

Health Impacts of Radon

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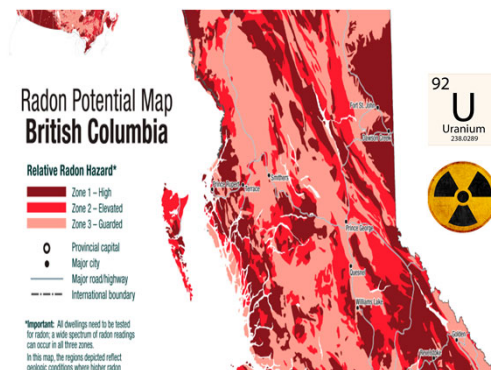
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Health Impacts of Radon

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What is Radon?

- Radon gas results from the breakdown of Radium, a product of Uranium
- Uranium is found in the soil, with higher concentrations in some regions more than others
- Radon is radioactive
- Radon is mobile in the soil



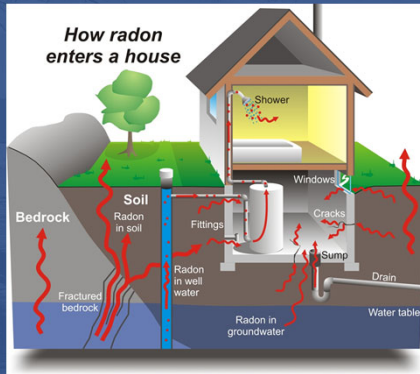
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Canadians are exposed to Radon mostly from indoor air

↑↑↑↑↑
Stack
Effect



- Radon is found Inside homes and other buildings
- Radon gas enters through:
 - Cracks in floors or walls
 - Sumps or drains
 - Ground water supplies
- Levels generally highest in basement and ground contact rooms



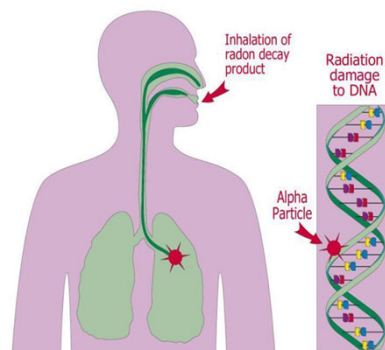
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Radon and your Health

- Radon decay produces alpha particles that can damage DNA in lung cells
- Risk depends on level and length of exposure
- Lifetime exposure to high Radon increases lung cancer risk

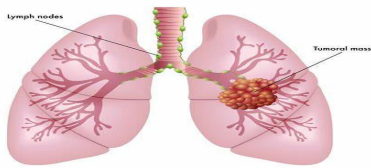


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Radon and Lung Cancer



- Radon is the 2nd leading cause of lung cancer.
- 21,200 Canadians will die of lung cancer each year
(<https://cancer.ca/en/cancer-information/cancer-types/lung/statistics>)
 - 16% of lung cancer deaths are caused by radon
 - (Chen, J., Moir, D. and Whyte, J., 2012)
 - *3,300 people will die from radon related cancer*



Footer Text

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Central Okanagan: Lung Cancer

Estimated New Lung Cancer Diagnoses in 2021 by Health Authority

Health Authority	Age at Diagnosis					Total*
	0-19	20-39	40-59	60-79	80+	
Interior	0	5	75	580	205	860
Fraser	0	10	155	795	285	1235
Coastal	0	5	85	450	180	715
Island	0	0	70	530	195	795
Northern	0	0	30	165	45	240
BC	0	10	405	2515	905	3845



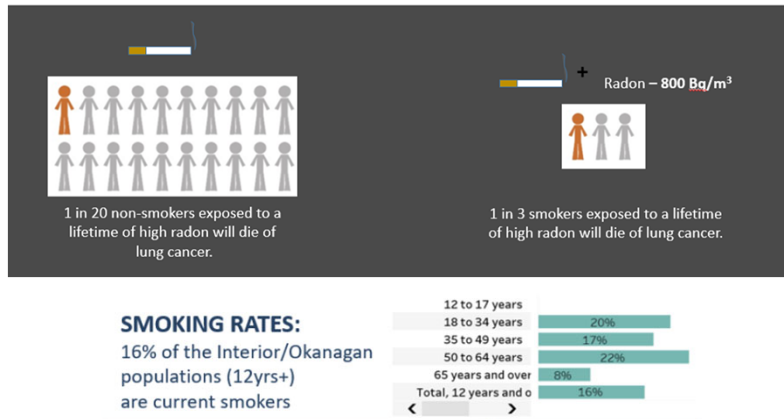
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Radon and Smoking

Smoking and inhaling tobacco products amplifies the cancer-causing risk of radon gas exposure

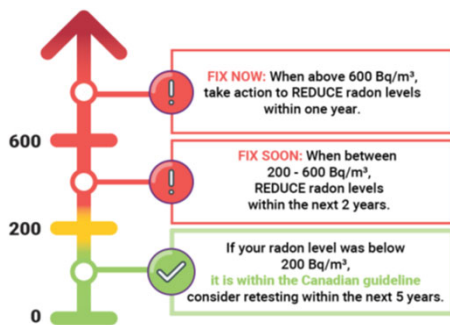


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Radon Levels in Buildings



Radon Level (Bq/m ³)	Lifetime Risk Smoker	Lifetime Risk Non-Smoker
Background	12%	1%
200	17%	2%
400	22%	3%
800	30%	5%



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Equity Considerations

Priority Populations

Lower income

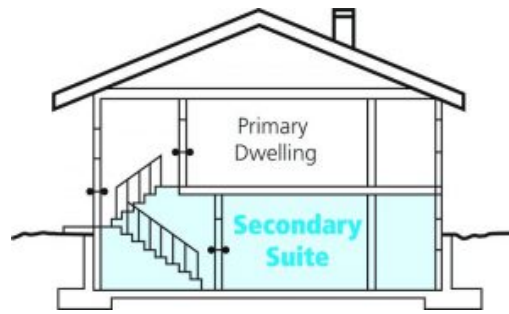
- *Living in basements*
- *Less able to pay for remediation*

Renters

- *Limited control over living space*

Workers

- *Limited control over work space*



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Radon Action and Health Collaboration



Interior Health

- Healthy Communities Team
- Tobacco and Vapour Control Team
- Environmental Health Officers & Air Quality Specialist



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Thank You



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