

TAKE
ACTION
ON RADON



Introduction to Radon for Alberta Municipalities

Today:

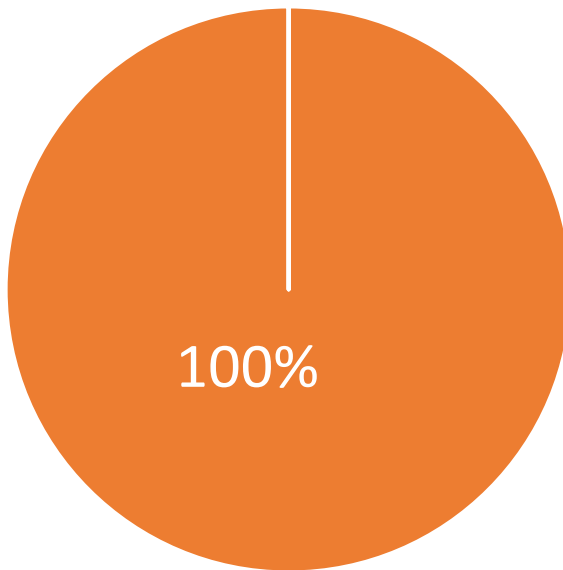
- Basics of Radon
- Answer common questions on radon such as:
 - What is the cost involved in testing for radon
 - What is the cost involved in mitigating radon
 - Who are trained contractors who can help citizens
 - Although it's a health issue, what part can municipalities have in helping citizens with reducing their radon exposure
- Radon Action Guides Developed by Health Canada
- Resources for Municipalities to use

TAOR is proud to unite members from across Canada, which encompasses the traditional territory of many First Nations, Métis Peoples, and Inuit whose ancestral footsteps and rights extend beyond the colonial boundaries that exist today. We respectfully honour these Peoples' rights, history, and relationships with this Land.



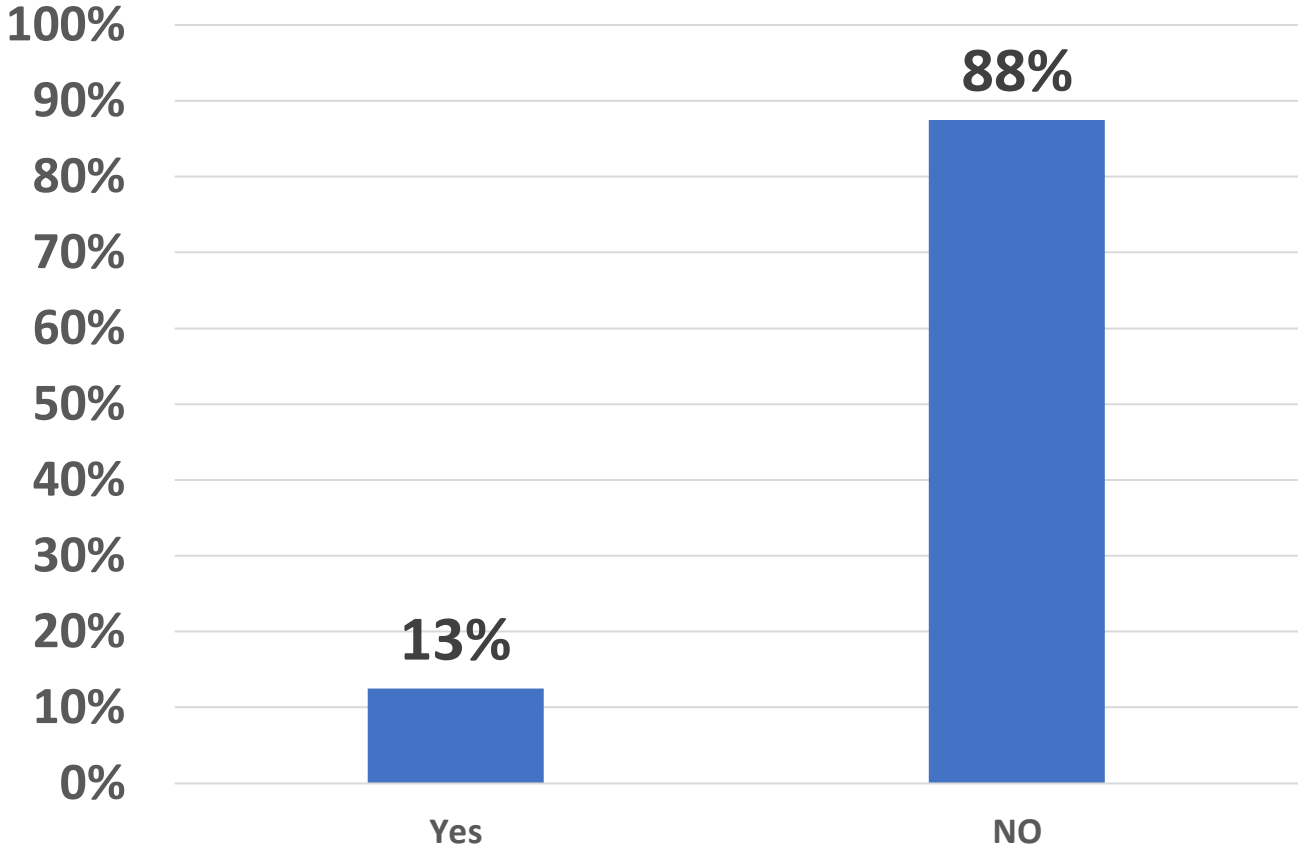
CARST Municipal Survey on Radon Awareness – Alberta

Are you aware of what radon is?



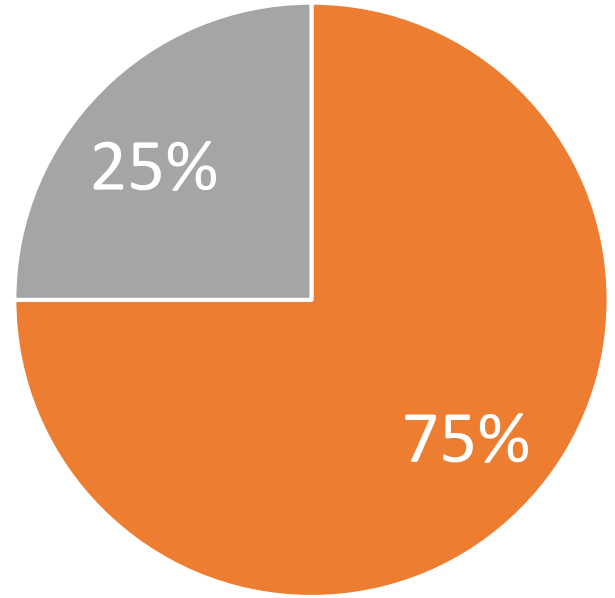
Yes NO

Were you aware that Health Canada has developed a Radon Action Guide for Municipalities?



CARST Municipal Survey on Radon Awareness – Alberta

Will you consider implementing public awareness initiatives after completing this survey?

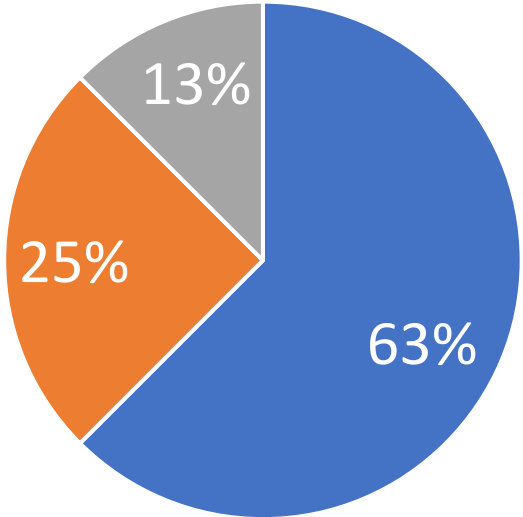


Yes No



CARST Municipal Survey on Radon Awareness – Alberta

Have you ever tested your municipal building(s) for radon?



- No, but we are interested in testing for radon
- No, we are not interested in testing for radon
- Yes, in the past 2 years



WHAT IS RADON?

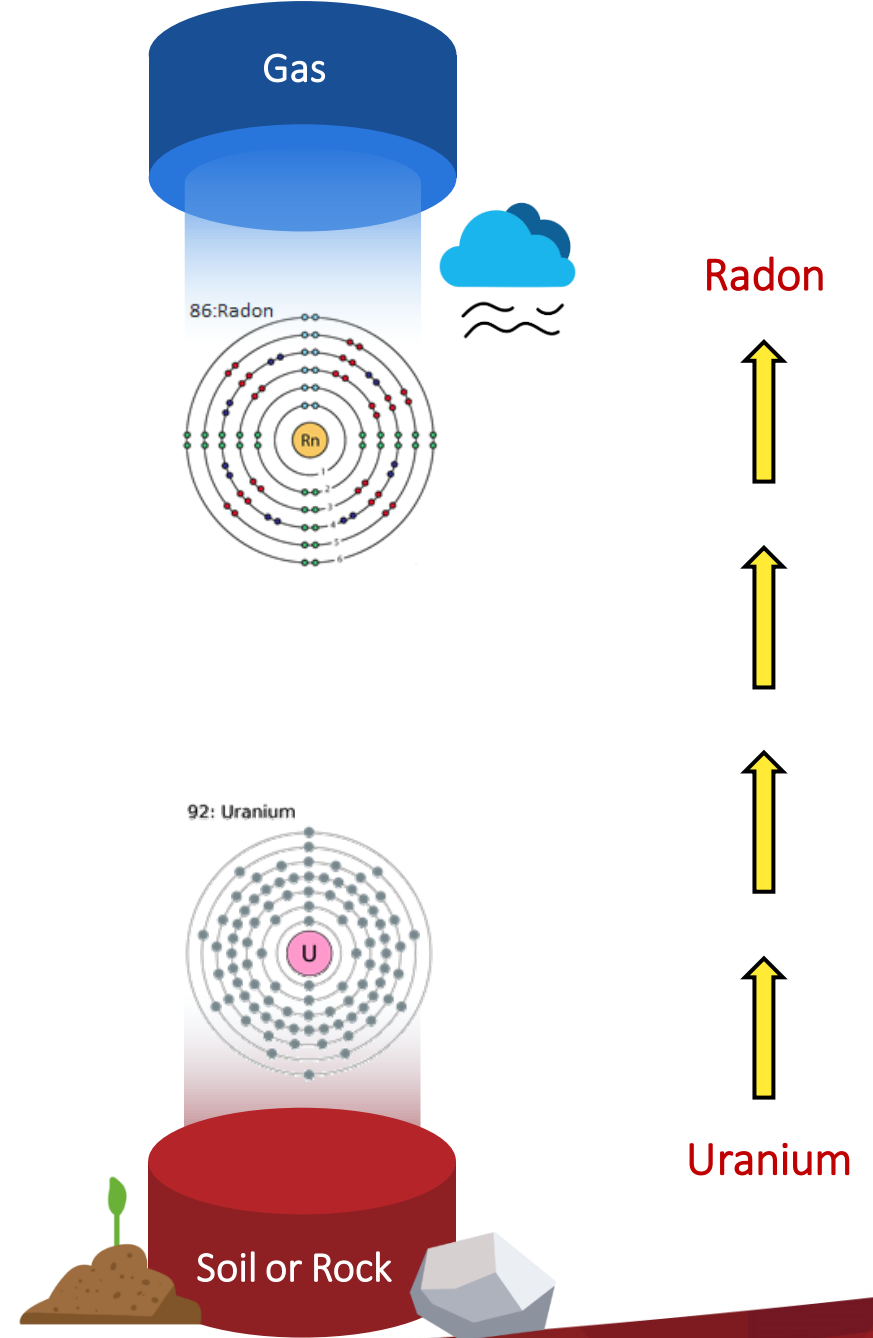
Radon is a **radioactive gas** that is produced naturally by the breakdown of uranium in the ground

Radon is:

Colourless

Odourless

Tasteless



NATURAL RADIATION IS EVERYWHERE

Radon represents almost **50% of a person's lifetime radiation exposure**



RADON – FEDERAL GUIDELINES

Radon Guideline in Canada

200 Bq/m³

Places where we spend
more than 4 hours per day



Remedial measures should be undertaken in a dwelling whenever the average annual radon concentration exceeds 200 Bq/m³



The higher the radon concentration, the sooner remedial measures should be undertaken

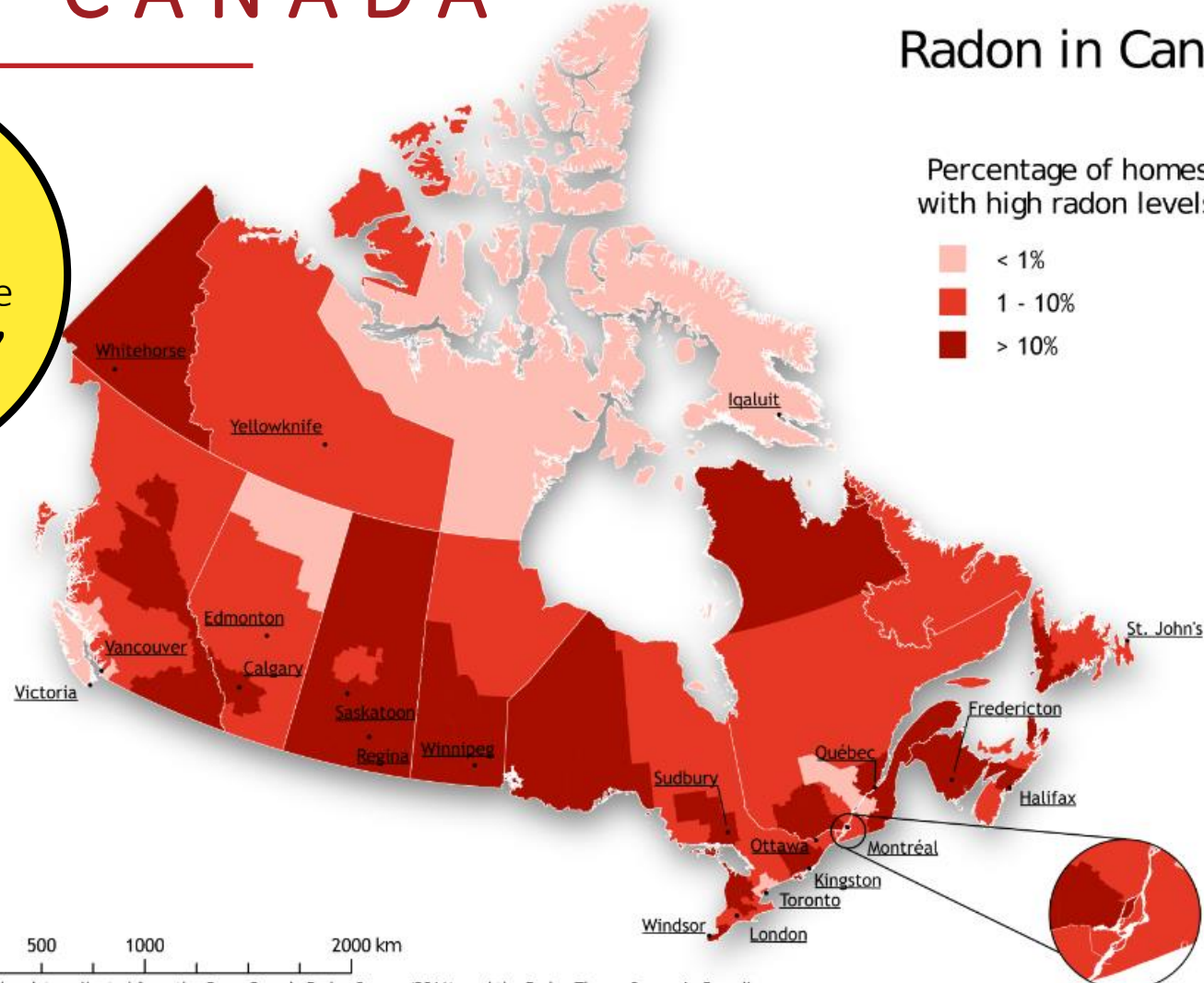


While the health risk from radon exposure below the Canadian Guideline is considered reasonable, there is still an associated potential health risk which is proportional to the exposure

RADON IN CANADA

There are no areas of the country that are 'radon free'

Two houses **built side-by-side** can have different indoor radon levels



Radon is found in every building in Canada

Indoor radon data collected from the Cross-Canada Radon Survey (2011), and the Radon Thoron Survey in Canadian Metropolitan Areas (2013). Collected information is grouped by Health Region. Boundary files sourced from Statistics Canada, 2018. Map produced by Radiation Protection Bureau, Health Canada, 2019.
*A high radon level is defined as a radon level that is greater than the Health Canada guideline for indoor radon, 200 Bq/m³.

WHERE CAN RADON BE FOUND?

Radon is in ALL buildings



**Residential
Homes**

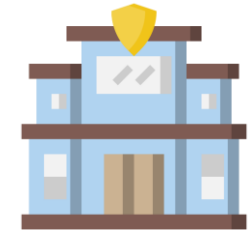
The biggest risk for radon exposure is at home where we spend most of our time.



**Workplace/
Offices**



**Schools/
Daycares**



Other buildings

HOW RADON ENTERS A HOUSE



Any cracks, opening or gaps in foundation walls or floors provide route(s) of entry into home



The air pressure inside a house is normally lower than the pressure underneath or around the foundation

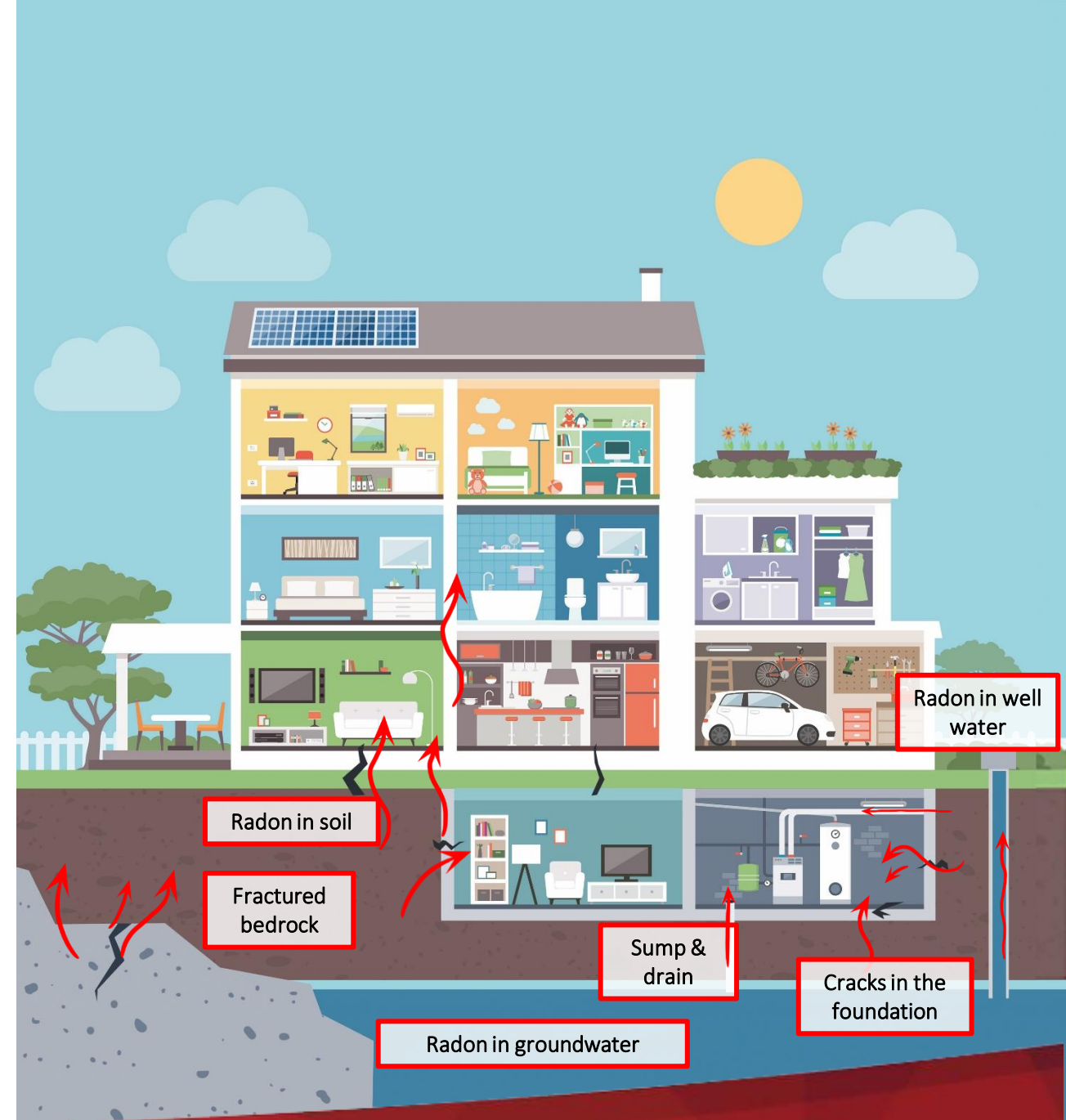
- *Windows, wood stoves, fireplaces, ventilation units, can all affect the pressure differential*



This difference in pressure acts like a vacuum drawing radon in through foundation cracks and other openings



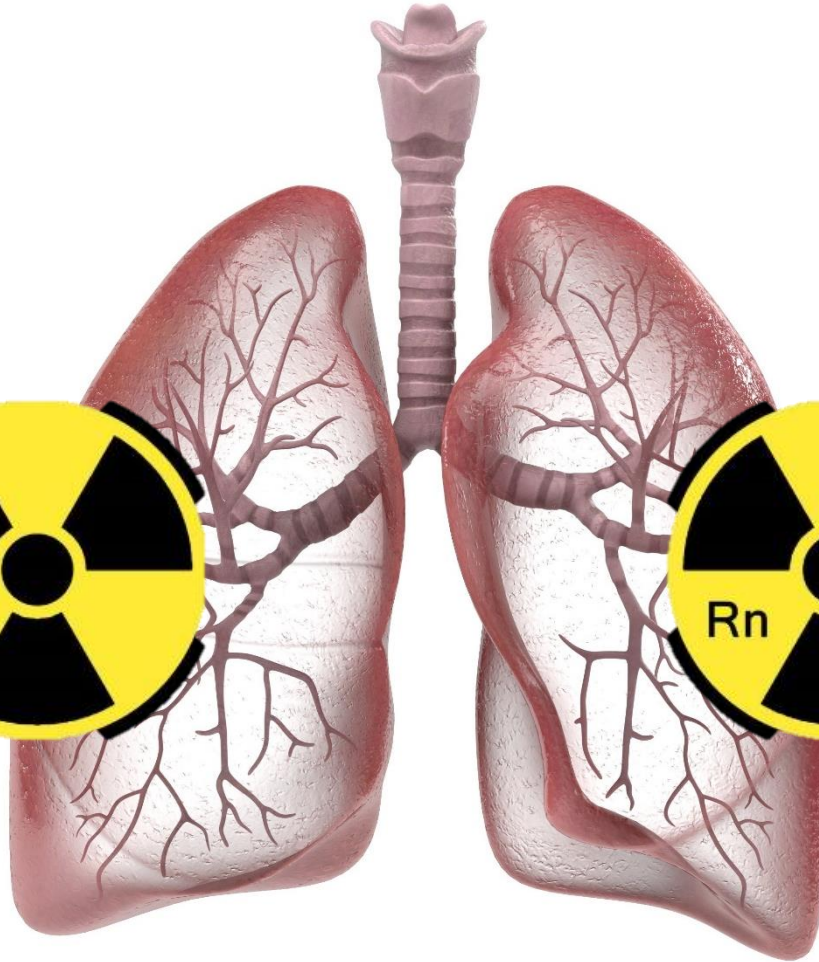
Once inside the home, radon can build up to dangerous levels



WHAT ARE THE HEALTH RISKS?



Radon is the
**#1 CAUSE OF
LUNG CANCER**
in non-smokers



Kills more than
3,000
Canadians each year

Radon is a known carcinogen (Group 1)

RADON EXPOSURE RISK COMPARISON

Annual Deaths in Canada:



of deaths from radon-induced lung cancer



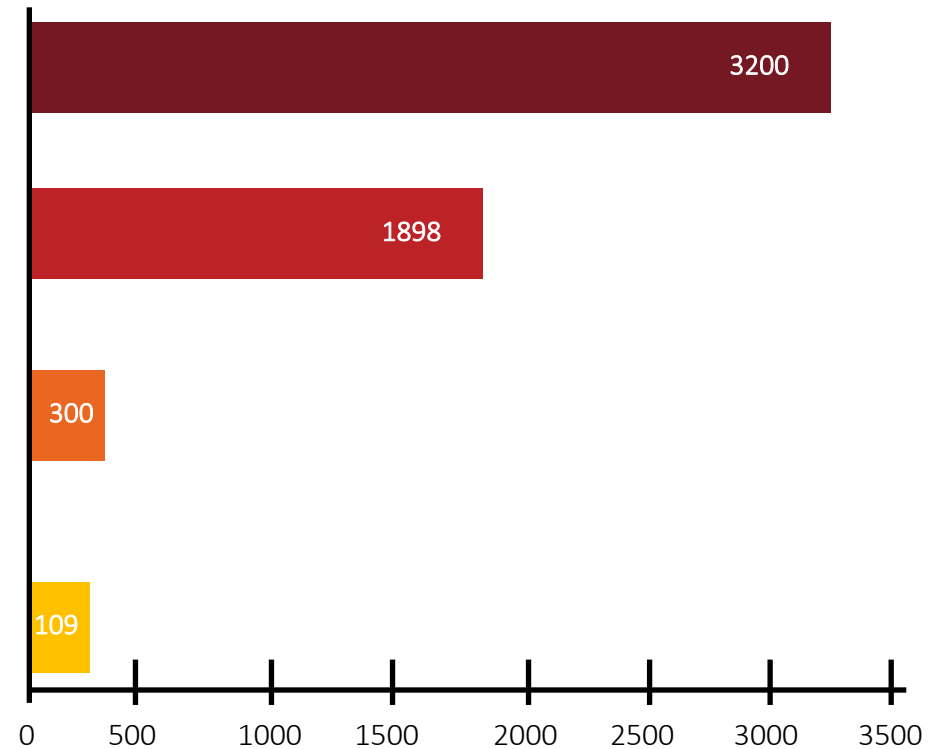
of deaths from car accidents



of deaths from carbon monoxide



of deaths from house fire



The risk of lung cancer from radon is significant but preventable.

References:

www.tc.gc.ca/en/services/road/publications/canadian-motor-vehicle-traffic-collision-statistics-2016.html
www.injuryresearch.bc.ca/wp-content/uploads/2017/10/Carbon-Monoxide-Oct-2017-Final-UFV.pdf
www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3510019501

HOW CAN YOU TEST FOR RADON?

Option 1: Purchase a Do It Yourself kit



Option 2: Hire a certified radon measurement professional

OR



To find a radon test kit or certified measurement professional go to:
www.TakeActiononRadon.ca/test

RADON TESTING: WHY LONG-TERM TESTING?



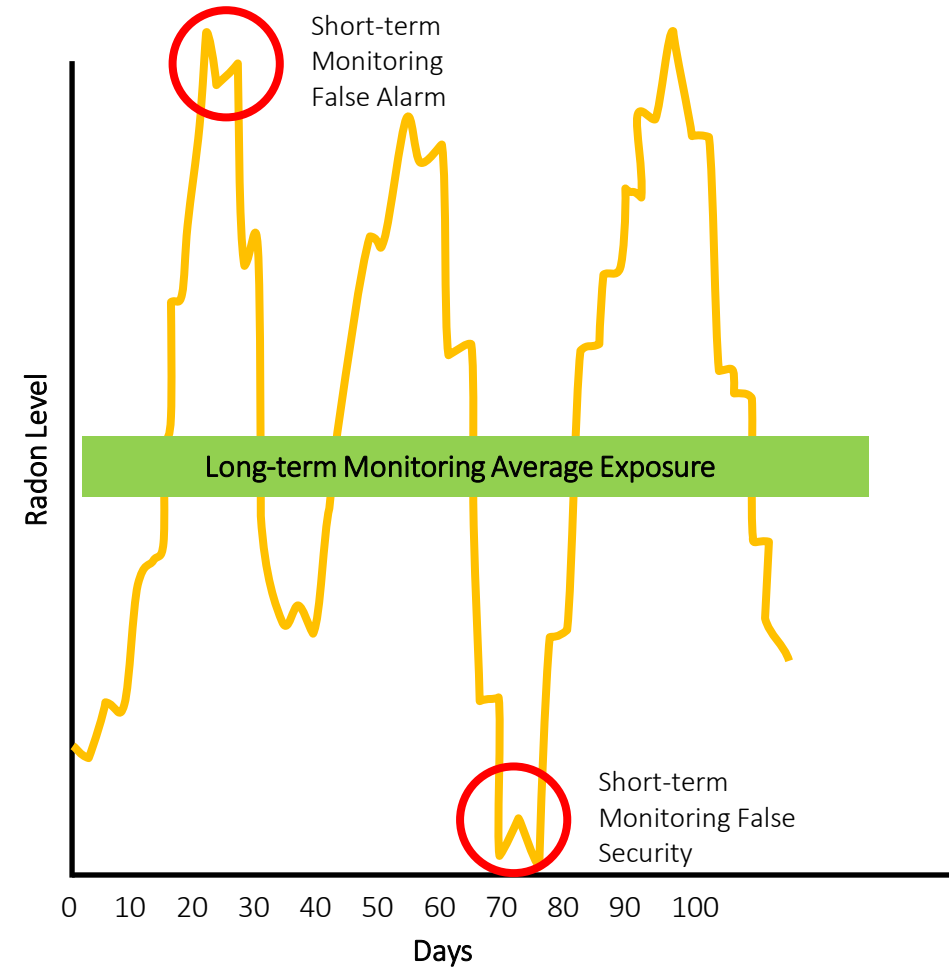
Indoor radon levels vary greatly even over a 24 hour period



Measurements gathered over a longer period of time will provide a better estimate of the annual average exposure



Several factors including building design, building condition, occupancy pattern etc. influence radon levels in a house



WHEN TO REDUCE RADON LEVELS



200 – 600 Bq/m³

Fix your home **within 2 years**



Above 600 Bq/m³

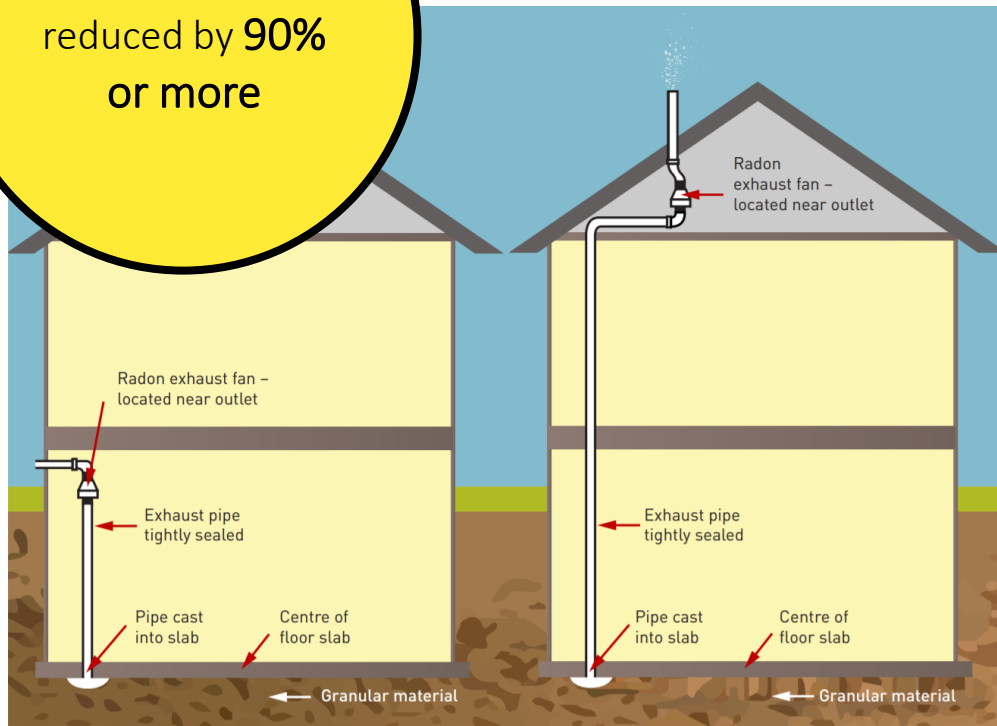
Fix your home **within 1 year**



If the radon level is at or above the Canadian Guideline level of 200Bq/m³ take action to reduce

ACTIVE SOIL DEPRESSURISATION (ASD) SYSTEM

High radon levels can often be reduced by **90% or more**



Installation typically costs ~\$2000 - \$3000



Also called active sub-slab depressurization



Most effective, reliable and common technique



A pipe is installed through the foundation and directed outside



A fan is attached to the pipe that is continuously run to draw radon from beneath the home and vented outdoors, where it gets diluted



ASD reverses the air pressure difference between the house and soil, reducing the amount of radon that is drawn into the home through the foundation



Canadian National Radon Proficiency Program



Find a Professional

Canada has a national certification program – list on www.c-nrpp.ca

C-NRPP Certified professionals are certified to work in every province and territory in Canada. Please ask the Professional if you have questions about their service area.

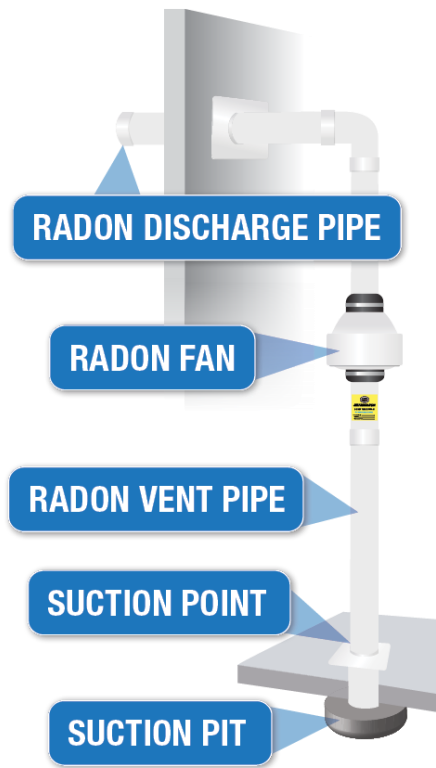
Over 3000 Canadians die a year from radon induced lung cancer. A C-NRPP Professional will help you lower your radon levels and protect your family.

To locate a radon professional in your area, please select a search method below and provide the necessary search terms.

Search by postal code: Postal Code Distance

Search by province: Province

Search for



Radon can be reduced.

- **A radon mitigation system is the most effective way to reduce radon**
- **Simple to maintain**

ALL HOMES CAN BE FIXED.



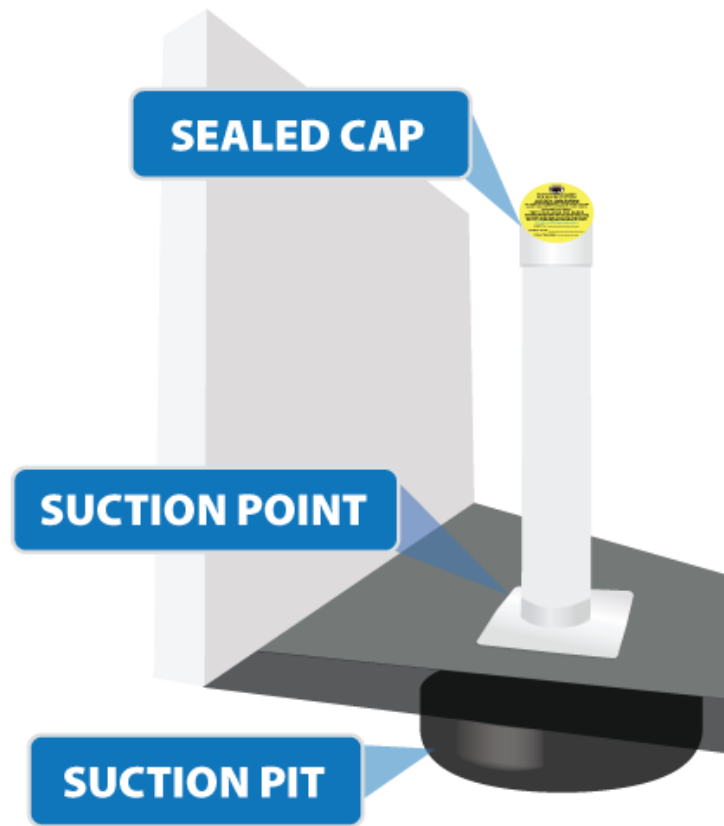
National code includes radon control measures:

- Gravel under the slab
- Well-sealed liner
- Sealed sump pit
- Radon rough-in for future installation



Our government is changing policies to address radon.





The radon “rough-in” is not a radon mitigation system; it’s simply the beginning of one.

Every home must be tested for radon, to determine if the rough-in needs to be completed with a pipe and fan.

The radon rough-in pipe is meant to be completed if required.





alberta lung
for every breath

Radon Programs



The Alberta Lung Association raises awareness about and encourages radon testing through their library rental program that is currently active in systems, serving libraries.

Interested patrons can check out a radon kit for 3 weeks at a time for a snapshot into their radon levels. We encourage patrons to follow this up with a full, long-term test of 90 days (ideally during winter for the most accuracy) to get an accurate reading.

ablung.ca/lung-disease-support/radon-awareness-education/

Radon Screening Kits – Library Lending Program

The screening kits are free and can be checked out at your local library. The kits are for initial screening only. Long-term radon testing, for 3 months, is required after the screening to get an accurate annual average radon level in a home. Each of the kits available explains the basics of radon, how to use the screening kit, and what to do after completing the screening test. Ask your local library if they offer the kits. Click the radon testing guide below to learn more about your screening kit.

[Radon Testing Guide](#)

You can complete an anonymous Radon Screening Survey Form in the link below.

[Complete Radon Screening Survey Form](#)



alberta lung
for every breath

Radon Programs

Kits can be purchased at homeradontest.ca in partnership with Alberta Lung.

Participating libraries will have discount codes for patrons to use toward kit purchase after they return their kit rental.

The screenshot shows the homepage of homeradontest.ca. The browser address bar displays the URL. The navigation menu includes: Home, Purchase Test Kit, Start Test, End Test, FAQ, My Radon Story, Login, and Français. Below the navigation, there is a partnership banner with the Home Radon Test.ca logo (a house with a radiation symbol) and the Alberta Lung logo (stylized blue and teal shape with the text 'alberta lung for every breath'). A text box states: "COVID-19 has not stopped our ability to provide you your radon test kits. As we spend more time in our homes than ever before, it is even more important to test. Orders should ship within two weeks and be delivered within 14 business days." To the right, there is a dark blue button labeled "Purchase Test Kit" with a shopping cart icon and the text "ORDER ONLINE". Below the button, it says "Shipping anywhere in Canada."

Radon Discount Code Pilot Project



Health Canada Santé Canada Canada

RADON

 Radon is the **#1 cause of lung cancer** for non-smokers.

Ask your library about the **Radon Monitor Lending Program** and get a discount code for a long-term radon test kit.

For more information about radon, visit www.canada.ca/radon

The poster features a stylized illustration of a house with a chimney, trees with autumn foliage, and a cross-section of the ground showing colorful layers of soil and rock.



Health Canada Santé Canada Canada

RADON

 **RADON IS THE #1 CAUSE OF LUNG CANCER IN NON-SMOKERS.**

Radon is a radioactive gas that comes from the breakdown of uranium in soil and rock. It is invisible, odourless and tasteless.

 **ALL HOMES HAVE SOME LEVEL OF RADON. THE ONLY WAY TO KNOW IS TO TEST.**

Health Canada recommends a long-term test for 3 months, ideally during the fall or wintertime.

ASK YOUR LIBRARY ABOUT THE RADON MONITOR LENDING PROGRAM AND GET A DISCOUNT CODE FOR A LONG-TERM RADON TEST KIT.

For more information about radon, visit www.canada.ca/radon

The poster features a stylized illustration of a family (a man, a woman, and a child) walking on a grassy lawn in front of a house, with hills and trees in the background.



Thank you for borrowing this Radon Monitor from the Library. Now, don't forget...

YOU NEED TO DO A LONG-TERM RADON TEST!

Use discount code **RADONPROMO** at these suppliers to get your long-term radon test kit:

AccuStar | CANADA
Overseas by 8002 88
<https://www.accustarcana.com/en/product/long-term-radon-test-kit-for-radon-in-air-alpha-track-at100/>

LUNG SASK
<https://www.homeradontest.ca/>

Radon
Radon Corp
<https://radoncorp.com/testing-shop/radtrak2>

Health Canada Santé Canada Canada

The poster features a stylized illustration of a town with houses and trees, and a cross-section of the ground showing colorful layers of soil and rock.

LUNGS MATTER

Financial support for home radon mitigation

Radon is the second-leading cause of lung cancer in Canada...it can also be



Lungs Matter

Home Radon Mitigation Grant Program

BREATHE
the lung association

In Partnership with



The Canadian Lung Association has recently launched a new grant program to help people across Canada afford radon mitigation services.

The Lungs Matter Grant Program aims to provide financial support to individuals who have been diagnosed with lung cancer and individuals considered a low-moderate income households with priority given to the low-income households.

<https://www.lung.ca/lungs-matter-radon-mitigation-support>

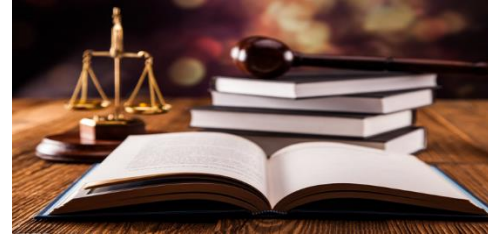
HEALTH CANADA'S RADON ACTION GUIDES (RAGS)

- Health Canada's National Radon Program developed Radon Action Guides (RAGs)
- The RAGs:
 - Describe why radon action is important
 - Describe the regulatory and policy actions that provinces, territories, and municipalities in Canada can take
 - Include examples of radon policy and regulatory action in Canada and internationally
 - Include draft language that may be adopted



DOCUMENTS THAT SUPPORT THE RAGS

- Radon Action in Municipal Law
 - Powers that municipalities have to address radon in enabling laws
- Justifications and Policy Rationales for Radon Action
 - Why governments should take action
 - How radon action fits with societal values and is cost-effective
 - Linking radon to existing initiatives



JUSTIFICATION AND POLICY RATIONALES FOR RADON ACTION

Provinces and Territories

- Largely have jurisdiction over buildings, public health, and air quality

Municipalities and Regional Districts

- Powers to protect health and the environment
- Can jumpstart action on radon before, or in parallel with higher levels of government

Health
Equity

Avoiding
Personal
Risk

Cost
Effective

Consumer
Protection

Public Health
Across the
Whole of Society
and Built
Environment

Environment
and
Sustainability

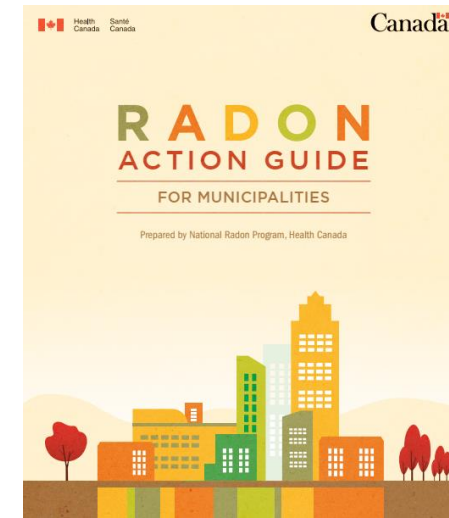
Climate
Action
and
Health

Public Health
Interventions
Save Lives

Avoiding
Legal
Liabilities

RAG FOR MUNICIPALITIES

- Helps municipal governments develop programs and policies to address radon
- Considers individual interventions across the built environment such as:
 - Public education programs
 - community testing and radon risk maps
 - testing and mitigation in schools, daycares and public buildings
 - including radon in standards of maintenance and business bylaws



Radon fits within many existing municipal policy platforms:

- sustainability planning
- housing policies
- healthy built environments
- healthy community strategies
- standards of maintenance
- clean air bylaws

HEALTH CANADA'S 2022-23 PRIORITIES

Postcards

The distribution of postcards in November will encompass the following regions and quantities:

- Manitoba: 328,300
- Saskatchewan: 119,278
- Ontario: 74,161
- Quebec: 48,746
- Newfoundland: 3,794
- Nova Scotia: 42,262
- New Brunswick: 56,439
- British Columbia: 63,311
- Alberta: 35,288

This year, Health Canada is starting once again at the “top of the list”, with communities with the highest incidence of elevated radon levels, according to their 2012 Cross-Canada radon survey.



HEALTH CANADA'S RESOURCES

Preview	Format	Title	Published date
	Infographic	Radon and energy retrofits	2023
	Infographic	Take action on radon	2016
	Brochure	Radon gas: it's in your home	2017
	Brochure	Radon in real estate	2021

Find them online at:

<https://www.canada.ca/en/health-canada/services/health-risks-safety/radiation/radon/resources.html>

TAKE ACTION ON RADON

OCCUPE TOI DU RADON

RESOURCES for order:

When was the last time you tested for radon?

Every home in Canada, regardless of age or size should be tested for radon.

- 1 Test**
Order a test kit and follow the set-up instructions to place it in your home.
- 2 Get Results!**
After 91 days, return the test to the lab and get your results.



Reducing the risk of Lung Cancer starts at the ground level.

Radon comes from the soil and enters buildings through contact with the ground. The longer people are exposed to radon, the greater their risk of lung cancer. Testing for radon is the only way to determine radon levels in a building.



If your radon levels are high - they can be lowered by installing a radon mitigation system.



Radon Test kits can be ordered at: takeactiononradon.ca



Poster (French on reverse)

WHEN WAS THE LAST TIME YOU TESTED YOUR HOME FOR RADON GAS?

YOU SPEND A LOT OF TIME AT HOME - ENSURE THE AIR IS SAFE TO BREATHE YOU CAN'T SEE, TASTE OR SMELL IT - BUT YOU CAN MEASURE IT. MEASURING RADON LEVELS IN YOUR HOME IS AS EASY AS:

- 1 Test**
Order a test kit.
- 2 Get Results!**
After 91 days, return the test to the lab and get your results.
- 3 Take Action!**
If levels are high - reduce them.



www.TakeActionOnRadon.ca

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If levels are high - reduce them.



Find a radon test kit provider at: www.TakeActionOnRadon.ca

[f /TAKEACTIONONRADON](https://www.facebook.com/TAKEACTIONONRADON) [@ActionOnRadon](https://twitter.com/ActionOnRadon) [#RADONActionMonth](https://www.instagram.com/RAADONActionMonth)



Postcard (French on reverse)

Window Clings available



Pins



Information for Medical Practitioners (French on reverse)

Help patients reduce their risk of lung cancer.

Radon exposure is the leading cause of lung cancer for non-smokers and significantly increases risk for people who smoke. Health Canada estimates that over 2,000 people die each year from exposure to radon gas.

Radon Mitigation Grant Program (RMGP) is a federal program that provides financial assistance to help eligible Canadians reduce radon levels in their homes. For more information, visit www.canada.ca/radon.

- 1 Test**
Order a test kit.
- 2 Get Results!**
After 91 days, return the test to the lab and get your results.
- 3 Take Action!**
If levels are high - reduce them.

When was the last time you tested for radon? Every home in Canada, regardless of age or size should test for radon.

Reducing the risk of Lung Cancer starts at the ground level.

Radon comes from the soil and enters buildings through contact with the ground. The longer people are exposed to radon, the greater their risk of lung cancer. Testing for radon is the only way to determine radon levels in a building. Free radon tests are available for people who have been diagnosed with lung cancer and their family members.

Patients with a lung cancer diagnosis are eligible to apply for a Radon mitigation grant to help with reducing radon levels in their home.



Radon Test kits can be ordered at: takeactiononradon.ca/test-for-radon/radon-testing-program



Canadian Cancer Society Société canadienne du cancer

Order online:

<https://form.jotform.com/91975565858277>



White Ribbon Campaign



Free tests for Lung Cancer Patients and Families

- Piloted project with BC Cancer Agency
- Also working with Canadian Cancer Society's Cancer Information and Prevention Specialists
- Presenting to Canadian Association of Nurses in Oncology this November
- Open to anyone across Canada

- <https://takeactiononradon.ca/test-for-radon/radon-testing-program/>



Canadian Cancer Society
Société canadienne du cancer



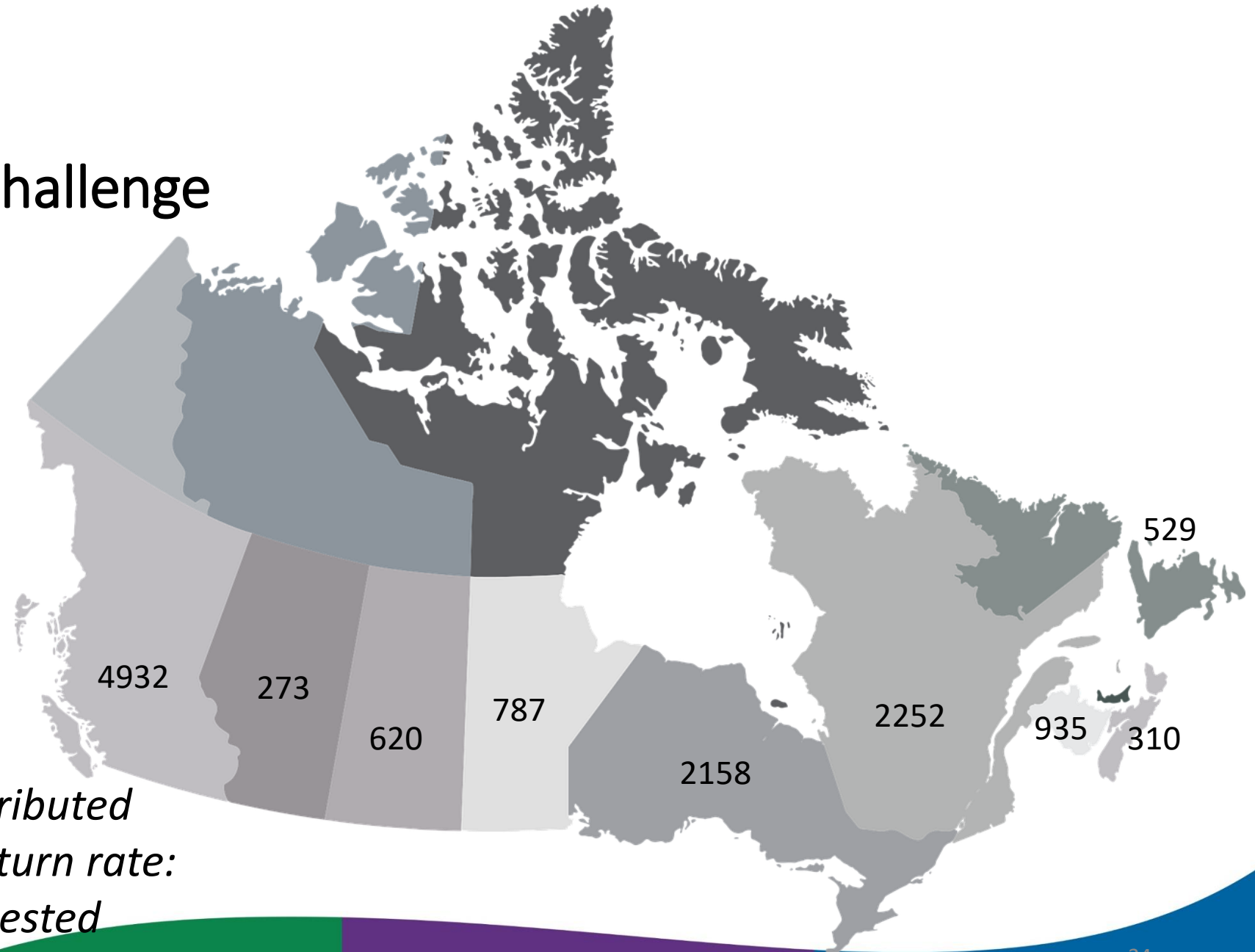
100 Radon Test Kit Challenge Impact to date

Over 120 Communities

-9 Provinces

-5 First Nations

-2 Métis groups



*Over 14 000 detectors distributed
with an average of 74% return rate:
more than 10 000 homes tested*



100 Radon Test Kit Challenge Impact to date



2018-19

Spruce Grove, AB



2020 – 2021

Sundre, AB

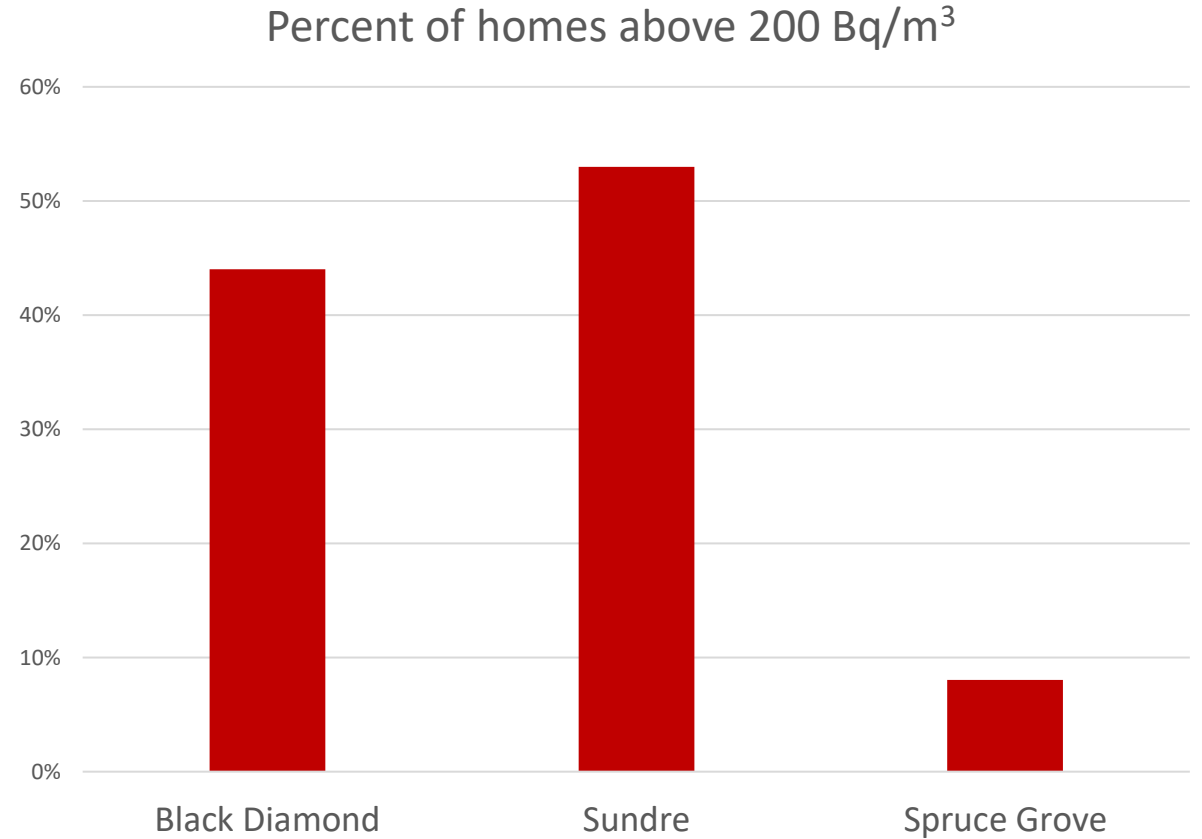
Black Diamond, AB

2023-2024

Lacombe County, AB

Edmonton, AB

Innisfail, AB





Questions, comments?