


Radon in Indoor Environments: What You Can Do to Protect Children from an Important Lung Cancer Risk


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Workshop Overview




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- Introductions
- Part 1: What is radon and why is it a concern?
- Part 2: Resources and strategies for sharing radon information with families
- Part 3: Promoting radon awareness and action in the child care sector – a case example
- Part 4: Open discussion
- Evaluations

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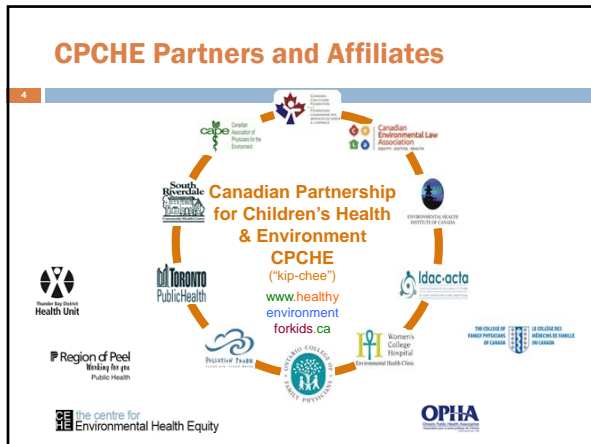
Who is CPCHE?

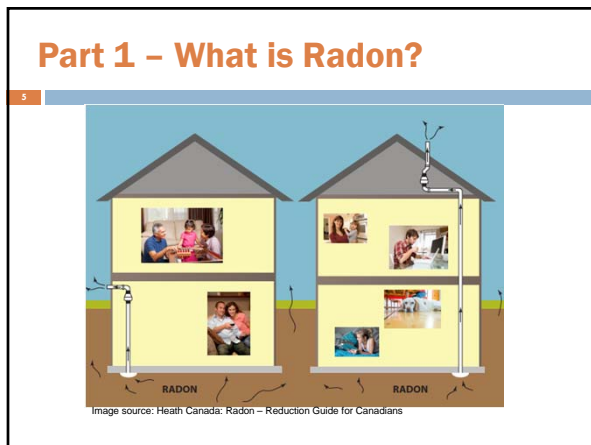


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- The Canadian Partnership for Children's Health and Environment (CPCHE) is an affiliation of organizations working together since 2001 to protect the developing fetus and child from toxic chemicals and pollution
- CPCHE partners share diverse expertise in the areas of public health, medicine, environmental protection, child care, law and policy

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Radon - an invisible indoor health risk

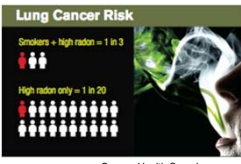
- ❑ Radon is a radioactive gas that comes from breakdown of uranium in rock and soil
- ❑ Radon enters homes through cracks and gaps in foundations, can build up to harmful levels in indoor air
- ❑ All homes should be tested (simple do-it-yourself test kits available)

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Radon and lung cancer

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- Long-term exposure to elevated levels of radon in indoor environments is the 2nd leading cause of lung cancer; 1 in 20 lifetime cancer risk
- The risk of lung cancer is much higher when also exposed to tobacco smoke: 1 in 3 people exposed to elevated radon **and** tobacco smoke will develop lung cancer



Source: Health Canada

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Radon and lung cancer

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- As radon breaks down, it forms radioactive particles that can get lodged in the lungs
- The radioactive particles release energy that can damage lung cells
- This damage makes it more likely that cancer will develop




Image courtesy of cooDesign / iStockPhoto.com

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Measuring the radon level in your home

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- Purchase a do-it-yourself test kit at most hardware or home improvement stores or on-line
 - See **Take Action on Radon** website http://www.takeactiononradon.ca/file/take-action/pdf/where-to-buy-radon-test-kits_english.pdf
- Or, hire a certified radon specialist
 - See **Canadian National Radon Proficiency Program** <http://c-nrpp.ca/find-a-professional> Toll free: 1 800 269-4174



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Measuring the radon level in your home

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- Test during the fall or winter months (when doors and windows mostly closed) by setting the test device on a shelf or other surface in the lowest occupied level of the home
- Test for a minimum of three months to get an accurate average reading of radon levels
- Send the test device to the lab for analysis




Image source: Health Canada

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Radon guidelines

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- Health Canada's guideline is 200 Bequerels per cubic metre of indoor air (200 Bq/m³)
- WHO guideline is 100-300 Bq/m³
- If a home or indoor space exceeds that level (long-term test), action should be taken within 1-2 years




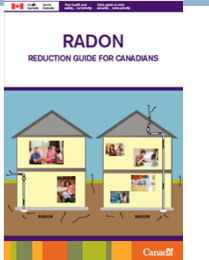
Image source: Health Canada

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How to reduce radon levels in the home

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- Three basic means of reducing radon levels in the home:
 - Seal gaps and cracks in the foundation
 - Improve ventilation
 - Hire a certified contractor to install a radon reduction system




Health Canada advises that the 3rd option is generally the most effective at reducing levels to below the guideline

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Active sub-slab depressurization

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- Installation of a radon reduction system requires
 - puncturing the concrete slab of the basement floor
 - installing a pipe fitted with a small fan that draws the gas from under the slab and vents it out the sidewall or roof of the home
- Estimated cost is \$1,500-\$3,000
- Be sure to hire a certified radon professional



Source: Health Canada: Radon - Reduction Guide for Canadians



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Re-testing the radon level

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- Test again after the remediation to make sure that levels have dropped below the Health Canada guideline of 200 Bq/m³
- Retesting is also recommended after renovations, installation of a new heating or AC system or other changes in the home that could affect radon levels and/or air flow




Image source: Health Canada

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Radon and the National Building Code

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- National Building Code now includes provisions for "radon-ready" construction.
- A partial sub-slab system is put in place so only the hook-up is needed if elevated radon levels are found
- Provinces and territories decide whether and how to adopt the national code provisions





Image source: HBS&A, 2013

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Part 2 – Resources and Strategies

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... for sharing information on radon with families



National “Home Safety for your KIDS’ Sake: Check it Today” campaign

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- Links radon testing to home safety measures that are more familiar, i.e., smoke and CO detector use
- Partners:
 - CPCHE
 - Health Canada
 - Canadian Lung Association
 - Canadian Association of Fire Chiefs
 - Parachute




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National campaign launch

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- Launched on Feb. 13th
- Disseminated widely by campaign partners and others via social media across Canada
- Generated local and international attention
- Campaign mini-poster available in 7 languages plus Valentine’s Day version



www.healthyenvironmentforkids.ca/campaign/home-safety

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Local awareness-raising event

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- Child care facility in Winnipeg used campaign materials to raise awareness among client families
- The kids had fun, too!



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Radon message linked to CPCHE's popular "Top 5 Tips" campaign for prospective/new parents

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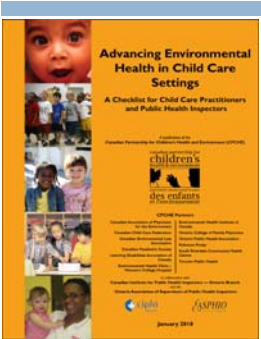


www.reduceradon.ca

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CPCHE's Child Care Checklist

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- Provides a menu of practical ways to reduce harmful exposures in all areas of a child care centre
- Includes testing for elevated **radon** as one of the actions for healthy indoor air
- Checklist funded by ON Trillium Foundation with additional support from Health Canada

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Take Action on Radon campaign; National Radon Action Month

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- November 2013 was Canada's first **Radon Action Month**
- Take Action on Radon** website provides useful info on finding contractors, radon test kits online, etc.
- Campaign led by Ontario and NB Lung Association chapters and Summerhill Impact, funded by Health Canada




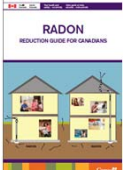

www.takeactiononradon.ca

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Health Canada's Radon Education and Awareness Program

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- Health Canada has useful guidance materials for the public and professionals:
 - Radon – Reduction Guide for Canadians (34 page booklet)
 - Radon: Another Reason to Quit (fact sheet)
 - Radon – Is it in your home? (8- page brochure)
- Public awareness-raising at home shows, retail outlets, etc.

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Training for health professionals

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- Training on radon for health professionals
- Developed by MacHealth and OCFP, funded by Health Canada
- CME credits




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Part 3 – Case example

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... child care professionals “leading by example” on radon



CPCHE/CCCF Vanguard Initiative in the Child Care Sector

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- Six child care facilities in Winnipeg recruited to “lead by example” in promoting radon awareness and action
- Three main components:
 - Sharing radon information with client families
 - Testing the radon levels in their centres
 - Capturing and sharing experiences and lessons learned with other child care professionals via CCCF network



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CPCHE/CCCF Vanguard Initiative in the Child Care Sector

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- Reasons cited for joining the project:
 - wanting to learn more about radon
 - concern about this health risk for children and staff, and
 - the opportunity to get their centres tested
- Some concerns cited: “What if we find high levels?”



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CPCHE/CCCF Vanguard Initiative in the Child Care Sector

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- Sites will soon embark on their outreach to families and initiate the 3-month radon tests
- Successful awareness-raising event already held by one of the 6 sites (*Home Safety for your KIDS Sake* campaign launch)




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CPCHE/CCCF Vanguard Initiative - Sharing results, empowering the child care sector

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- A key objective is to engage with child care professionals as agents of change on radon
- Outreach and empowerment of the child care sector:
 - Educational webinars
 - Sharing stories and lessons learned via CCCF's extensive listserve and social media networks, *Interaction* magazine
 - Dissemination of resource materials




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Part 4 - Discussion


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- **Issues for consideration in addressing the health risks posed by radon**
 - Health equity: what is the reality for tenants in addressing an indoor health concern such as radon?
 - Potential policy responses: (e.g., QC requirement that all schools and child care facilities be tested)
 - Role of prenatal and early years service providers?
 - Your thoughts? reactions? ideas?



Workshop Evaluation

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Acknowledgements and Thanks

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- Health Nexus/Best Start
- Health Canada for financial support for CPCHE's radon outreach activities*
- Ontario Trillium Foundation for financial support for CPCHE's Child Care Checklist*
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- Participating vanguard sites, Winnipeg, MB
- Health Canada colleagues, in particular Kelley Bush and Tara Barrows

*Note that financial support does not indicate endorsement of content



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Thank you!

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