Radon:
Schools & Childcare Facilities

Radon is a silent indoor danger

Radon is a gas that you cannot see, smell, or taste. It forms from the breakdown of uranium in rocks and soil.

- Outdoors, radon levels are usually low.
- Indoors, radon can build up to high levels.
- Radon can enter buildings through cracks and openings in foundations.
- Over time, breathing in radon can increase the risk of lung cancer.

Children are at higher risk

- They breathe faster than adults.
- Their lungs and bodies are still developing.

Radon levels in our region

- Some areas of BC have a have a higher chance of having elevated indoor radon levels.
- The BC Radon Map shows areas higher risk areas.
- Any building can have high radon levels.
- Levels depend on how much radon is in rock and soil, how easily it enters a building, and ventilation in the building.

Radon levels vary from building to building. Testing is the only way to know.

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Testing for Radon

- Because radon is invisible, the only way to know the levels is to test.
- For most childcare facilities, testing is simple. A detector is placed in the facility and left in place for at least 3 months over winter and up to one year. The detector is then mailed to a lab to receive results.
- For schools, guidance is available on what types of detectors and how many to use, and where to place them.
- Facilities and schools can contact HealthyEnvironments@fraserhealth.ca for more information.

Long-term detectors, such as alpha track detectors, are recommended because they provide the most accurate estimate of average radon levels.

Radon Guidelines

- Health Canada recommends that indoor radon levels be below 200 Becquerels per cubic metre (Bq/m^3).
- World Health Organization recommends a lower value of 100 Bq/m^3.

There is no safe level of radon exposure.

Health risks decrease as levels are reduced.

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Mitigating Radon Levels

- If radon levels are high, they can be lowered by installing a mitigation system.
- Health Canada recommends:
  - Levels between **200 and 600 Bq/m^3** be reduced within 2 years,
  - Levels above **600 Bq/m^3** be reduced within 1 year.
- Mitigation systems work by venting radon from underneath the building to the outdoors using a pipe and fan.
- Testing should be done afterwards to confirm that radon levels have decreased.
- Only certified radon professionals should install radon mitigation systems.

Resources

- Fraser Health's Indoor Air Quality webpage: Learn more about radon, where to buy radon test kits, and find certified radon professionals.
- BC Radon Map: Understand the risks of having high radon in homes and buildings in different communities.
- Take Action on Radon: Find summaries of community radon testing initiatives, school education resources, and other tools to support awareness and action.

Want to learn more?

Check out these other documents for schools & childcare facilities:

Wildfire Smoke

Extreme Heat

Ventilation and Indoor Air Quality