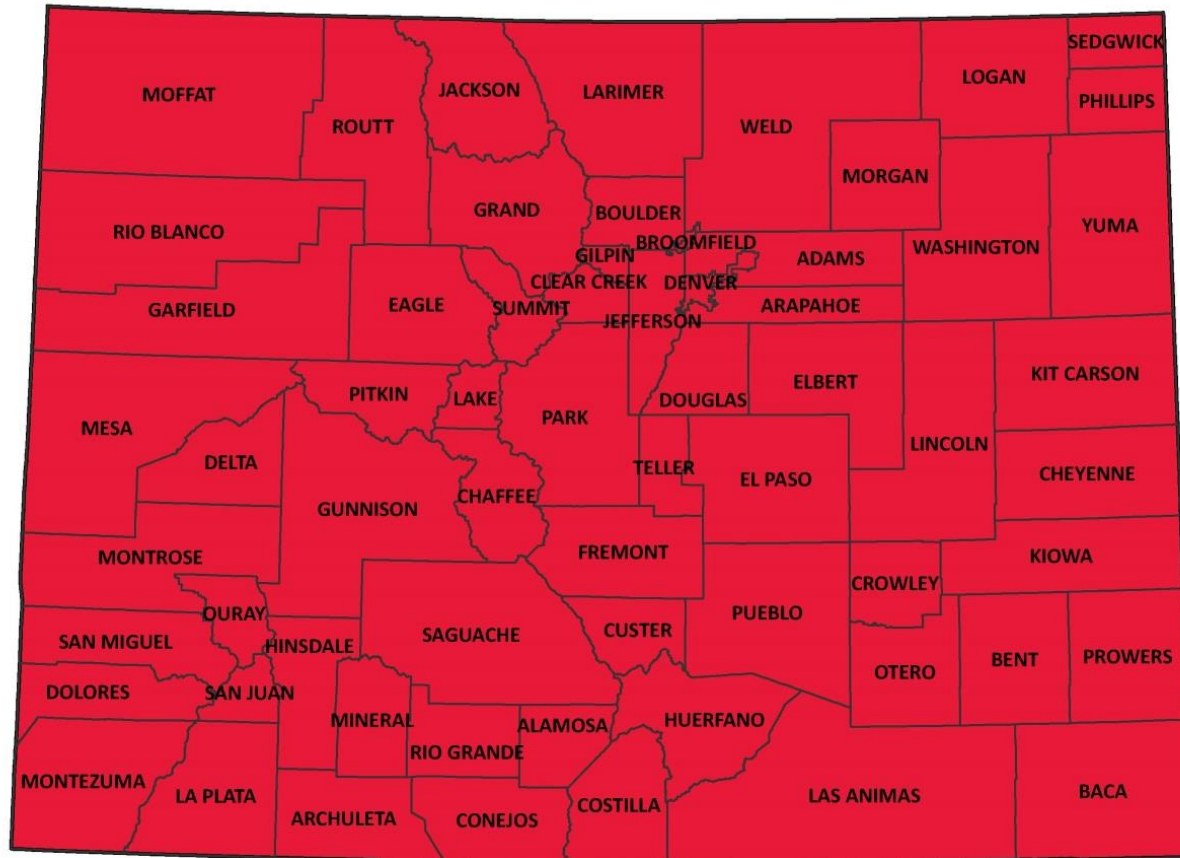


Preventing Lung Cancer from Radon Exposure

PHR³ The Public Health Radon Reduction Roadmap



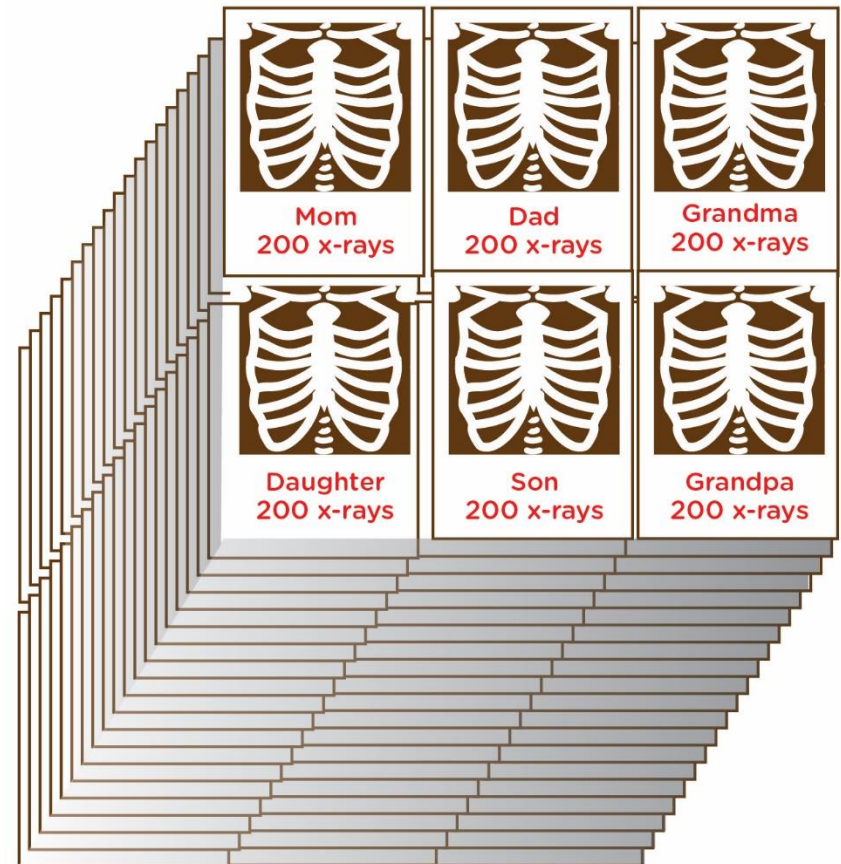
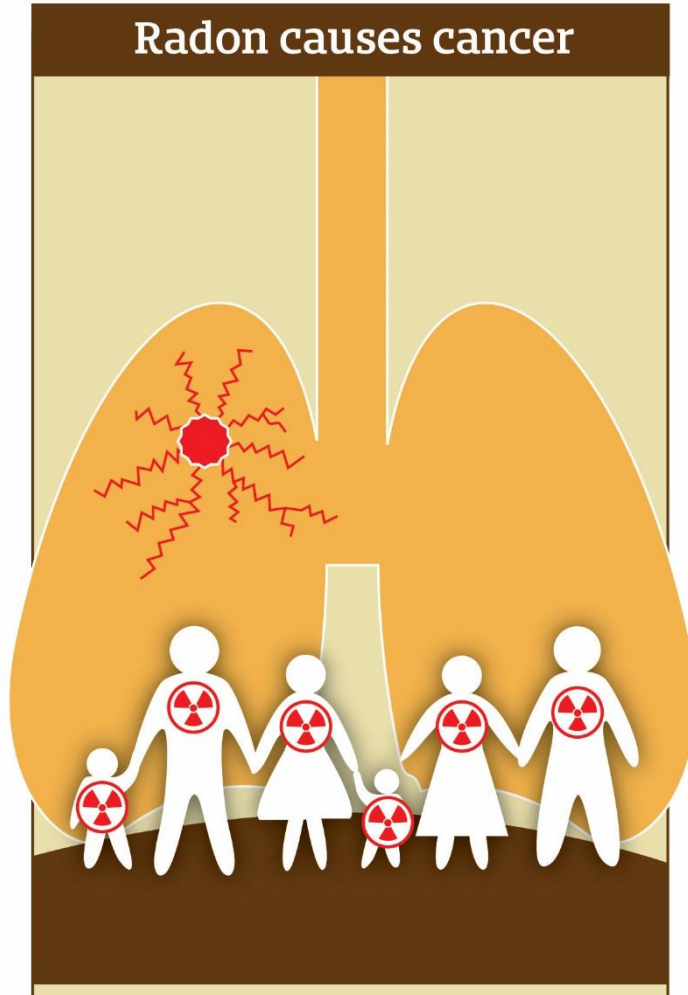
Colorado Residents are at Risk



Source: Colorado Department of Public Health and Environment (CDPHE) Radon Outreach Program and Colorado Environmental Public Health Tracking.
Notes: These radon zones were determined based on indoor radon, geology, soil, construction type and aerial radiation measurements. Approximately 20,000 pre-mitigation radon test results were used in development of this map.
4 pCi/L is the EPA action level for indoor radon.

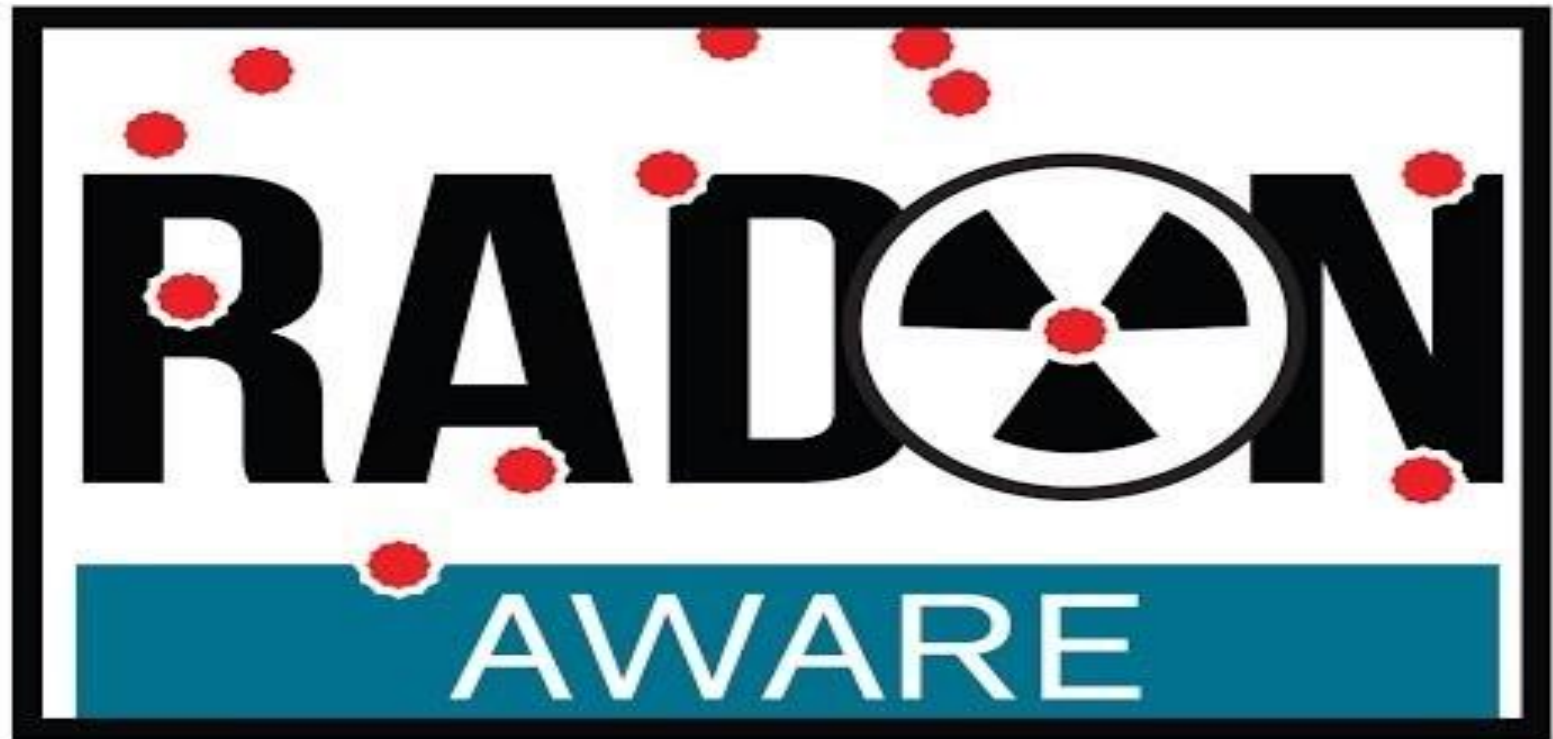
ZONE 1 High radon potential
(probable indoor radon
average >4pCi/L)

Radon Causes Cancer



Radon Exposure is Avoidable

- Radon Aware video



Radon Awareness is Growing

IS YOUR HOME SAFE FROM RADON?

What is radon? Radon is a naturally occurring invisible, odorless gas that comes from the natural radioactive breakdown of uranium in soil, rock, and water.

Radon can enter any home Radon is drawn in through cracks and gaps in the foundation.

Radon occurs naturally in soil Due to the geology of Colorado, homes in our state have higher levels of radon than the national average.

200 chest x-rays That's more than three per week, per person, per year.

Radon causes cancer Every year in the U.S., over **20,000** people die from lung cancer caused by radon.

Testing for radon is easy Ask your home inspector about radon and request a radon test.

Fixing the problem is easy and inexpensive Systems can be added to homes.

Improvement cost comparison

Contact Your Health Department

Boilder County Public Health
701 1st Street, Suite 100
Boulder, CO 80501
303.440.1100
boildercountyhealth.org

Broomfield Public Health & Environment
701 1st Street, Suite 100
Broomfield, CO 80020
303.402.1100
broomfieldpublichealth.org

Denver Department of Public Health & Environment
1001 17th Street, Suite 100
Denver, CO 80202
303.733.1100
denverhealth.org

Jefferson County Public Health
1001 17th Street, Suite 100
Denver, CO 80202
303.733.1100
jeffersoncountyhealth.org

Colorado Department of Public Health & Environment
1001 17th Street, Suite 100
Denver, CO 80202
303.733.1100
coloradohealth.org

This Real Estate Professional is

RADON

AWARE

Public Health Radon Reduction Roadmap

*Recommended Practices and Policies to
Reduce Exposure to Radon in our Communities*

January 2018

You Can Help

Tier 1: Outreach & Education

For communities with little or no awareness of radon risks.

| Option | Venue or Method | Example |
|--|---|--|
| Distribute free radon tests kits or coupons coupled with educational materials. These cost-effective tests provide valuable information, especially when paired with follow-up assistance to understand and take action on results. Educational materials can target selected stakeholders, such as women, doctors, real estate agents, building code officials, contractors, etc. | Health fairs Community events Local public health agencies Building departments Public buildings (e.g. libraries) | Wyoming Department of Health Radon Education and Outreach: https://health.wyo.gov/wyoming-homes-tested-radon |
| Provide free radon test kits or coupons with free in-home air quality assessments. | Local public health agencies Housing programs Rental housing permit programs CSU Extension Energy reduction/savings programs | Fort Collins, Colorado: https://www.fcgov.com/healthyhomes/homeassess.php |
| Provide free radon testing and inspection services for residences upon request. | Local public health agencies Housing programs Rental housing permit programs | New Hampshire Department of Health and Human Services: http://www.gencourt.state.nh.us/rsa/html/X/125/125-9.htm |
| Provide residential radon gas consultations. | Local public health agencies Housing programs CSU Extension Energy reduction/savings programs | Las Animas-Huerfano Counties District Health Department: https://www.la-h-health.org/index.php/services/epw/monmental/health/26-about.html |
| Provide digital signage or videos with radon messages in medical clinics and offices. | Local public health clinics (e.g. WIC, immunizations) Hospital waiting rooms Doctors' offices Pharmacies | Montana local public health departments: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4358189 |
| Educate stakeholders about radon. Post video(s) or provide a link on website to Radon Aware videos for homebuyers, real estate professionals, builders, and decision makers. | Local public health agencies Housing programs Social media (e.g. Facebook, Twitter, etc.) Real estate websites (e.g. Zillow, Trulia, etc.) | PHR3 Radon Aware videos: https://www.youtube.com/playlist?list=PLx8moSeWY1JWTPjXlwevnd7yS8d7YM7zu |



Tier 2: Social Mobilization

For communities with established radon education and outreach programs that want to move towards incorporating radon policies and/or codes into city/county codes.

| Options | Venue or Method | Example |
|--|--|--|
| Distribute an easy-to-use homeowner self-inspection checklist for assessing the home radon mitigation (reduction) system. | Health fairs Community events Local public health agencies Building departments Housing departments Public buildings (e.g. libraries) | Pennsylvania Consumer Radon Mitigation System Checklist: http://www.dep.pa.gov/Business/RadiationProtection/RadonDivision/Monitoring/Documents/2949-23-04E4430.pdf?Mobile=1&source=32FBusiness%2FRadiationProtection%2FRadonDivision%2FMonitoring%2F%5FLayout%2Fmobile%2Fview%2F.aspx%3Furl%3Dccbsaebod%2520b9d7%2520d434 |
| List "Radon Mitigation (reduction) System" as a permitted retrofit option for basement finishing to fulfill energy efficiency requirements. | Building code Energy code Other codes | Boulder County, Colorado, Build Smart Checklist: https://assets.bouldercounty.org/wp-content/uploads/2017/03/buildsmart-checklist-2015.pdf |
| Require a radon test as part of a basement finishing permit, regardless of the retrofit option selected. | Building code Energy code Other codes | Boulder County, Colorado, Build Smart Checklist: https://assets.bouldercounty.org/wp-content/uploads/2017/03/buildsmart-checklist-2015.pdf |
| Require installation of radon mitigation (reduction) systems that include design and installation be performed by a certified radon mitigation contractor. | Building code Energy code Other codes | New Jersey: http://www.njradon.org/download/sub07.pdf |
| Partner with local energy reduction/savings program to distribute test kits and review radon testing information with clients during energy audits of their homes. | Local public health agencies Housing programs CSU Extension Energy reduction/savings programs | Boulder County, Colorado, EnergySmart Program: https://www.bouldercounty.org/environment/healthy-home/radon/testing |
| Test affordable housing for radon. | Local public health agencies Housing programs City/county codes | Boulder County, Colorado: https://www.bouldercounty.org/files/miles/housing U.S. Housing and Urban Development (HUD): https://www.hud.gov/sites/document/13-03HSGN.PDF |



Tier 3: Institutional Change & Policy

For communities ready to incorporate policies and practices that directly reduce radon exposure into city/county codes, programs, and practices.

| Options | Venue or Method | Example |
|--|---|--|
| Require owners of rental units to inform renters, in writing, before a lease is signed if the rental space has been tested for radon and that a radon hazard may exist. If the rental unit hasn't been tested, require that the renter can conduct a do-it-yourself radon test or ask the owner to test by hiring a licensed radon contractor. If a renter conducts a radon test in the rental unit and results show high radon levels, require the renter to inform the building owner, in writing. | Rental housing permit programs Housing programs City/county codes | Illinois Radon Awareness Act: http://www.ileg.gov/legislation/ilc/s/ilcs3.asp?ActID=2913&ChapterID=37 |
| Require real estate professionals to provide homebuyers with radon information during real estate transactions. | City/county codes CO Division of Real Estate | Fort Collins, Colorado: https://www.fcgov.com/airquality/radonpolicy/ |
| Require radon testing in all residential rental properties, and unless a mitigation system is installed, allow tenants to request a retest every 10 years. If the radon level is 4 pCi or higher and is not mitigated, allow the landlord or tenant to end the lease with at least 30 days' notice. | City/county codes Housing programs Rental housing permit programs | Maine: http://www.maine.gov/dhhs/mec/s/environmental/health/rad/radon/documents/2013%20tipsheet%2011.pdf |
| Require single-family home sellers to test for radon and disclose results prior to sale. | City/county codes CO Division of Real Estate | Montgomery County, Maryland: https://www.montgomerycountymd.gov/green/air/radon.html |



Together, we can help Colorado residents create healthy homes.



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