

Radon Detector Loan Program for home radon screening



Measure your radon level at home.

takeactiononradon.ca

Table of Contents	Page
Introduction to the Radon screening device	3
Understanding the Radon screening device	4
Using the Radon screening device	5
Device Troubleshooting	7
Kerri’s Story	8
Radon: A Radioactive Discovery	9
Basics of Radon	10
Health Effects of Radon	11
Radon Levels in Canada	12
Radon in Buildings and potential entry points	13
Long-term Radon test	14
Reducing Radon levels	15
Understanding Radon reduction methods	16
Finding a Certified professional to help	17
Additional information	18

Legal Disclaimer of Liability

A long-term radon test (minimum 91 days) is recommended by Health Canada regardless of the result of this radon screening test. This radon screening test indicates the potential of radon in your home. Since radon fluctuates continuously, a long-term test (minimum of 91 days) during the heating season is recommended.

Read the information on how to use the detector before beginning the screening process. The *Take Action on Radon* or any organization related to this program do not guarantee the function or accuracy of the device.

INTRODUCTION to the RADON SCREENING DEVICE

Thank you for borrowing this radon screening kit. Read on to learn about radon and how to use the detector.

If you have any questions, contact Take Action on Radon or Health Canada. Contact information can be found at the end of this booklet.



Ask Us! by Phone: 905-653-READ (7323)

Ask Us! by Text (SMS): 647-694-2135

Email Us! at librarian.librarian@vaughan.ca

Call or text during these hours:

MON-THU: 9 am - 9 pm, FRI: 9 am - 6 pm, SAT/SUN: 9 am - 5 pm.

UNDERSTANDING the RADON SCREENING DEVICE

The Radon Screening Program provides you with an opportunity to learn about radon, and to conduct a radon screening to help you understand how radon levels vary in your home. Radon levels can change, and so it is recommended to test your home for at least 3 months before drawing any conclusions about your radon level.

It is important to follow-up with a long-term radon detector once you're done with this kit. Learn where you can order a long-term radon test kit on page 14.

The top number is the average calculated from the time the device is reset.

The bottom number will change every few seconds. This is the average for 1 or 7 days as noted by the text on the left side.



The radon screening device in this kit is called a Corentium Home, by Airthings. It is an electronic device that measures radon.

USING the RADON SCREENING DEVICE

- 1** Gently press the RESET button on the back to start the screening (you may need to use a paper clip or pen).

Do NOT press the MODE button. It only changes the units.

- 2** Device will say CAL and count down. The display will flash with no numbers for the first 24 hours.



Disclaimer

This device is meant as a screening tool and a first step in measuring for radon. Regardless of the radon level, we recommend following up with a long-term radon test for at least 3 months during the heating season.

3

Place the radon screening device in a bedroom or living room on a bookshelf or end table in the lowest level of your home.



Place device out of reach of pets and children.



Do not put in direct sunlight or high moisture areas.



4

Leave the device in one spot undisturbed for as long as possible. Longer measurement periods will be more representative.

5

When you are finished your radon screening and are ready to return the device to the library, record the following information about your radon screening so you can refer to this information again.

- Date Started screening:
- Date Ended screening:
- Long Term Average:



6

Complete the anonymous online survey.
https://healthcanada.qualtrics.com/jfe/form/SV_80uIJ5PWWK44tbU?Q_Language=EN

Scan to go to survey link



Confirm the results of this screening with a long-term test kit.

Purchase at takeactiononradon.ca/test/radon-test-kit



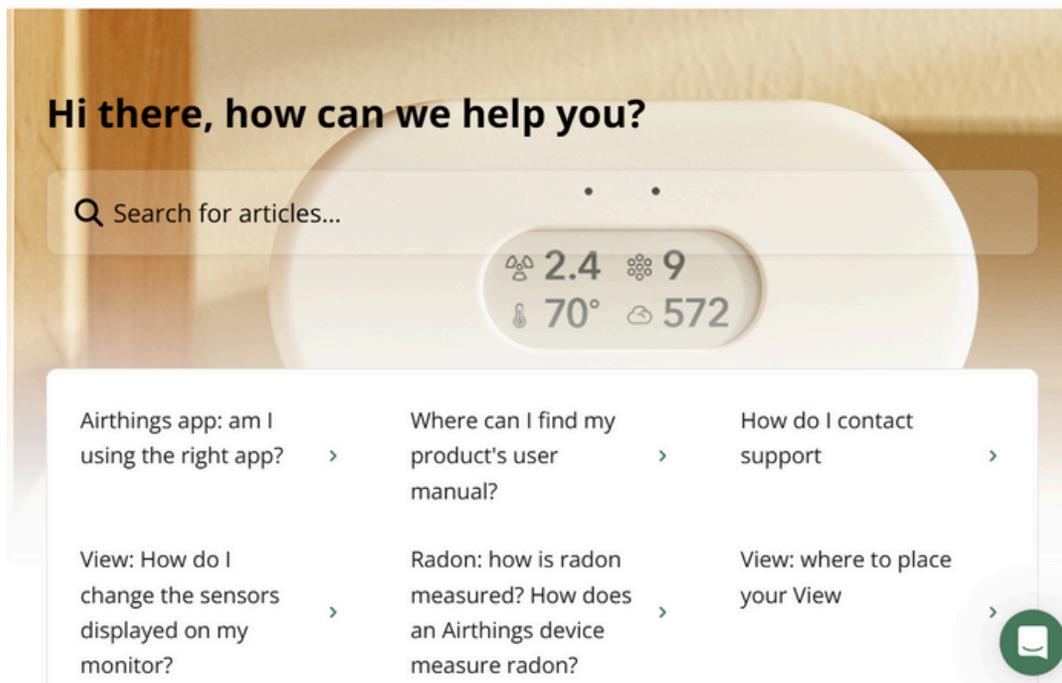
DEVICE TROUBLESHOOTING

Airthings has a great FAQ and Troubleshooting section on their website.

Go to: help.airthings.com/en/



Back to Airthings.com English ▾



Contact: support@airthings.com

+1 (866) 222-2117

Kerri's Story



Kerri was a young mother of three, healthy with no smoking history. She was experiencing symptoms similar to pneumonia when she attended a presentation by the Saskatchewan Lung Association and heard about radon and lung cancer. As a result, she advocated with her medical team to evaluate the possibility she had lung cancer. She was then diagnosed with lung cancer with Stage 2 lung cancer. Because she had caught it early, she has been able to get treatment and has a more successful path for health.

The only risk for her lung cancer was radon exposure. She immediately determined to be an advocate to let others know about radon and to help prevent radon in others. As a real estate agent, she recognized the important role that Real Estate Agents have in raising awareness on radon.

Find more about Kerri's story online:

<https://www.homeradontest.ca/story/kerri>



1899 Radon was discovered at McGill University in Montreal by Ernst Rutherford and Harriet Brooks

1976-1980 In 1976 a Federal-Provincial Task Force on Radioactivity investigated high radon levels in Elliot Lake, ON. The result of this survey lead to an extensive radon remediation program to reduce radon levels in homes in Elliot Lake. Elliot Lake became the first city in Canada to address these concerns initiating development of the most widely recognized radon reduction system in the world, the “Active Sub-slab Radon Depressurization System”, became the most common and reliable system engineered to reduce radon levels in a building. This Canadian engineered solution is thanks to work of Luc Lance, Arthur Scott and others.

1988 The World Health Organization classified radon as a Group 1 carcinogen, with well-established links to lung cancer.

2007 Health Canada launched a national radon program and reduced the action level from 800 to 200 Bq/m³.

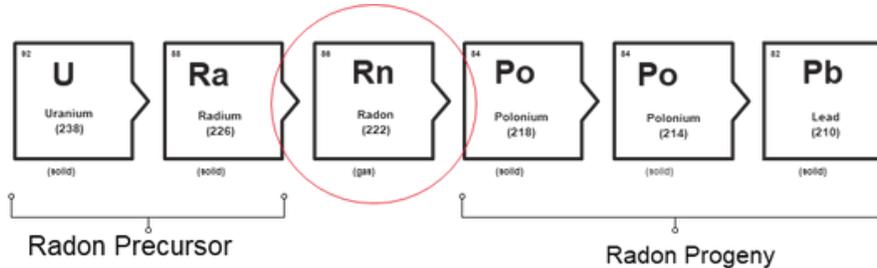
BASICS OF RADON



About Radon

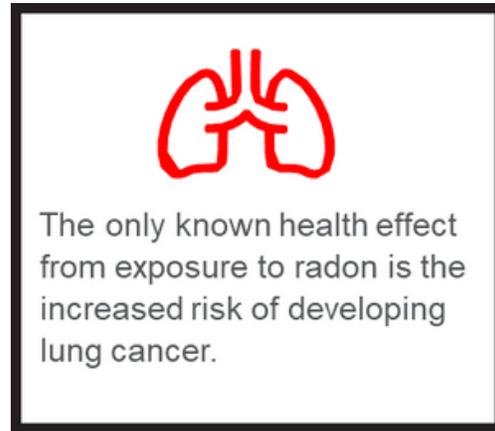
Radon is formed by the breakdown of uranium, which is found in all soil, water and rock. Since radon is a gas, it can escape from the ground. In outdoor air, radon is diluted very quickly and is not a concern. However, in enclosed spaces like homes, it can become trapped and accumulate to high levels, which creates a health risk

Radon Decay Chain



Once in your home, radon continues to decay, turning into radioactive polonium and lead (solids). When you breathe in radon and its radioactive progeny, the solids get deposited in the lungs and release alpha radiation, which damages the DNA in your lungs.

HEALTH EFFECTS OF RADON

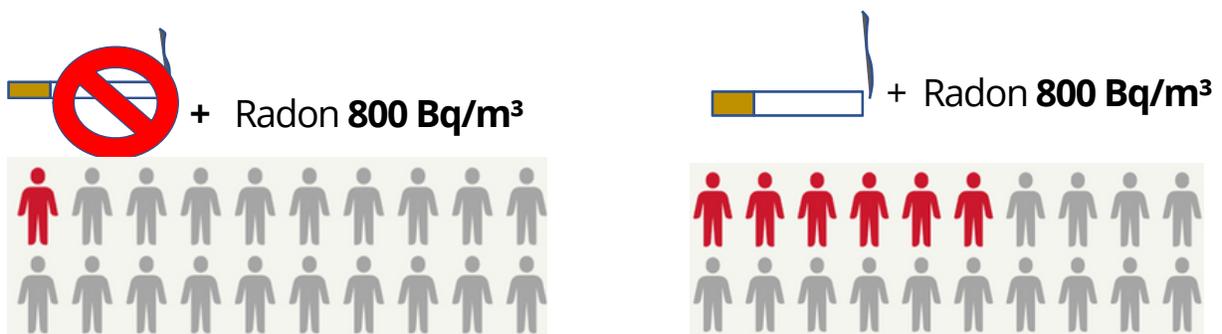


It is estimated that 16% of all lung cancer cases are radon-induced, which results in more than 3000 deaths per year in Canada.

Long term exposure to radon is the second leading cause of lung cancer for people who smoke and is the #1 cause of lung cancer for non-smokers.

Exposure to elevated levels of radon has only been linked to lung cancer and has not been linked to respiratory diseases such as asthma or COPD.

According to Health Canada, the lung cancer risk for lifetime exposure to radon at 800 Bq/m³ is 1 in 20.

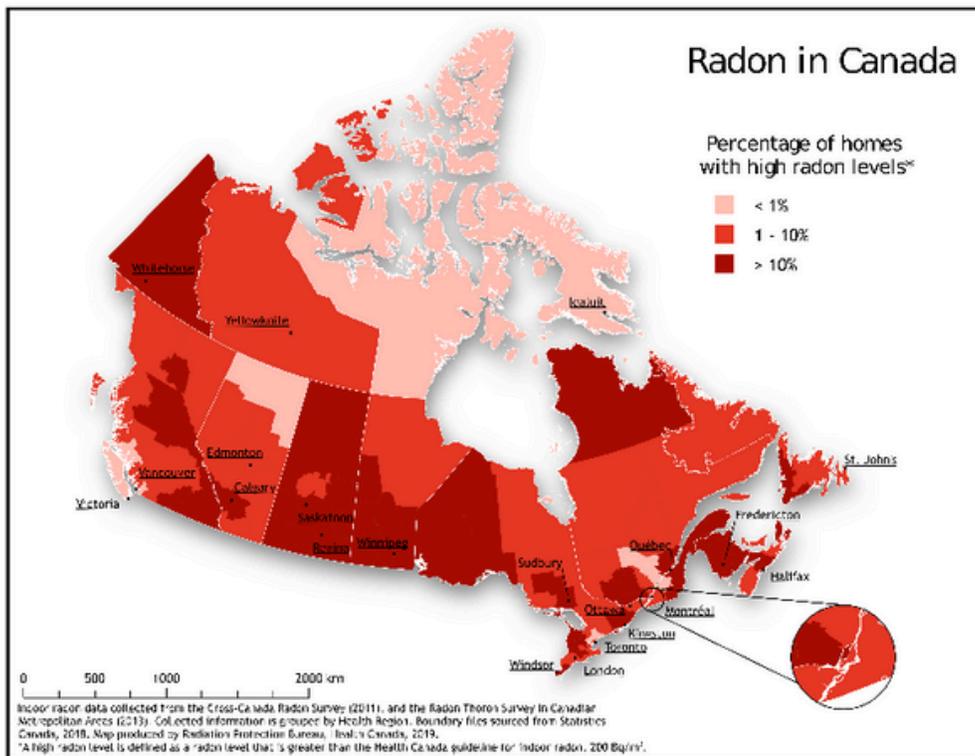


The lung cancer risk for smokers is even higher when exposed to high radon

RADON LEVELS IN CANADA

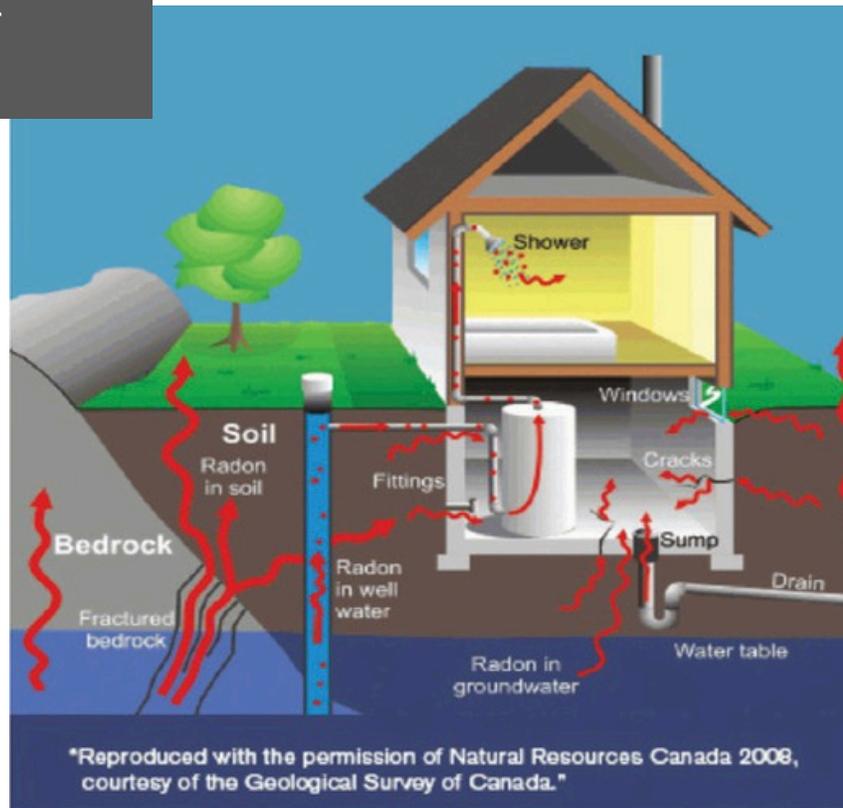


Health Canada's Cross-Canada survey found that no areas in Canada are free from radon issues.



The above map shows the potential for radon to be found in homes across Canada. It is based on uranium concentration in the soil.

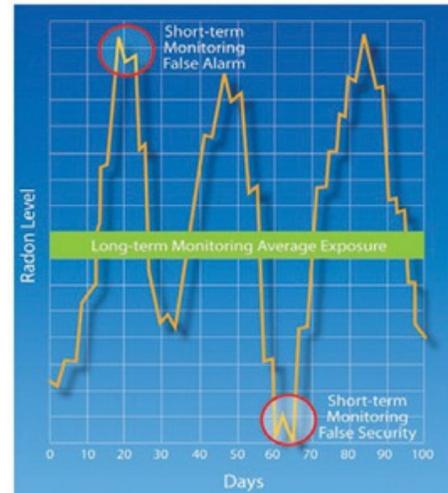
RADON in BUILDINGS and POTENTIAL ENTRY POINTS



Radon can get into any building that is in contact with the ground. Radon will not just stay in your basement; it will circulate in the air throughout your home.

Every home has some level of radon – the only way to know how much is to test. Several factors influence radon levels, and two houses built side-by-side can have different indoor radon levels.

LONG-TERM RADON TEST



Health Canada recommends long-term testing, as radon levels can fluctuate throughout the year. A long-term test will be more representative of your annual average exposure.

The easiest and least expensive way to test is to purchase a do-it-yourself approved long-term test kit that costs between \$30 and \$60.

These are alpha track long-term kits. Find a provider listed on the *Take Action on Radon* website: <https://takeactiononradon.ca/test/radon-test-kits/>



NOTE: some test kits do not include lab fees and shipping. You may want to check additional costs before purchasing.

Place the kit in your home for at least three months during the heating season, when windows and doors usually are closed.

After three months, send the kit back to the lab, and results will be emailed to you.

REDUCING RADON LEVELS



The Canadian Guideline for radon is **200 Bq/m³**. If you are above this level, Health Canada recommends you take action.

While the health risk from radon exposure below the Guideline is small, there is no safe level. Health Canada recommends reducing your exposure to as low as reasonably achievable.

The action levels are based on long-term exposure. You must do a long-term test of at least three months to determine if you are at risk.



200 - 600 Bq/m³
fix your home
within 2 years



Above 600 Bq/m³
fix your home
within 1 year

The library kit is a short-term screening; regardless of the results, we recommend you do a long-term test.

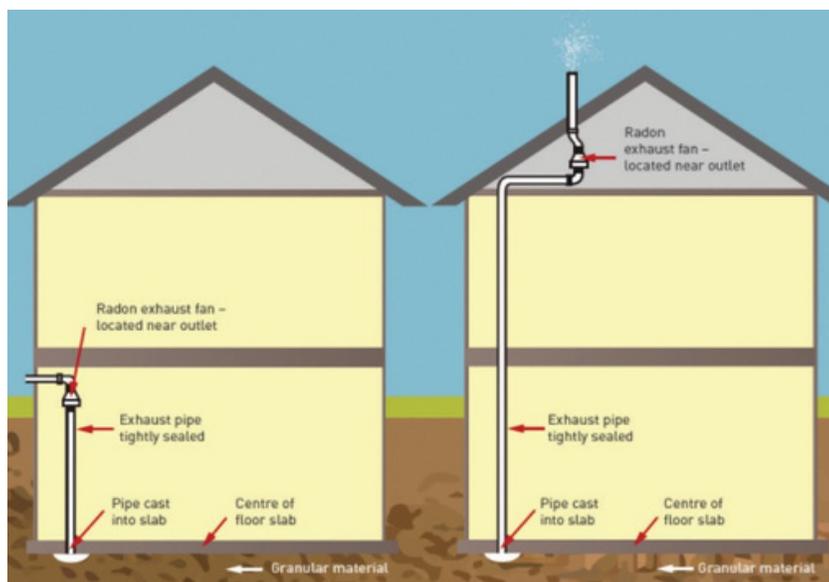
If your levels are below 200 Bq/m³, re-test every 5 years or after a major home renovation.

UNDERSTANDING RADON REDUCTION METHODS

The most common and effective method utilized is called sub-slab depressurization.

This method involves installing a pipe through the foundation and attaching a fan that runs continuously. The fan draws the radon gas from below the home and vents it to outside the home, where it is diluted to safe levels.

Increasing ventilation in the home and sealing cracks in the foundation are other ways to reduce your radon exposure but will generally only result in a small reduction in the radon levels in your home.



FINDING A CERTIFIED PROFESSIONAL TO HELP



High radon levels in all homes can be reduced by a certified mitigation professional.

The average cost to have this system installed by a mitigation professional is \$2,000-4,000, including materials and labour. It is recommended that you get multiple quotes and ask for references as you would for other types of home renovations.



To find a certified mitigation professional visit:
<https://c-nrpp.ca/find-a-professional/> or
call: 1-855-722-6777



Radon Detector Loan Program for home radon screening

ADDITIONAL INFORMATION

For more information on radon:

Health Canada – National Radon Program

<http://www.canada.ca/radon>

☎ 1.833.723.6600

✉ radon@hc-sc.gc.ca

Take Action on Radon

<https://www.takeactiononradon.ca>

info@takeactiononradon.ca

To find a certified mitigation professional visit:

Canadian National Radon Proficiency Program (C-NRPP)

<http://c-nrpp.ca/find-a-professional>



© All Rights Reserved. Radon - Reduction Guide for Canadians.

Health Canada, modified 2017. Adapted and reproduced with permission from the Minister of Health, 2019.

© All Rights Reserved. Radon: Is it in your home? Health Canada, modified 2017.

Adapted and reproduced with permission from the Minister of Health, 2019.

Rachael Malmberg, Lori Enns, Pierre Dubois and Kerri's image and stories used with permission.