



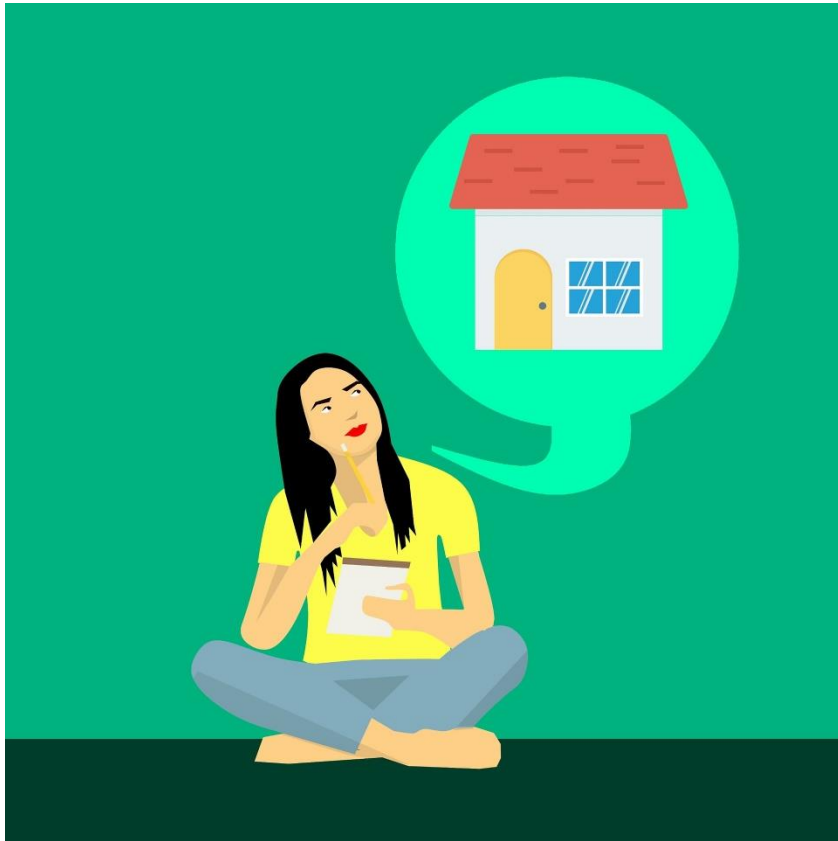
Real Estate Toolkit Webinar



Today:

- *Basics of Radon and Radon Reduction*
- *Discussing Radon during Real Estate Discussions*
- *International Picture*
- *Recommended Options*
- *Tools for Real Estate*





- *Homeowners trust their Real Estate agent*
- *Homeowners are attentive during house purchase/sale*
- *Homeowners are prioritizing their spending*

Radon is an important consideration when purchasing a house.





Radon is killing 3200 Canadians per year from lung cancer. Radon is the leading cause of lung cancer in non-smokers.

- *Radon is a radioactive gas that causes lung cancer.*
- *Radon is invisible and has no smell or taste, but we know it exists in all homes in Canada*
- ***ALL HOMES CAN BE FIXED.***
- *Radon levels can be reduced.*

*Let's start with the basics.....
Radon is radioactive.
This can cause cancer in lung tissue.*





- *Testing is easy.*
- *Testing should be done for **91 days or more.***
- *Radon Test Devices are available.*
- *Radon Professionals can be hired to help test.*

*Let's help prevent cancer...
Test & Reduce Radon*

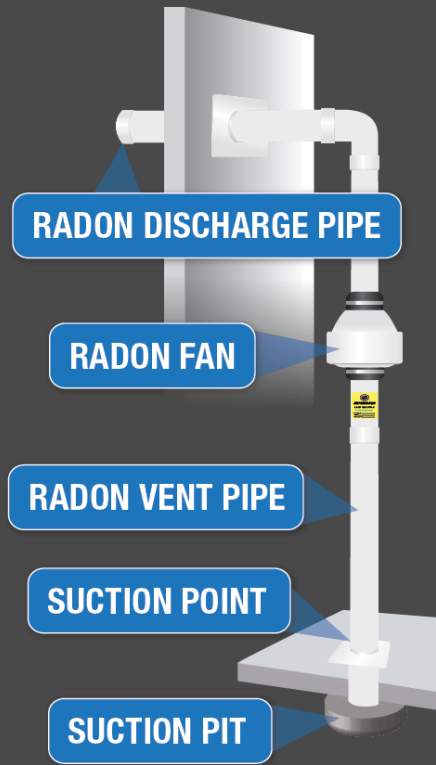




- *Health Canada helped initiate a national certification program*
- *C-NRPP has certified professionals in every province.*
- *Measurement professionals test for radon.*
- *Mitigation professionals reduce radon levels in buildings.*

Canada's national radon certification program.





- *Radon mitigation system is the most effective way to reduce radon.*
- *It is proven to be effective and when installed properly, reducing radon by 91%.*
- *Once installed, it protects all future occupants.*
- *Simple to maintain.*

ALL HOMES CAN BE FIXED.





Agents should have the knowledge to answer homeowner's questions.



Homebuyers **trust** their real estate agent.

Real estate agents must have accurate information in order to guide their clients.

Prioritizing Homeowner Expenses



Homeowner's should understand that radon can be fixed and the cost isn't prohibitive.

Roof - 10 years old:
\$5 000+

High Efficiency Gas
Furnace- 3 years old:
\$3 000

Older Windows:
\$10 000+ to replace

Pool maintenance -
\$500 annual maintenance

Hot Water Tank - 8
years old: \$800 to fix

Prioritizing Homeowner Expenses



RADON

- Test when we move in
- \$3500 to fix
- Health Concern = High Priority

Homeowner's should understand that radon can be fixed and the cost isn't prohibitive.

Roof - 10 years old: \$5 000+
- Lower priority/5 more years

High Efficiency Gas Furnace: 3 years old: \$3 000
- Low priority/many more years

Older Windows - \$10 000 to replace
- Medium priority: but not a health concern

Pool - \$500 maintenance per year

Hot Water Tank - 8 years old; \$800 to fix
- High priority/needs fixing,



UK: (affected areas – high radon areas)

- Ask for a long term radon test report
- If no report; discuss a retention with your lawyer

Sweden: ask for a long term radon test report (current within 5 years)

- If no report, install a long term test after sale with a clause in the sales contract
- Occasionally there will be a short-term indicator test prior to sale; followed by a long-term test after sale

US:

- Short Term Tests; 48 hrs
- Real Estate Testing is mandatory in some states

Norway: ask for a long term radon test report (2 months duration between October and March).

Radon isn't just a Canadian problem, however it is more significant in cold-climate countries.

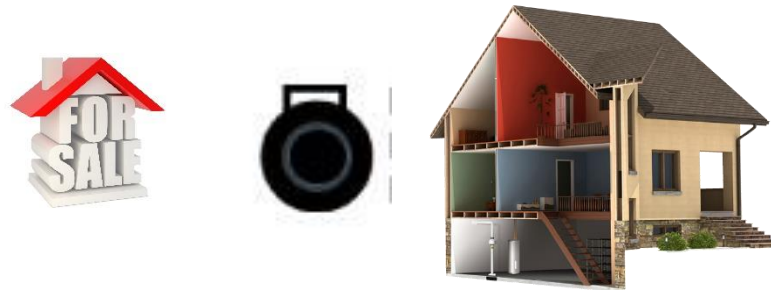
Option A

Test – Fix - Sell



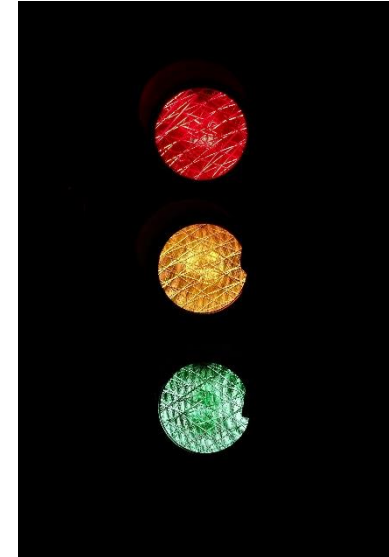
Option B

Buy – Test - Fix



Option C

Radon Indicator/Assessment



Real Estate options for Canada...

Option A

Test – Fix - Sell



Advantages:

- Proactive
- Provide a healthy house for all future owners
- Seller peace of mind

Role of the Real Estate Agent:

- *Help homeowner understand that every home can be fixed*
- *Help potential purchasers value a home with a mitigation system as a healthy home*

Option A: The Seller could fix prior to listing home for sale.

Option B

Buy – Test - Fix



Advantages:

- People living in and investing in the house make the decision
- Fixes the house for all future occupants
- People purchasing house know test was done properly

Role of the Real Estate Agent:

- Help homeowner's understand that all home's can be fixed
- Encourage homeowners to test in first year after moving into a home
- Provide connection with a local mitigation professional to help understand future cost for installing a system

Option B: The purchaser can be confident that radon levels can be reduced.

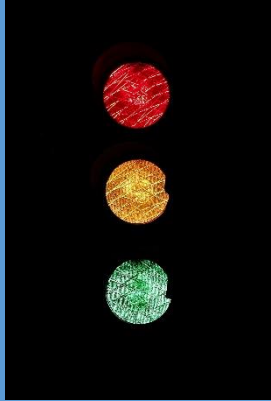
How to ease the cost of Radon Mitigation?

- This could be achieved through a mortgage plus improvements where sufficient money (say \$3500) is added to the mortgage and held in lawyer's trust fund to be used for remediation should long term testing reveal higher than acceptable levels. If the test comes back with acceptable levels, the money held would be applied back to the principle of the mortgage, without penalty.

Option B: The purchaser may be concerned about the future cost.

Option C

Radon Indicator/Assessment



Why did we develop Option C?

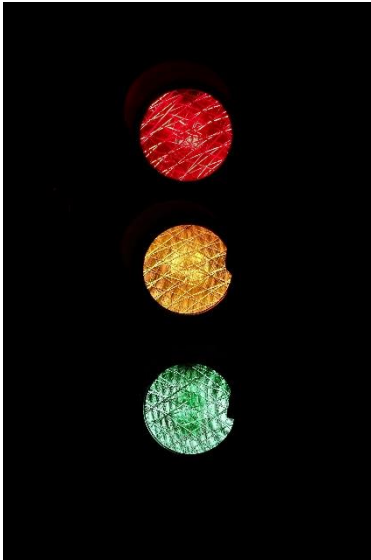
- Homeowners may want more understanding of potential radon levels
- Agents may want a method to assist homeowners with understanding potential radon levels

Providing Guidelines & Structure



Option C

Radon Indicator/Assessment

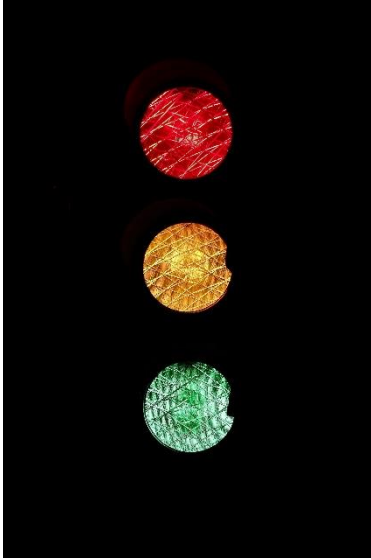


- Short Term Test, minimum 4 days
- Result above 50 Bq/m³ (*summer*) or 75 Bq/m³ (*winter*) initiates discussion of money for radon mitigation
- Follow up LONG-TERM TEST (minimum 91 days) conducted during first winter after new owner moves in
- Provides guidelines on how to conduct the test regarding consistency of process, notice of testing and some guidance for prevention of interference

Option C - *Explained*

Option C

Radon Indicator/Assessment



Advantages:

- Uses conservative indicator level to estimate the likelihood that radon mitigation would be required
- Decision for Radon Mitigation based on Long-Term Test
- Provides structure for agent/purchaser who is determined to have a radon test conducted

Role of the Real Estate Agent:

- Ensure a C-NRPP professional conducts the Radon Assessment
- Ensures that both parties realize a long-term test will be used for the basis of radon mitigation
- Remind buyer to test for radon upon moving into the home

Option C

THINKING OF BUYING OR SELLING YOUR HOME?



Every house can be reduced to a safe radon level: call a trained professional to help
www.c-nrpp.ca/find-a-professional



Testing is easy and should be done in the living area of the home

Radon enters buildings where they touch the ground

Tests should be done for at least 91 days.

Be proactive! Test for radon and set money aside to reduce your radon level and protect your family



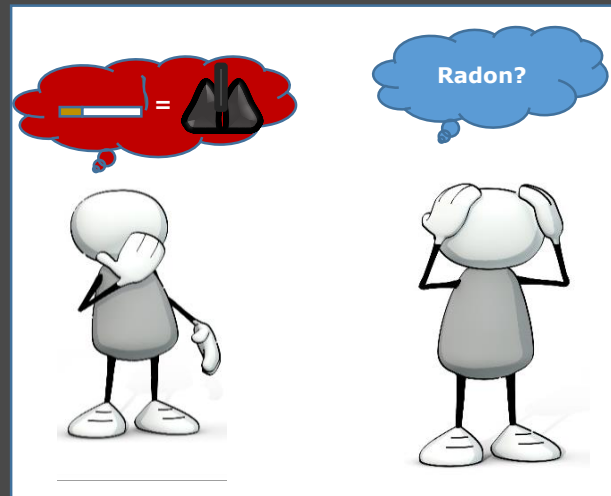
Every home needs to be tested and all homes can be fixed.

Radon is killing 3200 Canadians per year from lung cancer. Radon is the leading cause of lung cancer in non-smokers.

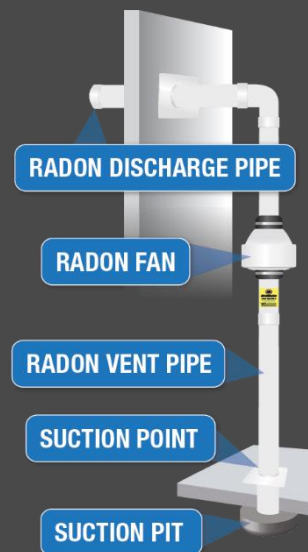
Category	Value
Radon \$120	120
Roof \$2000	2000
Windows \$1500	1500

Cost of radon compared to cost of home repairs.

Help to understand radon:
Make **TESTING** a priority



Help to understand radon mitigation:
Make **FIXING** a priority



Understanding a Radon Mitigation System

DO YOU HAVE HIGH RADON?

WANT TO KNOW WHAT TO DO NOW?

A radon mitigation system is a proven, efficient method to reduce radon levels.




www.c-nrpp.ca

Tools for Real Estate Agents:

- Information to help you understand radon
- Radon graphics for you to use in your own communications
- Support- check out www.carst.ca/real-estate



ONTARIO - TARION HOME WARRANTY



- *Tarion Home Warranty includes coverage for radon within the homes first 7 years*
- *Real Estate agents must tell homeowners to ensure they don't lose the coverage; they should test before the 7 years run out*
- *Radon levels are reduced for free*



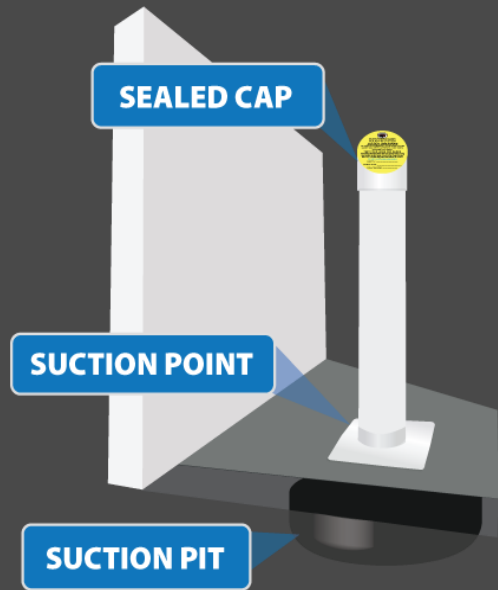
*Find more information at:
carst.ca/ONHomeWarranty*



The National Building Code states:

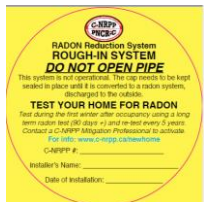
A home must have...

- A membrane barrier under the slab,*
- A layer of gravel beneath the radon barrier,*
- A radon stub pipe so that a finished pipe and fan can be added to complete into a radon mitigation system,*
- Proper sealed cap and label on the stub pipe.*



Real Estate Agents should be able to understand what the radon pipe is, and determine good from bad installations.





Understanding a Radon Mitigation System

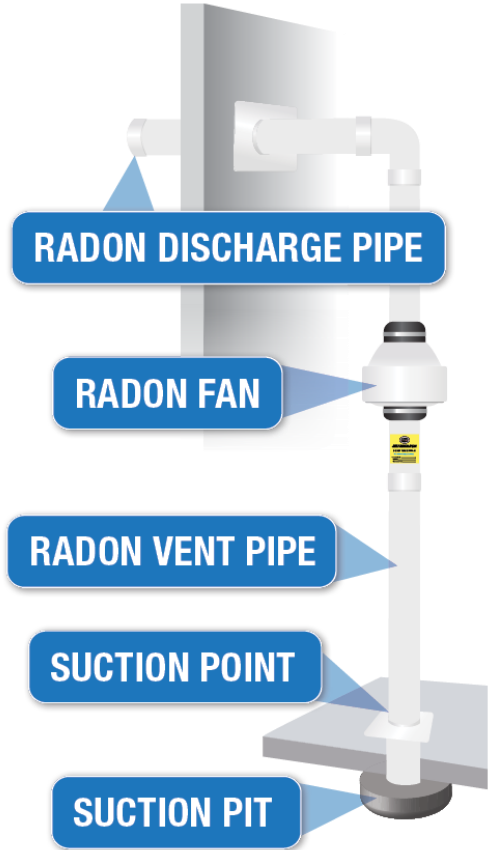
DO YOU HAVE HIGH RADON?

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www.c-nrpp.ca www.carst.ca



BASICS OF A RADON MITIGATION SYSTEM

RADON DISCHARGE PIPE – The pipe may exit the side of the house or above the roof. A C-NRPP professional will ensure the discharge point is a proper distance from any other openings in your home.

RADON VENT PIPE – Provides a conduit for the air and radon to move from below the basement floor to outside of the home.

RADON FAN – Draws air from beneath the basement floor to blow the radon gas outside. A C-NRPP professional will choose the most appropriate fan.


SUCTION PIT – The C-NRPP professional will create a space beneath the floor by removing some of the soil or gravel. This makes the mitigation system more effective.

SUCTION POINT – The pipe goes through the basement floor and sucks the air and radon from below the building.

GRANULAR DRAINAGE LAYER – A continuous layer of coarse clean granular material on top of exposed soil.

SEALED SUB SLAB MEMBRANE – A continuous air barrier on top of the granular layer which covers the whole area and is sealed in all areas to prevent air leakage.

Contact C-NRPP at www.c-nrpp.ca for further information.



Radon Mitigation Information



Protect Your Workplace from Radon

Radon is a gas that you can't see, smell, or taste, but it can be dangerous. It's the second leading cause of lung cancer in Canada.

4% of Federal Buildings tested were above 200 Bq/m³

CARX estimates 95,000 employees are engaged to eliminate radon levels at their workplace.

Radon is in the ground around the basement from the foundation through the ground floor and walls.

Radon and your workplace: Protecting your employees

If you and your employees spend more than three a day in one room at a time, you and your employees can be at risk for high levels of Radon.

Take the First Step There's good news — you can protect your workplace by testing for radon.

Learn more on how you can protect and test your workplace by visiting CNRPP.CA

GUIDANCE FOR PLACING TESTS IN A WORKPLACE/PUBLIC BUILDING

Where to Test
Test all occupied rooms with floors or walls that are in direct contact with the ground or a crawl space. If none of these rooms have occupied rooms, test all occupied rooms on the first occupied level.

Additional tests may be used on the floors of buildings.
Test basements or occupied basements on the highest floor to determine radon levels due to its possible stack effect from elevator shafts, other utility shafts, stairwells, or from air and heating, ventilation and air conditioning (HVAC) ducts.

Occupied or defined as a room where people spend 4 hours per day or more
Rooms are defined as an area with walls from floor to ceiling in the building.
This category would not include an outdoor space. The entire space (except occupied by radon) would be needed for the area (200 m² maximum) tested as one room. Tests will be placed and left in operation for 3 months and will be done.

Where to Locate the Detector
Choose a location for the detector which is:
• In an interior wall of a location between 0.6 m to 2 m (2 ft to 6 1/2 feet) from the floor and at least 30 cm (12 inches) from the ceiling in the space (excluding zone)
• 30 cm (12 inches) from other objects
• 45 cm (18 inches) from an exterior wall
• 30 cm (12 inches) from an exterior wall

Do not place the detector by heating, ventilating and air conditioning units, doors, fans, windows, fireplaces, draft stopper placement, or computer, television sets, stoves or washers, or in direct sunlight.

Quality Control Tests (additional required tests)
The radon detector should be placed close to the 200 cm x 40 cm x 40 cm with a second detector with every 15 detectors deployed.

WORKING TOGETHER TO PREVENT LUNG CANCER

We are **TESTING** our **CHILD CARE CENTRE** for **RADON**

Positive
Education
of
Disabled
/ Level

WORKING TOGETHER TO PREVENT LUNG CANCER

A Guide to help you with testing your Child Care Centres for Radon

C-NRPP PNCR-C

AIR QUALITY TEST IN PROGRESS

PLEASE DO NOT DISTURB.

For more information:
www.cnrpp.ca/radon-testing

Questions?

Contact:

Measurement Labels

Workplace Resources

C-NRPP PNCR-C

RADON Reduction System ROUGH-IN SYSTEM DO NOT OPEN PIPE

This system is not operational. The detector will be kept sealed in place until it is connected to a radon system, discharged to the outside.

TEST YOUR HOME FOR RADON

Test during the first winter after installation using a long term radon test (90 days +/-) and re-test every 2 years. Contact a C-NRPP Mitigation Professional to calibrate.

For info: www.c-nrpp.ca/radon-test

C-NRPP # _____

Installer's Name: _____

Date of Installation: _____

C-NRPP PNCR-C

RADON Reduction System Active Soil Depressurization System DO NOT TURN OFF FAN

An active soil depressurization system has been designed, installed and is operating in the dwelling. The fan should NEVER be turned off.

The radon system pressure gauge should be read periodically. Call for service if the readings are outside the normal operating range.

For info: www.c-nrpp.ca/radon-test

Installer's Name: _____

C-NRPP # _____

Date of Installation: _____

RADON: A Radioactive gas that can seep into your home

COMMON RADON ENTRY POINTS

- 1 Soil
- 2 Cracks in the floor and walls connected with the soil
- 3 Gaps around pipe fittings and support points in the foundation
- 4 Floor drains & sump pits

SEE HOW TO HELP PROTECT YOU AND YOUR FAMILY...

Are you **building a new home?**

Radon is a radioactive gas that can seep into your home. It's the second leading cause of lung cancer in Canada. Radon is a radioactive gas that can seep into your home through cracks, gaps, floor drains, drains and sump pits.

What's in the code?
• Check with your local building department for the code requirements that will make a radon mitigation system code compliant, more efficient and more effective at reducing your radon levels.
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C-NRPP PNCR-C

Is There a Killer in Your Home?

Protect Your Family from deadly Radon

Radon Gas is in EVERY HOME

Every home — even yours — has radon gas. The C-NRPP team is here to help you find it, and if it's present in your home and other rooms. This radon is extremely important for you & your family's health levels to be safe you and your family are safe.

KNOW your radon levels

Testing is the only way to know if your radon levels are safe. If testing shows you have high radon levels in your home, there is a solution. High radon levels can be fixed and we can help.

Child Care Resources

Mitigation Labels
4" (6 versions available, not all shown)

Postcard Handouts

Other RADON resources...



Questions, comments?



Thank you!
... to all our
contributors and participants!

