

What Is Radon Gas?

Radon occurs naturally when uranium breaks down in rock and soil. It is an invisible, odourless and tasteless gas

When radon leaves the ground it is usually diluted in air and is relatively harmless. However, radon can seep into buildings and accumulate in higher concentrations, posing a health risk.

Schools in BC have legal obligations to make sure that students, teachers and staff are safe from high radon.

Radon and Human Health

Radon is naturally occurring ionizing radiation. This means it emits radioactive particles. When breathed in it can cause lung cancer. Radon gas is the #1 cause of lung cancer in non-smokers. High radon causes approximately 3,360 deaths per year in

Canada. Health Canada research estimates that with lifetime exposure at 800 Bq/m³, the lifetime lung cancer risk would be one in 20 for non-smokers, and one in three for smokers.

Radon poses an even higher risk for children. Children's smaller lungs, faster breathing rates and lower proximity to the ground makes them twice as likely as adults to develop lung cancer when exposed to the same level of radon.

For radon test results between 200 and 600 Bq/m³, Health Canada recommends taking steps to reduce the radon level within two years. If results are greater than 600 Bq/m³, Health Canada recommends to reduce the level within one year.

Testing and Mitigating for Radon

Testing is the only way to discover radon levels in a building

Radon can be tested using inexpensive 'alpha tracker' monitors, available at leading retailers or from the British Columbia Lung Foundation our [website](#), by email: info@bclung.ca, or by phone: 604.731.LUNG (5864).

In BC only around 15% of schools have been tested so far. Health Canada has developed [guidance for best practices in testing schools](#).

If high radon is found, professional mitigators can fix the problem.. The [Canadian National Radon Proficiency Program](#) (C-NRPP) has lists of certified radon mitigation professionals by community.

BC Building Code

There is language in the BC Building Code which supports the need for attention to radon in all buildings, including schools. All buildings should have "Air Barrier Systems" that prevent radon from entering from below the building. The Building Code states that heating, ventilating and air-conditioning systems must be constructed and installed in conformance with good engineering practice. As awareness of radon grows, 'good engineering practice' will include attention to radon.

Public School Districts' Responsibilities

School districts and their superintendents and boards have legal responsibilities to address radon. This flows from obligations to ensure the safety of students and staff. By addressing radon, school districts can avoid the risks of litigation. School districts should include radon in safety programs and test for radon.

As workplaces: Schools are workplaces, so school districts must comply with the *Workers Compensation Act (WCA)* and the *Occupational Health and Safety Regulation (OHSR)*. The OHSR has clear rules on ionizing radiation (s. 7.19-24) and also puts on employers a 'general duty' to ensure workplaces are safe (s. 2.2).

Under the OHSR, regular inspections are required to prevent unsafe working conditions, and unsafe working conditions must be fixed immediately (ss. 3.5, 3.9). Schools need to be tested as part of inspecting for unsafe working conditions.

Joint occupational health and safety committees (JOHSC) under the *WCA* have a duty to ensure radon is tested in schools, and mitigated if necessary.

Protecting Students: Under the *Occupiers Liability Act*, school districts have been named as “occupiers” because they control school grounds (s. 3.1).

As occupiers, school districts have a legal duty to take reasonable care that students are reasonably safe on the school grounds. If school districts fail in their duty, they could be liable to the students under the laws of negligence.

School districts also owe students a fiduciary duty, which means that they have a legal obligation to act in the students' best interests. If there is a situation where school districts know about elevated radon in a school but the school district does not disclose this information or fix the situation, school districts may be found to have breached their fiduciary duty.

No school wants to face litigation from former students who became sick from lung cancer.

What can Teachers and Other School Staff Do?

The *WCA* provides that workplaces such as schools have JOHSC committees (s. 31-46). This provides a good way for teachers and other school staff to make sure that radon is tested.

JOHSC committees bring representatives of the employer and the workers together to identify and help resolve health and safety issues in the workplace. For instance, the representatives make recommendations to improve the workers' occupational

environment and recommendations about educational programs to promote workers' health and safety.

Employers must respond to JOHSC committees' recommendations. If they reject the recommendations they need to give written reasons. Then the chair of the JOHSC committee can report the matter to Worksafe BC which can lead to an investigation and potential order (*WCA* s. 38 and 39). According to s. 3.8 of the OHSR, JOHSC committee members should participate in health and safety inspections.

As well, the BC Teachers Federation has a [Health and Safety Handbook](#) which describes how teachers can raise health, safety and indoor air quality issues with their employers.

Parents and Students

Parents and students can bring the issue of radon to the attention of principals, school districts and school boards. Parents and students can follow the process in section 11 of the *School Act* to make a complaints about radon issues. Under the *School Act*, if a school board employee's decision significantly affects a students' education, health or safety, the student or their parent can appeal the employee's decision to the school board. There is a process for informal dispute resolution and if that doesn't work, there is a further process for making appeals (s. 11.1).

Medical Health Officers

As well, the *School Act* gives medical health officers the power to inspect schools for radon (s. 90). Because school medical officers are health officers within the *Public Health Act*, school medical officers can have schools

inspected for radon and take other measures such as closing a school if students' or staff members' health is at risk.

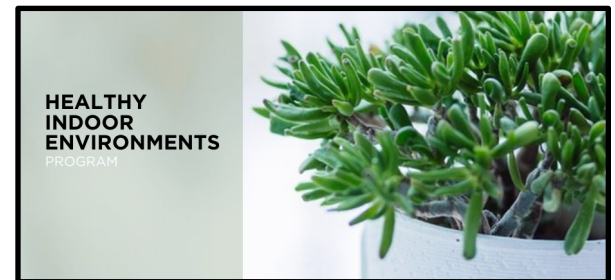
Taking Action Against Radon

School districts, parents, teachers, school medical officers and BC's Ministry of Education can all work together to help ensure that children and staff learn and work in a radon-safe school environment.

The provincial government has clear powers to make specific orders for testing and mitigation in schools under the *School Act*. It can also update guidance on healthy schools to specify indoor air concerns, including radon.

Further Information

This is an abridged version of a more detailed legal opinion, titled **RADON IN BC SCHOOLS: Legal Duties and Responsibilities** which includes further information, resources, and legal analysis. To learn more please visit our website on [Radon: Rights and Duties](#) or contact us at healthyindoor@bclung.ca



Funding for this project has been made possible by

