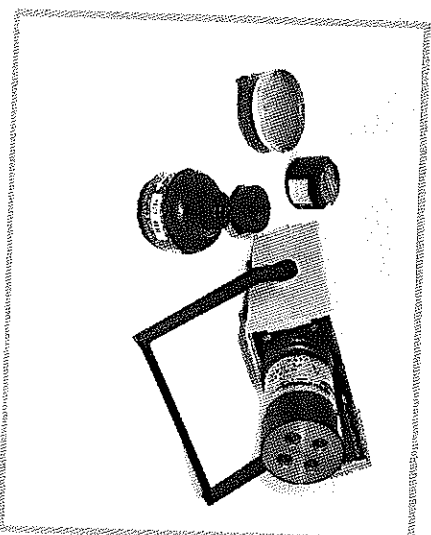
Radon is a tasteless, odorless, colorless, naturally occurring radioactive gas. It comes from the breakdown of uranium in rocks and soil.

Radon enters the home through hollow block walls, cracks in the foundation floor and walls, and openings around floor drains, pipes, and sump holes.



## How Do You Know If Your Home Has High Radon Levels?

You and your family are most likely to get the greatest exposure to radon at home. The only way to know the radon level in your home is to test. Testing is easy and inexpensive. You may perform the test yourself using a radon test device.



Radon test devices can be purchased at a home center or from a Pennsylvania-certified Laboratory. You may also hire a Pennsylvania-certified tester to perform the test.

There are two types of radon tests:

- Short-Term Test:

These tests are placed for two to seven days and provide a quick screening result. Closed house conditions must be maintained during these tests.

- Long-Term Test:

These tests are placed from three to twelve months and provide a long-term average of the home's radon level. Closed house conditions are not required for these tests.

The cost of a test is about \$20 to \$30 for a do-it-yourself test and about \$90 to \$120 for a certified tester to test the home.

## IMPORTANT NOTICE!

Pennsylvania law requires anyone (except the owner/occupant of the building) performing radon testing, mitigation, or laboratory analysis to be certified by the Department of Environmental Protection (DEP).

To verify certification, call

**800-23-RADON** or

visit [www.dep.pa.gov/radon](http://www.dep.pa.gov/radon)

and look for "Radon Services Directory"

## Did you know . . .

After smoking cigarettes, radon is the second leading cause of lung cancer and is estimated to cause approximately 21,000 deaths in the United States annually.

An estimated 40 percent of Pennsylvania homes have radon levels greater than the EPA guideline of 4 picocuries per liter (pCi/L).



## Health Effects of Radon

Radon is a radioactive gas that is present throughout soil and rocks which often migrates into homes and other buildings through basements, slabs, and foundations. Once in the home, radon can build up to high concentrations resulting in a radiation exposure to the occupants.

Radon is a colorless, odorless, and tasteless radioactive gas produced by the natural decay of trace amounts of uranium in soil and rock. The harmful health effects of radon arise from radioactive particles – emitted from radon and its decay progeny – that have settled in the lungs, where radon attaches to the surface of the lungs and emits its radioactive particles. It is these radioactive particles that can impact the lungs and cause lung cancer.

Currently, there are no other health effects associated with radon exposure except for lung cancer. Additionally, lung cancer due to radon exposure cannot be distinguished from lung cancer due to smoking. The table below shows the U.S. Environmental Protection Agency's (EPA) risk chart for smokers and non-smokers for several levels of radon concentration.

If 1,000 people were exposed to this level over a lifetime*		
Radon Level	Smokers	Non-smokers
20 pCi/L (picocuries per liter)	~ 260 people could get lung cancer	~ 36 people could get lung cancer
8 pCi/L	~ 120 people could get lung cancer	~ 15 people could get lung cancer
4 pCi/L	~ 62 people could get lung cancer	~ 7 people could get lung cancer

*\*Lifetime exposure equates to 70 years and 18 hours per day.*

There are three primary factors that can increase the risk of developing lung cancer: the concentration of radon in the home, the length of time exposed to that concentration, and being a smoker. Smokers are approximately six times more likely to develop radon-induced lung cancer than non-smokers.

According to the EPA, radon is the second leading cause of lung cancer after smoking. This is a particularly important issue for residents of Pennsylvania because it may be one of the most severely affected states in the country for radon. Pennsylvania has a wide distribution of radon occurrences, a significant number of high radon results, and a high average radon concentration in homes that were measured.

Many lung cancers are diagnosed in more progressed stages and are more difficult to successfully treat. Therefore, it is important to minimize the risk from radon exposure.

How can one reduce the risks from radon? First and foremost, stop smoking. Also, test the home for radon and if elevated levels are found, have the home mitigated to reduce the radon level. These steps can significantly reduce the risks of lung cancer from radon exposure.

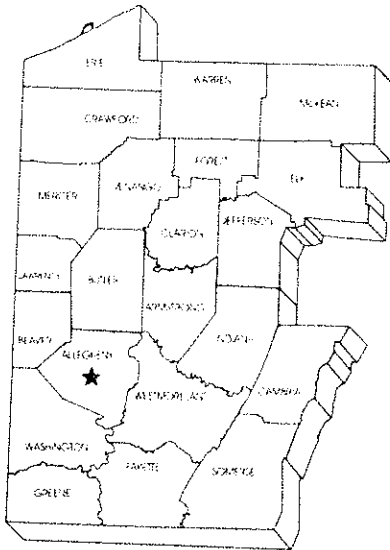
For more detailed information on health effects of radon, see the following publications:

EPA Assessment of Risks from Radon in Homes, June 2003. Office of Radiation and Indoor Air, U.S. Environmental Protection Agency.

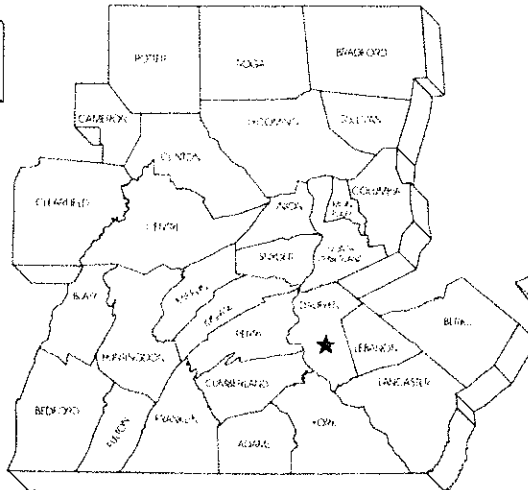
Health Effects of Exposure to Radon, BEIR VI, 1999. National Academy Press, Washington, D.C.

For more information, visit [www.dep.pa.gov](http://www.dep.pa.gov).

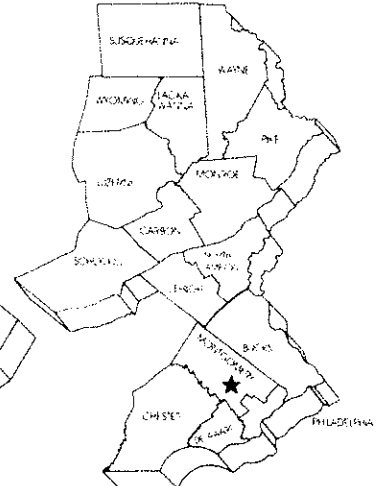
**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
RADIATION PROTECTION PROGRAM OFFICES**



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