

## URANIUM IN DRINKING WATER

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### *What is Uranium?*

Uranium is a radioactive metal that is found naturally in rocks, soil, water and air. It can be found in many areas in Canada and the United States. The amount of uranium in drinking water depends on the natural levels in the area where the water system obtains its raw water. Most uranium that we ingest is from food (approximately 77%) and water (approximately 13%).

### *Why is there Uranium in the Drinking Water?*

Uranium and other elements are naturally occurring in ground water. As ground water passes through bedrock it picks up some elements as dissolved particles. These can then be consumed by people through their drinking water.

### *What are the health effects of Uranium exposure?*

Currently the Guidelines for Canadian Drinking Water Quality state that drinking water uranium levels should not exceed 0.02 mg/L. This level is determined by studying the effects of uranium on both animals and humans. Studies show that as the level of exposure to uranium goes up there is a possible increased risk of kidney damage. This effect is due to the direct toxic effect of the uranium metal, not radiation. Radiation emitted by uranium is very low and is of little health significance.

### *Is Radon a hazard in drinking water?*

Radon is a gas byproduct of uranium and can be found in some drinking water supplies. Inhalation of radon can be hazardous. Typically, higher exposures occur from radon gas seeping into the home from the surrounding soil rather than from water. Long term exposure to elevated levels of radon can increase the risk of lung cancer. For more information on radon please refer to <http://www.interiorhealth.ca> and look under Your Environment, Air Quality.

### *What can home owners do about uranium contamination in their drinking water?*

Uranium can be present in any water supply. If you own a drinking water well it is recommended that you have your water chemically tested.

If test results show uranium levels exceeds 0.02 mg/L limit your exposure by:

- Using water from a safe alternate source.
- Consulting with a reputable water purification and filtration equipment sales representative on Point of Use or Point of Entry Systems. Reverse Osmosis units and anion exchange units may be helpful in reducing uranium levels in your drinking water. Both systems require proper maintenance and monitoring.

For persons on a community water system with an operating permit issued by Interior Health, chemical analyses are conducted by the water supplier. Ask them for their most current chemical sample results. If the system is affected by elevated uranium, some questions you can ask your water supplier are:

- What precautions should you take?
- How long will this problem last?
- What is the water supplier doing to reduce the uranium level?
- How will the water supplier know when the water is acceptable?
- How will you know when the water is acceptable?
- When will your water system be able to provide drinking water that is not affected by elevated uranium? How will this be done?

If you have further questions, please contact Interior Health.