

14 ways you can help prevent cancer



Recommendation 10 for Individuals on Indoor radon gas

Inform yourself about radon gas levels in your area by checking a local radon map. Seek professional help to measure levels in your home and, if necessary, reduce them.

Key summary

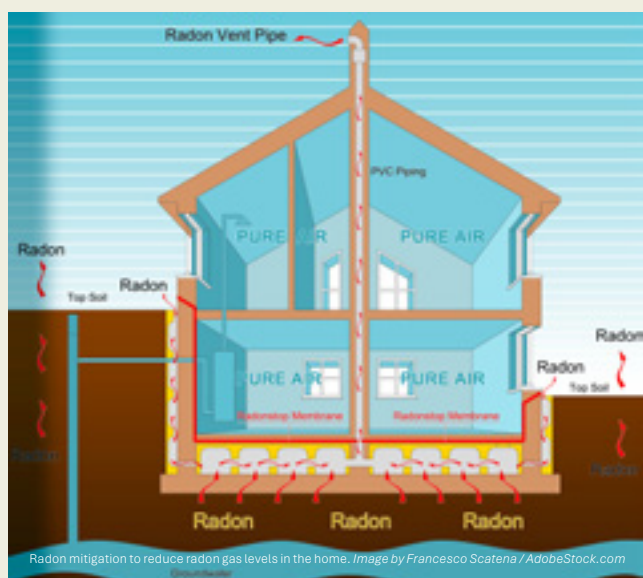
- Radon is a radioactive gas that arises from the decay of uranium in soil, rock, and water. When inhaled, radon and its decay products can build up in the lungs, where they release radiation that can damage lung cells and lead to an increased risk of developing lung cancer.
- Globally, exposure to radon is the second leading cause of lung cancer, responsible for about 19,000 lung cancer deaths in Europe every year.
- To lower your risk of lung cancer from radon, check a local radon map and get your home tested by a professional. If the test shows high levels of radon, seek professional help to lower them.

Radon and cancer

Radon is a radioactive gas produced by the decay of uranium found in soil, rock, and water. It is colourless and odourless, so it can only be detected using specialized equipment.

Radon can accumulate to high levels indoors. In Europe, exposure to radon is a significant public health concern, accounting for about 12% of lung cancer cases every year and about 19,000 lung cancer deaths every year. The prevalence of radon varies significantly across the European Union (EU), and certain regions have higher levels due to geological factors.

Long-term exposure to radon is primarily linked to lung cancer because inhaled radon particles can damage lung tissue. Although the risk is notably higher for people who smoke, people who have never smoked are also at risk. This makes radon a critical issue for cancer prevention for everyone.



Actions to reduce your cancer risk

Test your home for radon. Radon is colourless and odourless, so it is impossible to detect without proper testing.

- Check a local radon map, and hire a professional to test your home. Testing is recommended for all homes, especially those in high-risk areas.

Mitigate high radon levels. The World Health Organization recommends that radon levels do not exceed 100 Bq/m³ (becquerel per cubic metre). If the recommended maximum radon level is different in your country, it should not exceed 300 Bq/m³, as per EU legislation. If radon levels exceed this level, you need to reduce them to protect your health.

- If tests show high levels of radon, hire a professional to reduce them. This may involve improving ventilation, sealing cracks in floors and walls, or installing a radon mitigation system.

Do not smoke tobacco, and avoid second-hand smoke. Smoking significantly increases the risk of lung cancer, especially when combined with exposure to radon.

- If you smoke, seek support to quit. Avoid exposure to second-hand smoke, to further reduce your cancer risk.

Maintain good indoor air quality. Good ventilation can help to reduce radon levels and improve overall air quality.

- Open windows when the weather and outdoor air quality permits, and ensure proper airflow in your home.

Educate yourself and others. Understanding radon and its risks empowers you to take action.

- Share information about radon testing and mitigation with family and friends. Encourage them to test their homes as well.

Co-benefits for the prevention of noncommunicable diseases (NCDs) with similar risk factors and opportunities for health promotion

Reducing exposure to radon not only lowers the risk of lung cancer but also benefits overall health. Improving indoor air quality to reduce radon levels can alleviate respiratory issues, such as asthma. Addressing radon also complements efforts to stop smoking, because both smoking and high levels of radon increase lung cancer. Living in a healthy environment with low levels of radon can positively affect mental well-being. Encouraging radon testing and making healthy lifestyle choices fosters a culture of prevention that reduces the incidence of multiple NCDs. Integrating radon risk reduction into public health strategies enhances overall health outcomes.

Myths versus Facts

MYTH: Exposure to radon does not pose a significant health risk.

FACT: Radon contributes to about 19 000 lung cancer deaths in Europe every year.

MYTH: Only older homes have a high radon risk.

FACT: Newer homes can also have high levels of radon, because radon levels depend on the geological of the ground beneath buildings.

MYTH: Testing for radon is expensive and complicated.

FACT: Radon testing is simple and affordable in most countries. Testing is crucial to identify and address exposure to radon.

MYTH: It is not possible to reduce radon once a house has been built.

FACT: Removing soil gas from under the foundations of houses reduces indoor radon.

Specific target groups

Low-income families: They often live in rental properties where radon testing and mitigation are neglected due to financial constraints.

Renters: Individuals in multi-unit buildings or basements may face higher risks and have less control over their environments.

Children: Those in day-care centres or schools in radon-prone areas are particularly vulnerable.

Elderly residents: Older adults living in long-term care facilities may experience prolonged exposure to radon.

Occupational groups: Workers in mining, tourism caves, and water treatment facilities may face higher risks of exposure to radon.

Geographical variability: Certain regions, particularly those with high natural uranium content in the soil, may have elevated radon levels, requiring targeted interventions.

Learn about policies that help support reducing your radon risk

Effective policies that support radon mitigation play a significant role in reducing the risk of cancer and improving overall health. Some examples are:

- **National radon testing programmes:** Subsidized or free radon testing kits help more people identify and address high radon levels.
- **Radon-resistant building codes:** Building codes mandate radon-resistant construction techniques to lower radon levels and reduce the costs of radon mitigation.
- **Public awareness campaigns:** Educational campaigns to inform the public about the risks of radon and the importance of testing and mitigation.
- **Targeted interventions for high-risk areas:** Focused efforts, such as subsidizing radon testing and mitigation systems, in regions with high radon levels, to protect those at a higher risk. This promotes equity.
- **Integration with smoking cessation programmes:** Combine radon education with smoking cessation initiatives to address the combined risks of lung cancer from radon and tobacco smoke.

References

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