General Radon Gas Information

- Common Questions and Answers About Radon Gas
- Health Canada's Guideline for Action
- Homeowner Funding Resources

General Radon Gas Information

What is the health risk of Radon Gas exposure?

Radon exposure is the #1 cause of lung cancer in non-smokers and the second leading cause of lung cancer in smokers.

What is Radon Gas?

Radon is a radioactive gas that occurs naturally in the ground when the uranium in soil and rock breaks down. When radon is released outside, it is diluted with the outdoor air and is not a concern. But when radon enters enclosed spaces like our homes it may accumulate to high levels and become a potential health risk.

How does radon exposure cause lung cancer?

Radon is inhaled into our lungs when we breathe. Once radon is in our lungs, it continues to decay into radioactive particles that release small bursts of energy. The lungs' cells are damaged when this energy strikes the lung tissue. Over time, as the damaged cells reproduce, they have the potential to cause lung cancer.

How are we exposed to Radon Gas?

Radon is an invisible and odorless gas that enters our homes where our houses' foundations contact the ground. It seeps in through openings, like cracks in the foundation walls and in floor slabs, floor drains, sump pits, construction joints, gaps around service pipes, support posts, window casements, or cavities inside walls. The only way to know if your home has high radon is to test.

General Radon Gas Information

Health Canada's Guidelines for Action

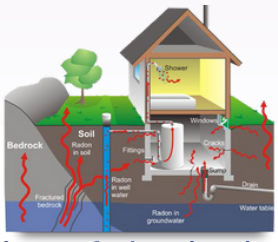
There is no safe level of radon.
Health Canada has created action level guidelines to help you decide if mitigation of your home is needed. The table below indicates when to take action to reduce high radon in your home.

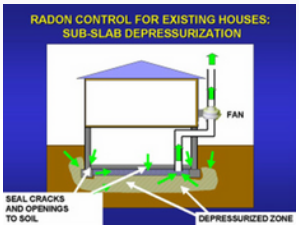
Radon Level in Becquerel* per cubic metre (Bq/m^3)	Recommendation**
Less than 200 Bq/m^3	No action required
200 Bq/m^3 – 599 Bq/m^3	Mitigate within 2 years
600 Bq/m^3 or more	Mitigate within 1 year

*Radon is measured in Becquerels. A Becquerel is a unit that measures the amount of ionizing radiation released when a radioactive isotope such as radon begins to decay.
**The World Health Organization (WHO) action level is 100 Bq/m3 & the US action level is 150 Bq/m3.

Radon Gas Prevention

Research by public and private organizations and years of firsthand mitigation experience have proven that caulking and sealing foundation openings is not enough. The most effective methods are when sealing is done together with other mitigation steps.
One of the most common mitigation methods is active soil depressurization (ASD). It has been proven to be a cost-effective and reliable method for radon reduction.





The ASD system typically consists of plastic pipes connected to the soil through a hole in your floor slab, through a sump lid connection, or beneath a plastic sheet in a dirt or gravel crawl space. Attached to the pipe is a quiet, continuously operating fan that draws the radon-laden soil gas from beneath the foundation and vents it outside before it can enter your home.
This is a job usually performed by trained mitigation specialists. For help finding a mitigation specialist in your area, please contact the Six Nations Environment Office:
Tel/Voicemail: (226) 227-2103
Text: (548) 328-2422
E-mail: enviro@sixnations.ca

General Radon Gas Information

Lung cancer General Information

Lung cancer is a disease where the cells in the lungs grow in an uncontrolled way to form a tumor. This can make it hard for a person to breathe and can be deadly if not treated.

To prevent lung cancer, it is important to avoid smoking or being around secondhand smoke because smoking is the leading cause of lung cancer.

It is also important to avoid exposure to things that can cause lung cancer such as radon, asbestos, and air pollution. Eating a healthy diet, getting regular exercise, and limiting alcohol consumption may also help reduce the risk of developing lung cancer.

Six Nations Lung Cancer Stats

For the period between the years 2013 – 2018 cancer of the respiratory system was one of the top 3 most diagnosed cancers amongst Six Nations community members.

Reference:
Cancer Care Ontario, "Lung Cancer," https://www.cancercareontario.ca/en/cancer-information/cancer-type/lung/lung-cancer
Public Health Agency of Canada, "Lung Cancer," https://www.canada.ca/en/public-health/services/diseases/lung-cancer.html

General Radon Gas Information

Lung cancer General Information

Not everyone exposed to high levels of radon will develop lung cancer. Your risk level depends on 3 factors:

1. The level of radon in your home.
2. How long you are exposed to radon.
3. Your smoking habits.

Together radon exposure and tobacco use can significantly increase your risk of lung cancer.

Tobacco Use & High Radon Level	Risk of Getting Lung Cancer
Tobacco Use: 1 in 10	
Tobacco Use & Long-Term Exposure to High Radon Level: 1 in 3	
Non-smoker's Lifetime Lung Cancer Risk to High Radon Level: 1 in 20	

General Radon Gas Information

Homeowner Funding Resources

Senior Relief Fund – up to $5000

- Six Nations' band member on reserve
- >55 years old
- Have not used their allotted amount of money in the current fiscal year.
- Owner of the home (renters not eligible)
- Repairs costing >$5000 would be covered by the homeowner or other funding sources.
- Contact: Kim Jones, Health Advocacy Officer
- Organization: Home & Community Care

Jordan's Principle

- Supports First Nations Children with unmet health, social, or educational needs.
- Contact: Six Nations Health Services, Child & Youth Health Office: 519-445-4983
- Organization: Six Nations Health Services

To learn more about Radon, scan the QR code:

Or by visiting: https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/radon.html