WHAT IS URANIUM?

Uranium is a naturally occurring radioactive metal found in some rocks, soils, and water. As a result, some private water wells in Georgia may exceed the federal drinking water standard for uranium. Uranium is more likely to occur in bedrock groundwater. Therefore, deep bedrock wells are more likely than shallow wells to have elevated levels of uranium. The amount of uranium in well water will vary greatly from place to place. Testing is the only way to determine if water contains uranium.

While exposure to elevated levels of uranium in drinking water for a short period of time is not an immediate health concern, uranium may pose a health risk when the water is used for drinking and cooking over many years. This is from the toxic effect of the uranium metal, not radiation. The amount of radiation emitted by uranium is very small, and poses little health risk.

You can be exposed to uranium by drinking and cooking with water containing uranium. Uranium does not absorb through the skin. It does not "evaporate" from the water into the air.

We can not eliminate exposure to uranium in the environment.

We can, however, reduce our health risks by minimizing exposure.

WHAT ARE THE HEALTH EFFECTS FROM URANIUM?

A small amount of uranium in drinking water is absorbed into the body from the digestive tract, but most is eliminated. Absorbed uranium settles in body tissues, and over a long period of time it can increase cancer risk and damage the kidneys. Talk to your health care provider regarding your particular health concerns. Special medical tests can measure for uranium in the body and for kidney function.

CAN I REMOVE URANIUM FROM MY WELL WATER?

Uranium testing is the first step. The Georgia Department of Public Health recommends that you contact a state-certified laboratory and ask for a uranium test. The test costs about $50. If you do have elevated uranium, you can install a "point of use" filtration system in your home.

Reverse osmosis and anion exchange filtration systems reduce uranium levels in drinking water. The World Health Organization reports that reverse osmosis treatment will remove at least 90 percent of uranium. Both systems require proper maintenance and monitoring. A system typically costs around $300 and you can save money by installing it yourself.

WHAT SHOULD I DO?

Sensitive Populations

Infants and young children are most at risk for adverse health effects from repeated exposure to uranium in drinking water. Because of their body weight and developing systems, infants and children are exposed to higher doses. Their growing bodies absorb more contamination and can sustain permanent damage if exposures occur during critical growth stages.

Therefore, pregnant and nursing women, women who may become pregnant, infants and small children are sensitive populations that should avoid consuming water with elevated levels of uranium for an extended period of time.

Test Your Home for Radon

When uranium is found in drinking water, the indoor air should be tested for radon. Radon is a colorless, odorless gas that comes from the decay of uranium. Radon can build up in indoor air, resulting in an elevated radon level in the home. Radon emits particles that can be harmful to the human body, primarily the lungs. It is the leading cause of lung cancer among non-smokers. In fact, everyone in Georgia should test their home for radon.

For more information about testing your home for radon, contact the Chemical Hazards Program at 404-657-6534 or visit our website: *www.health.state.ga.us/programs/hazards*

IS URANIUM REGULATED?

The Safe Drinking Water Act covers uranium in public drinking water. Although private wells are not subject to the same regulatory standards as those set for public drinking water supplies, it is recommended for health purposes that private well owners use these standards to guide their water treatment decisions.

The U.S. Environmental Protection Agency establishes maximum contaminant levels (MCLs) for radioactive contaminants in public drinking water supplies. MCLs are well below levels at which health effects have been observed. Therefore, they are assumed to be protective of public health. The uranium MCL is 30 µg/l (micrograms per liter) in drinking water.

? COMMON QUESTIONS ?

Does uranium cause cancer?

There are insufficient data to determine if uranium causes cancer in humans and experimental animals.

Can I use my water for bathing and laundry?

Yes, this water can continue to be used for bathing, showering, dish and clothes washing.

Can I water my garden?

Yes, this water can continue to be used for growing food and will not contaminate the environment.

Is public water safe?

Yes. Public water providers work with state regulators to correct problems in systems that exceed the MCL. Corrective methods include obtaining a new water source, blending water from more than one source, and removing uranium by treatment.

FOR MORE INFORMATION

Georgia Department of Public Health
Chemical Hazards Program
(404) 657-6534
www.health.state.ga.us/programs/hazards

Soil, Plant, and Water Laboratory
University of Georgia
(706) 542-5350
www.aesl.ces.uga.edu

U.S. Environmental Protection Agency
Radiation Protection Programs
(404) 562-9459
www.epa.gov/radiation/basic

Southface Energy Institute (radon)
Outside Atlanta 1-800-745-0037
Atlanta Area 404-872-3549, Ext. #148
www.southface.org

Sources: U.S. Environmental Protection Agency, www.epa.gov/radiation/radionuclides/uranium.html; Agency for Toxic Substances and Disease Registry, www.atsdr.cdc.gov/toxfaqs/tf.asp?id=439&tid=77.

URANIUM IN PRIVATE WATER WELLS

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Environmental Health Branch

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