

Arsenic in Well Water: The Problem You Can't See, Smell, or Taste

It's hard to believe that water that looks, smells, and tastes fine may not be safe to drink. But the truth is that many private wells in Maine yield water that is high in arsenic.



Arsenic is a naturally occurring chemical found in soil and rocks. Some rocks have higher levels of arsenic, and this may explain why some drilled wells have high arsenic water. And in some areas, past use of arsenic-containing pesticides on blueberry, apple and potato crops may add to the arsenic water problem.

The Harm Caused by Arsenic

People who drink water high in arsenic for many years are more likely to get cancer. Drinking water very high in arsenic can also cause stomach pain, nausea, vomiting and diarrhea, numbness or tingling in the hands and feet, as well as effects on blood and the heart.

How likely you are to get cancer or any other health effects from arsenic in water depends on three major factors:

- ◆ How much arsenic is in your water;
- ◆ How much tap water you drink;
- ◆ How long you have been drinking the water.

If you are concerned about health problems possibly due to arsenic in your well water, you should discuss them with your doctor. The Bureau of Health recommends that all household wells be tested for arsenic.



Answers to Some Commonly Asked Questions

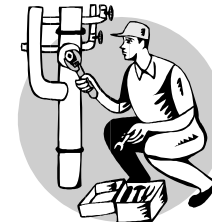
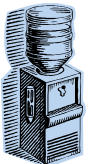


Q. How much is too much arsenic in well water?

Answer: Test results for arsenic in water are often reported as the number of *milligrams* of arsenic in a *liter* of water (mg/L for short). A liter is about a quart. The Bureau of Health guideline for arsenic in domestic well water is 0.01 milligrams of arsenic per liter of water. The current federal government standard for regulated water supplies is 0.05 mg/L, but this will be lowered to 0.01 mg/L.

Q. I just found out I have high arsenic water. What should I do?

Answer: If your water has more than 0.01 mg/L arsenic, we recommend you begin taking steps to reduce how much of this water you drink. Switching to bottled water will greatly reduce how much arsenic gets into your body. It will also allow you to safely take your time in deciding what, if any, treatment you want to have installed to remove arsenic from your well water. Sometimes, simply switching to bottled water is all that is needed.



Q. Is there a way to remove arsenic from well water?

Answer: Yes. We advise consulting one or more water treatment companies to help in choosing an arsenic removal system. This is because the choice of a treatment system depends on what else is in your water and how much water you need to treat. While we do not recommend any specific treatment system, we do advise selection of treatment systems that have been certified for arsenic removal by NSF International (www.nsf.org). Also, be sure to test at least once a year after any system is installed to make sure it is working.

Q. Can I use my water for bathing if it has high arsenic?

Answer: Studies have shown that little arsenic gets into adults from bathing. But we do not have studies on young kids. Kids might get more arsenic in them while bathing because of their bathing habits. We have a study underway to check this. For now, if you are concerned, call us toll-free to discuss exposure from bathing.



Q. Can I use my water for cooking if it has arsenic in it?

Answer: The answer depends on how much arsenic is in your water, how much water is either absorbed or used when cooking a food, and how often you eat such foods. Pasta, rice, oatmeal and dried beans are examples of foods that absorb a lot of water when cooked. Soup and jello are examples of foods that use water by recipe. If your water has more than 0.05 mg/L arsenic, contact us for information about use in cooking.

Q. How likely is it that my well water has high arsenic?

Answer: Based on the current information we have, it looks like about 1 out of every 10 Maine homes with a private well have arsenic levels of concern. Drilled bedrock wells are more likely to have high arsenic levels than dug wells, wellpoints, or wells that are drilled into sand and gravel.

How do I get more information about arsenic in private well water?

- For more information on the health effects of arsenic, contact:

Andrew E. Smith, SM, ScD.
State Toxicologist
Environmental Toxicology Program
Bureau of Health
11 State House Station
Augusta, ME 04333
Toll Free: 866-292-3474
Email: andy.e.smith@state.me.us

Website:

janus.state.me.us/dhs/bohstp/index.html

- For more information on treatment systems for removing arsenic from well water, contact:

David Braley, Geologist
Drinking Water Program
Bureau of Health
11 State House Station
Augusta, ME 04333
Tel: (297) 287-3194
Email: david.braley@state.me.us

Website:

janus.state.me.us/dhs/eng/water/index.htm



HAVE YOU TESTED YOUR WELL WATER FOR ARSENIC?

Health Information for Private Well Users



Arsenic in Well Water



Maine Bureau of Health



Fact Sheet: Arsenic Treated Wood

Maine CDC
Environmental and
Occupational Health Program

Department of Health and
Human Services
11 State House Station
Augusta, ME 04333

Toll Free in Maine: 866-292-3474
Fax: 207-287-3981
TTY: 207-287-8066
Email: ehu@maine.gov

IF YOU WORK WITH CCA WOOD

- **NEVER** burn CCA wood.
- Wear gloves when handling CCA wood
- Wear a dust mask when sanding or cutting CCA wood
- Don't work with CCA wood in an enclosed area (like a garage)

Apply a coating to seal the wood every 1-2 years

Does Your New Home Have Arsenic (CCA) Treated Wood?

About half of all Maine homes have a deck, or playground or some other structure that is made of wood treated with arsenic. This wood is called "CCA pressure-treated wood" or just "pressure-treated" wood. The wood was treated with arsenic to protect against rot and insects.

Too much arsenic can cause cancer. So it is good to prevent arsenic getting into your body when you can. When you touch wood treated with arsenic, you can get arsenic on your hands. The arsenic on your hands can get into your mouth if you are not careful about washing before eating. Young children are most at risk because they are more likely to put their hands in their mouths. The good news is that there are simple things you can do to protect yourself and your family from arsenic treated wood. This fact sheet will tell you how.



Children touching unsealed treated wood, and then putting their hands in their mouths is the biggest concern.

TO LEARN MORE

Eric Frohberg
Environmental and
Occupational Health
Program
Maine CDC
Toll-free in Maine 866-
292-3474
TTY: 207-287-8066
www.maine.gov/dhhs/
eohp

First: Does your house have arsenic treated (CCA) wood?

When arsenic treated wood is new, it tends to have a greenish tint. When CCA wood is older, it is harder to tell. Ask your realtor if the seller knows whether CCA wood was used. You can also test the wood to find out if it contains arsenic. Call us to find out how.

Second: If so, reduce contact with the arsenic.

You can lower the amount of arsenic on the surface of the wood by applying a coating on the wood every 1-2 years. Oil-based sealants, varnishes, or polyurethane work best for sealing arsenic in the wood. Be sure to wash your children's hands when they finish playing on or near CCA wood.

Third: If you have any questions, call us toll-free in Maine: 866-292-3474

Common Questions

What is CCA wood?

CCA wood is made by dipping the wood in a mixture of chemicals. These chemicals include chromium, copper, and arsenic. This protects the wood against insects and rot. This wood is known as CCA wood or "pressure treated" wood. Most pressure treated wood in the U.S. is CCA wood. After December 31, 2003, no more CCA wood will be made for use around homes. CCA wood may still be sold for home use until April 1, 2004 in the state of Maine.

What is Arsenic?

Arsenic is found in soil and rocks. Most people get a little arsenic every day from the food they eat. Also, some people have arsenic in their private wells, which is why it is important that anyone with a well have it tested for arsenic. People who are exposed to too much arsenic over many years are more likely to get cancer.