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Arsenic in Drinking Water and Groundwater

What is arsenic?

Arsenic is a naturally occurring semi-metal. Arsenic is fairly common in Montana's groundwater. High concentrations are often found around mountainous areas, near hot springs and glacial deposits. It is widely thought that naturally occurring arsenic dissolves out of certain rock formations. Surface arsenic-related pollutants enter the ground water system by gradually moving with the flow of ground water from rains, melting of snow, etc. Either way, ongoing testing for arsenic is an important strategy for private well owners to safeguard the health and well being of their family. Arsenic is odorless and tasteless. Consumption of food and water are the major sources of arsenic exposure for the majority of US citizens. People may also be exposed from industrial sources, as arsenic is used as a wood preservative, in semiconductor manufacturing, petroleum refining and herbicides.

How much arsenic is safe?

The US Environmental Protection Agency (EPA) has set the Maximum Contaminant Level (MCL) for arsenic to 10 ug/L or 0.01 mg/L. The Arsenic Rule can be found by visiting the EPA's website at www.epa.gov/safewater/arsenic.html. The EPA also set a Maximum Contaminant Level Goal (MCLG) for arsenic at zero. This means that ideally drinking water should not contain any arsenic but that goal is too expensive for most systems to achieve.

What are the symptoms of arsenic poisoning?

Arsenic has long been recognized as a poison. Chronic exposure to low doses in food or water can cause cancer of the lungs, skin, kidney or liver. In addition, arsenic has been reported to affect the vascular system in humans and has been associated with the development of diabetes, nervous system problems, and low birth weights. Observable symptoms of arsenic poisoning are: thickening and discoloration of the skin, stomach pain, nausea, vomiting, diarrhea, numbness in hands and feet, partial paralysis, and blindness. Whether someone will develop any of these conditions depends on the amount of arsenic consumed, the length of exposure, the form of the arsenic, and the general health and sensitivity of the person.

Is my private well at risk?

Like many contaminants in drinking water, arsenic is potentially hazardous at levels or concentrations that do not impart a noticeable taste, odor, or appearance to the water. Your best course of action is to get your water tested and compile as much information as possible about your water supply source, well construction, surrounding land-use, and local geology. Note: We do not recommend just testing your water for Arsenic because there may be other contaminants in your water. At the bare minimum, the EPA recommends that private well owners test their water annually for coliform bacteria, nitrate, pH, and specific conductance.

If I have Arsenic in my water, what do I do?

If you do have an arsenic problem, there are water treatment technologies available that can reduce or even remove arsenic from your drinking water. The most common are reverse osmosis or arsenic specific removal media. Be sure to use only an NSF certified product and sample your water annually to check that your removal system is working correctly.

For more information go to: www.epa.gov/safewater/arsenic.html