Building Radon Resistant

June 2025

Radon is a naturally occurring radioactive gas that can build up inside buildings. Breathing in radon increases your risk of getting lung cancer over time. Using certain materials and techniques during construction and renovation can help **prevent radon** from entering buildings.

If you need help accessing or understanding this information, contact Radon@vermont.gov.

Radon-resistant materials and techniques

- Placing a **gas permeable layer** below a slab or flooring system allows radon to move freely under a building. This is often a 4-inch layer of clean gravel.
- Using **plastic sheeting** on top of the gas permeable layer helps prevent radon from entering a building. It also blocks moisture.
- **Sealing and caulking** all openings in a concrete floor helps prevent radon from entering a building. If a radon fan needs to be added later, sealing and caulking will help the fan work better, too.
- Installing a **vent pipe** to move radon from under a building and vent it safely outside. This is usually a 3- or 4-inch PVC pipe that vents above the roof.
- Installing an **electrical junction box** in case a radon fan needs to be added.

Benefits of building radon-resistant

- Using radon-reducing features can reduce radon levels and save lives.
- It costs less to build radon-resistant ($250 to $750) than to fix a radon problem later ($1,500 to $2,500).
- Some builders already use radon-reducing features to control moisture.
- During new construction and renovations, pipes can be concealed within walls, and the vent pipe can exit the roof like a standard roof penetration.

Learn more about how to build radon-resistant

- Building Radon Out (EPA)
- ANSI/AARST Standards for Reducing Radon in New Construction (AARST)
- Radon Control Methods Appendix AF of the International Residential Code (IRC)

HealthVermont.gov/Radon
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