

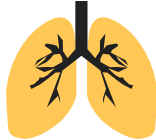
RADON SAFE NEW HOME CONSTRUCTION

Radon is a cancer-causing, radioactive gas that you can't see, smell or taste. Testing is the only way to know if radon is present in your home.

Radon

High levels of radon gas occur naturally in New Hampshire soil and water. It is produced by the breakdown of radioactive elements and can move up into a house from the ground. Well water that contains radon may also increase the level of radon in indoor air. Activities like taking showers, doing laundry or running the dishwasher can release radon dissolved in water into the air. The amount of radon in a home depends on many factors including geology, construction, mechanical systems and the way the building is used.

Radon is the second leading cause of lung cancer. Simple air and well water tests can show whether home radon levels meet state and national safety guidelines.



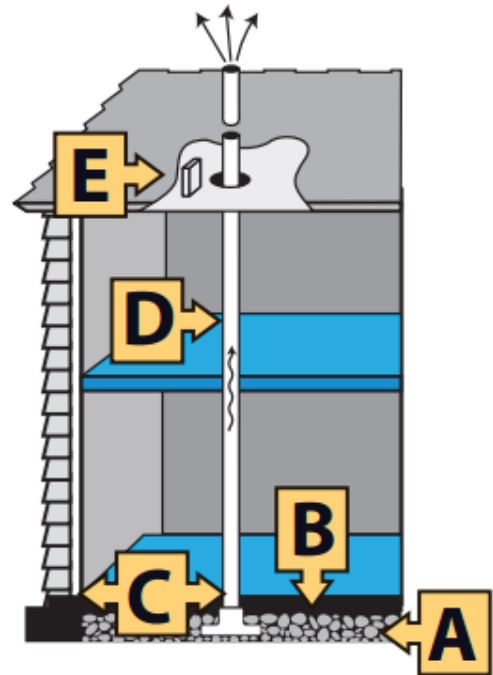
Radon Resistant Construction Techniques

[From EPA Radon Resistant Construction](#)

There are five basic construction techniques (Shown in the illustration A - E):

- A. Gravel:** Use a 4-inch layer of clean, coarse gravel below the "slab," also called the foundation. This layer of gravel allows the soil gases, including radon, to move freely underneath the house. Builders call this the "air flow layer" or "gas permeable layer" because the loose gravel allows the gases to circulate.
- B. Plastic Sheeting or Vapor Retarder:** Place heavy-duty plastic sheeting (6 mil. polyethylene) or a vapor barrier on top of the gravel to prevent the soil gases from entering the house. The sheeting also keeps the concrete from clogging the gravel layer when the slab is poured.

- C. A Vent Pipe:** Run a 3-inch or 4-inch solid PVC pipe, like the ones commonly used for plumbing, vertically from the gravel layer (studded up



when the slab is poured) through the house's conditioned space and roof to safely vent radon and other soil gases outside above the house. This pipe should be labeled "Radon System." Your plumber or a certified radon professional can do this.

- D. Sealing and Caulking:** Seal all openings, cracks, and crevices in the concrete foundation floor (including the slab perimeter crack) and walls with polyurethane caulk to prevent radon and other soil gases from entering the home.
- E. Junction Box:** Install an electrical junction box (outlet) in the attic that can be used with a vent fan, should, after testing for radon, a more robust system be needed.

Benefits of Radon Resistant New Construction

When you build a new home, you have the chance to protect your family from radon. Ask your contractor to put in a radon reduction system.

1. It's cheaper to install when building a new home than it is to go back and do it later.
2. Simple to build/install, mitigation options don't require any special skills or certifications from builders.



When you move in, test for radon.

The test results will tell you if you need to add a fan and activate your system. If you had a well drilled, be sure to test the well water for radon too.

Many radon test kits can be purchased online or in home improvement stores. Follow the directions on the packaging for the proper placement of the device and where to send the device after the test



to find out your radon level. Contact the [NH State Radon Program](#) for information on how to obtain testing from a certified professional with specific skills required to successfully complete radon testing.



Tips for Accurate Testing

Follow the instructions provided, but here are some general recommendations for testing:

- When possible, test when your heat is on (during cool months).
- Close all doors and windows for 12 hours before starting the test.
- Keep windows and doors closed during the test, except for normal coming and going.
- Place the bottles or canisters in the lowest livable area of the house – usually the basement.
- Avoid placing tests near drafts, heat sources, high humidity and moisture.
- Avoid placing tests in the kitchen, bathroom, laundry room and during winds and precipitation.
- After the test time is over, mail the canisters back to the lab in the envelope provided.

Contact the New Hampshire Radon Program:

 Call: **(603) 271-1708**

 Email: **radon@dhhs.nh.gov**

 Visit: **bit.ly/RadonProgramNH**

 **Request your FREE Radon Test Kit!**
Visit: **aelabs.com/nh**