



Arsenic in Drinking Water

FACT SHEET

SWP-112

What is Arsenic?

Arsenic is a naturally occurring element. Not all rocks contain arsenic, but it is common in volcanic rock and sediments eroded from volcanic rock. In Montana, arsenic is associated with granitic bedrock and in valley fill sediments that have eroded from the bedrock or deposited as ash.

Is There Arsenic in My Well Water?

Without testing your drinking water, it is impossible to determine if the water is safe for drinking. Historically, few domestic drinking water wells were tested for arsenic. As public awareness about water quality-related health affects increases, more homeowners are choosing to analyze their drinking water for more substances, including arsenic.

How Can Arsenic Affect My Health?

People who drink water containing elevated arsenic for many years could experience skin damage, problems with their circulatory or nervous system, and may have an increased risk of getting cancer. Children may be more susceptible due to their smaller size. Generally, bathing and showering with water that contains arsenic is not considered to be a health concern as arsenic is not readily absorbed through the skin.

How Can I Make Sure That My Well Water Is Safe For Drinking?

To find out if you have arsenic in your drinking water, the Montana Department of Environmental Quality recommends that you contact a certified laboratory for cost and "how to sample" information. Arsenic analysis is usually less than \$20 and requires no special collection techniques. Water quality can change over time, so repeat testing on an annual basis is recommended. The Source Water Protection page (<http://deq.mt.gov/Water/WPB/SWP>) contains links to [Montana Certified Drinking Water Labs](#).

If you do have arsenic at a concentration greater than the EPA drinking water standard of 10 micrograms per liter (ug/L), DEQ recommends that you install a treatment system or use bottled drinking water. Neither the EPA nor the state regulates your private drinking water well, but the EPA standard provides a reasonable value to which you can compare your own drinking water quality.

How Do I Remove Arsenic from my Drinking Water?

Boiling water does not reduce arsenic. While whole house treatment units are available, homeowners commonly have a point-of-use treatment unit that provides treated drinking water at a separate tap at the kitchen sink. Arsenic treatment for domestic wells typically uses reverse osmosis, anion exchange, or an adsorptive filter. These units are relatively inexpensive to install and maintain. Other constituents in your water such as sulfate, manganese, and calcium carbonate (hardness) may affect treatment options. Following installation of a treatment device, water quality should be tested to verify the operation of the device. After that, water should be tested at least annually to confirm treatment effectiveness.

Treatment systems may be available from local hardware stores, or plumbing or water treatment companies. Treatment units can also be purchased from on-line suppliers. Be an informed consumer. Be sure to choose a treatment system meets that is tested for effectiveness and provides consumer protection. If you have elevated arsenic in your well, no one will force you to install arsenic treatment system, although installation of treatment is highly recommended. You may wish to consult your physician or health care provider about potential impact to you and your family's health based on the level of arsenic exposure through drinking and cooking water.

Additional Contacts: Where can you get help?

- Montana DEQ Source Water Protection Program. (406) 444-3080
- County Environmental Health Department or Sanitarian's Office under *County Government* listings in the phone book.
- Montana State University Extension Water Quality Program. (406) 994-6589

References:

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Oregon Health Authority. *Recommendations for Arsenic Removal from Private Drinking Water Wells*. 2012.

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