



Radon Health Risks

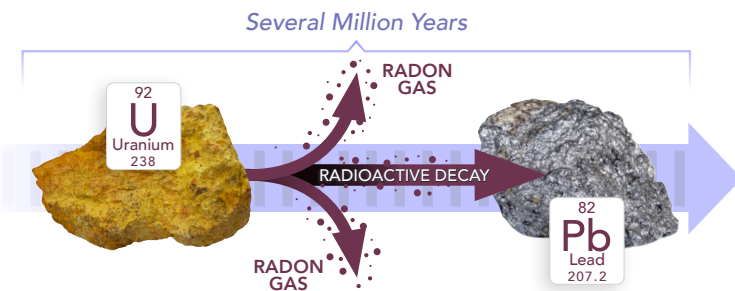
What is Radon?

- Radon is a naturally occurring radioactive gas found in very small quantities in soil and minerals. It is a biproduct of decaying uranium and thorium.



What is a radioactive material? A radioactive material is something that contains unstable radioactive isotopes—it breaks down spontaneously into other particles. When it breaks down, it releases very high-energy particles that can be harmful. These particles are called radiation.

- Uranium and thorium are natural metals that are radioactive. Over millions of years, these metals transform into lead, a more stable element.
- Radon gas is an intermediate product of radioactive decay, but it breaks down quickly—in just a couple of days.

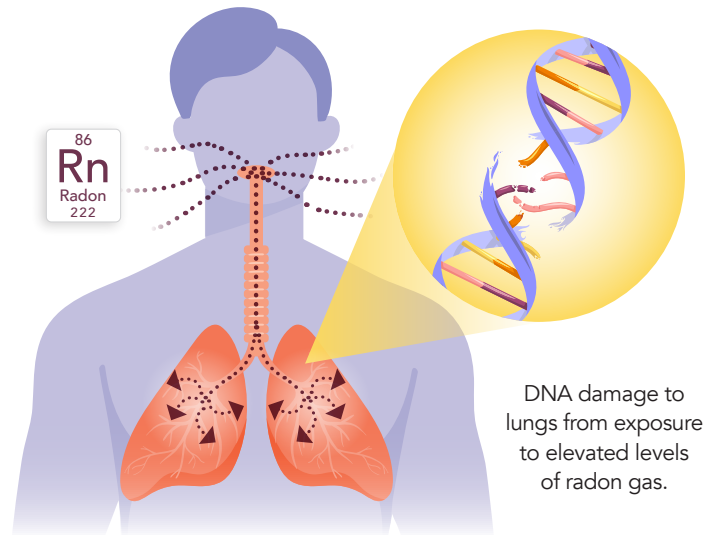


What Happens When You're Exposed to Radon?

Studies of miners working underground, where radon concentration is highest, show that exposure to elevated levels of radon gas can cause lung cancer. In some places, radon gas can migrate from the ground as soil gas and into buildings and cause elevated levels in living areas.

When you breathe air contaminated with radon, the radon atoms lodge in your lungs. The atoms break down and release high-energy *alpha* particles that can damage your DNA, which can lead to lung cancer. After DNA damage in the lungs, several years can pass before cancer develops.

Radon is the second highest cause of lung cancer in the U.S., causing an estimated 21,000 deaths per year.



Radon and Tobacco Smoke: A Deadly Combination

While radon raises the risk of lung cancer for nonsmokers, the risk is even higher for people who smoke or used to smoke. Studies show that the risk of lung cancer associated with radon is 10 times greater in smokers and former smokers than people who have never smoked. Since smokers already face a higher risk of lung cancer, exposure to radon compounds this risk.

Test for Radon

Property owners and managers are strongly advised to test for radon in houses or ground floor apartments. If tests show radon levels of 4 pCi/L or higher, contact your State radon office or a qualified contractor to find out how to reduce radon contamination.

Resources

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Kang, J. K., Seo, S., & Jin, Y. W. (2019). Health effects of radon exposure. *Yonsei Medical Journal*, 60(7), 597–603. <https://doi.org/10.3349%2Fymj.2019.60.7.597>

United States Environmental Protection Agency, *Health Risks of Radon*, <https://www.epa.gov/radon/health-risk-radon>.

Vogeltanz-Holm, N., & Schwarz, G. G. (2018). *Radon and lung cancer: What does the public really know?* *Journal of Environmental Radioactivity*, 192, 26–31. <https://doi.org/10.1016/j.jenvrad.2018.05.017>, <https://pubmed.ncbi.nlm.nih.gov/29883874/>