## Diseases and Contaminants



# Arsenic and Drinking Water from Private Wells

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## What is arsenic?

Arsenic is an element that occurs naturally in rocks and soil and is used for a variety of purposes within industry and agriculture. It is also a byproduct of copper smelting, mining, and coal burning. Arsenic can combine with other elements to make chemicals used to preserve wood and to kill insects on cotton and other agricultural crops.

For more information about arsenic illnesses and treatment, please visit CDC-ATSDR's arsenic (http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=3) page.

## Where and how does arsenic get into drinking water?

Arsenic can enter the water supply from natural deposits in the earth or from industrial and agricultural pollution. It is widely believed that naturally occurring arsenic dissolves out of certain rock formations when ground water levels drop significantly. Some industries in the United States release thousands of pounds of arsenic into the environment every year. Once released, arsenic remains in the environment for a long time. Arsenic is removed from the air by rain, snow, and gradual settling. Once on the ground or in surface water, arsenic can slowly enter ground water. High arsenic levels in private wells may come from certain arsenic containing fertilizers used in the past or industrial waste. It may also indicate improper well construction or overuse of chemical fertilizers or herbicides in the past.

### How can I find out whether there is arsenic in my drinking water?

If you suspect a problem and your drinking water comes from a private well, you may contact your state certification officer (http://www2.epa.gov/dwlabcert) for a list of laboratories in your area that will perform tests on drinking water for a fee.

## How do I remove arsenic from my drinking water?

Heating or boiling your water will not remove arsenic. Because some of the water evaporates during the boiling process, the arsenic concentrations can actually increase slightly as the water is boiled. Additionally, chlorine (bleach) disinfection will not remove arsenic.

You may wish to consider water treatment methods such as reverse osmosis, ultra-filtration, distillation, or ion exchange. Typically these methods are used to treat water at only one faucet. Contact your local health department for recommended procedures. If you want to know more about these and other treatment options, please contact NSF International (http://www.nsf.org/contact-us/) , an organization that focuses on public health and safety through standards development, product certification, education, and risk management. Remember to have your well water tested regularly, at least once a year, to make sure the problem is controlled.

Healthy Water Sites

- Healthy Water (http://www.cdc.gov/healthywater/)
  - Drinking Water (http://www.cdc.gov/healthywater/drinking/index.html)
  - Healthy Swimming (http://www.cdc.gov/healthywater/swimming/index.html)
  - Global WASH (http://www.cdc.gov/healthywater/global/index.html)
  - Other Uses of Water (http://www.cdc.gov/healthywater/other/index.html)
  - WASH-related Emergencies & Outbreaks (http://www.cdc.gov/healthywater/emergency/index.html)
  - Water, Sanitation, & Environmentally-related Hygiene (http://www.cdc.gov/healthywater/hygiene/index.html)

**Related Sites**

Community Water Fluoridation

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