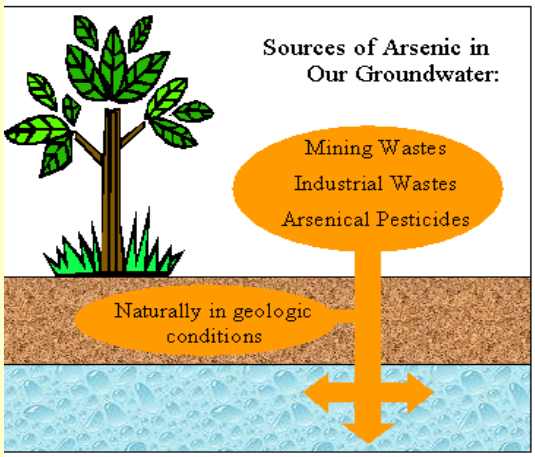
Dartmouth Toxic Metals
Superfund Research Program

Arsenic in NH Well Water
Your Questions and Answers

What is arsenic?

Arsenic is a chemical element present in the environment from both natural and human sources, including erosion of arsenic-containing rocks, volcanic eruptions, contamination from mining and smelting ores, and previous or current use of arsenic-containing pesticides. Arsenic is a metalloid, which is an element that shares properties of both metals and nonmetals.



How am I exposed to arsenic?

Water and food are the main sources of arsenic exposure. In New Hampshire, 46 percent of the population depends on private wells for their water supply. Private well owners who do not test or treat their water are much more likely to experience arsenic exposure and associated health problems. There is no safe level of arsenic exposure. Reducing your intake of arsenic from water and food lowers your health risk.

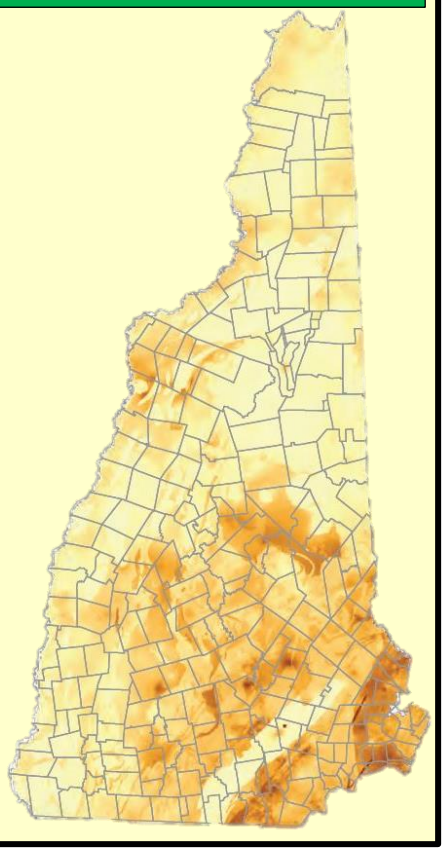
Arsenic and your health

Arsenic affects a broad range of human organs and systems. Drinking water with arsenic for many years could lead to health problems, including:

Cancer of the bladder, lung, liver, prostate, and skin; Cardiovascular, pulmonary, immunological, neurological, reproductive, and endocrine problems.

Studies show that developing fetuses and children are particularly sensitive to arsenic. Arsenic exposure has been associated with increased infant mortality, reduced birth weight, reduced ability to fight other diseases, neurological impairments, and greater potential for cancer later in life.

This map of NH released by the U.S. Geological Survey in 2013 shows the probability of arsenic in towns at or above five parts per billion in groundwater. The darker the color, the higher the probability of arsenic in groundwater. Wells outside the dark areas may also contain arsenic. About one in five wells contain high levels of naturally occurring arsenic.



Reduce Your Family's Exposure

Step 1: Test Your Drinking Water

Homeowners with private wells are solely responsible for testing and treating their water. Contaminants in private wells will not be detected or treated unless the homeowner gets their well tested. ***Arsenic is colorless, odorless and tasteless in water, so testing is required to determine whether your drinking water contains arsenic.***

The NH Department of Environmental Services (NH DES) has names of laboratories that are certified to test drinking water. The standard well water test at the NH State Lab includes a test for arsenic. **The NH DES recommends that households test for bacteria every year and get a standard water test at least every 3 to 5 years. For questions, call 603-271-2513. For certified labs, visit:** https://www.des.nh.gov/organization/divisions/water/dwgb/well_testing/accredited-labs.htm

Step 2: Treat Your Drinking Water

If your water contains arsenic, purchase a water treatment system or find an alternative source of water. Boiling water will not remove arsenic. For more information and resources on private well testing and treatment, visit http://des.nh.gov/organization/divisions/water/dwgb/well_testing/index.htm

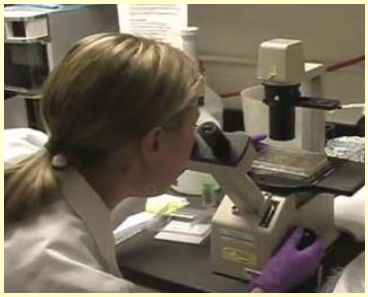
The Quick Facts

Arsenic is common in well water

- **Arsenic is present in New Hampshire well water** because of the state's granite and other types of rock.
- Arsenic in well water can cause **serious health issues over time**, such as heart problems and bladder, skin, and lung cancer.
- **Children are especially vulnerable** to the effects of arsenic in water.
- Everyone's wells need testing, so **do not rely on the results of your neighbor's test**. Arsenic levels vary from house to house.
- **Common treatment methods, such as boiling, most pitcher filters, or a water softener, do not remove arsenic.**
- There are **many resources available** to help! We suggest you start at: www.ArsenicandYou.org

Testing your water is easy

- The **first step to keeping your family safe** is to test your well water for arsenic and other contaminants.
- The cost to test your water ranges from about **$15 for just arsenic to $85 for a standard package** of tests of the most common contaminants.
- **Sample collection bottles are easily available** from state or private labs. Bottles **can be mailed to you** and samples **can be mailed back**. Directions will be included in your kit.
- If testing shows you have unsafe levels of arsenic, there are **reliable options** to address it.



Test for Arsenic

www.des.nh.gov
Go to 'A to Z List' and find 'Laboratory Accreditation'

or call: 603-271-2513

The Toolkit provides a step-by-step guide to help communities ensure the safety of private well water. www.dartmouth.edu/~toxmetal/assets/pdf/wellwatertoolkit.pdf

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How is arsenic in water regulated?

The U.S. Environmental Protection Agency standard for arsenic in public drinking water is a maximum contaminant level (MCL) of 10 parts per billion (ppb). This standard applies to public water supplies only.

Watch our ten minute movie about exposure to potentially harmful amounts of arsenic in private well water.

www.InSmallDoses.org

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