



Arsenic in Drinking Water Frequently Asked Questions (FAQs)



Division of Environmental Health • Drinking Water Program

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Public Health
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Health Department

What you need to know about the possibility of arsenic in your well water!

This document addresses issues and concerns surrounding the possible presence of arsenic in drinking water in small water systems and private drinking water wells.

New York has adopted the United States Environmental Protection Agency (EPA) federal standards for arsenic in public drinking water supplies. A drinking water standard, called Maximum Contaminant Level (MCL), establishes a limit on the concentration of a contaminant in drinking water. The MCL for arsenic in public drinking water is 10 parts per billion (ppb). There is no legal standard for private wells.

What is arsenic?

Arsenic is a naturally occurring toxic chemical element which is widely found throughout the earth's crust in soil, rocks and minerals. It is also a by-product of certain agricultural and industrial processes. It is odorless, tasteless, and colorless when dissolved in water (even at high levels) and can only be detected via chemical testing.

How can arsenic affect my health?

Arsenic ingestion can result in both chronic (long-term) and acute (short-term) health effects.

Acute effects at high dosage can include:

- nausea
- vomiting
- neurological effects such as numbness or burning sensations in the hands and feet
- cardiovascular effects
- decreased production of red and white blood cells, which may result in fatigue

Chronic effects include:

- changes in skin coloration
- skin thickening
- small corn-like growths, especially on hands and feet

Chronic exposure to arsenic is also associated with an increased risk of skin, bladder, and lung cancer. There is evidence that long-term exposure to arsenic can increase risks for kidney and prostate cancer.

The following factors determine health risks:

- the level of arsenic in your water.
- the amount of water you consume each day.
- the length of time you have been drinking the water.
- the dietary intake of arsenic (in the foods that you eat)
- your individual sensitivity to arsenic.

Arsenic in Drinking Water FAQs contd.

How does arsenic get into drinking water?

Arsenic enters lakes, rivers and underground water naturally when mineral deposits such as rocks containing arsenic erode and dissolve. It may also enter the groundwater through the discharge of industrial and agricultural waste products.

Is arsenic in drinking water regulated?

Yes. In 1974 Congress passed the Safe Drinking Water Act. This law, which was incorporated into the New York State Sanitary Code (Part 5, 10NYCRR), regulates public water systems and establishes Maximum Contaminant Levels (MCLs) for chemicals in water which may pose a risk to human health. These threshold/ elevated levels, are expressed as standards and public water providers are required to comply with these standards. The Standard or MCL for arsenic in drinking water is 10 ppb.

What is the regulatory standard for arsenic in drinking water?

The current drinking water standard, or Maximum Contaminant Level (MCL), from the U.S. Environmental Protection Agency (EPA) is 10 ug/L (micrograms per liter) or 10 ppb. Long term exposure to drinking water containing arsenic at levels higher than 10 ppb increases the chances of getting cancer; for lower levels, the chances are less.

If your water has arsenic levels above 10 ppb, you should get drinking water from another source or install a home treatment device. Levels above 10 ppb will increase the risk of long-term or chronic health problems. The higher the level and length of exposure, the greater the risk. It is especially important to reduce arsenic water concentrations if you have children or are pregnant. Children are at greater risk because of their water consumption is greater on a per unit body weight basis.

Pregnant women should reduce their arsenic exposures, because arsenic may occur in mother's milk and will cross the placenta, increasing exposure and risk for the fetus.

Is it safe to take a shower or brush my teeth if arsenic is found in my water?

Bathing with water that contains arsenic is not a significant health risk because arsenic is not readily absorbed through skin. Some ingestion of arsenic may occur when brushing your teeth. Although the amount ingested is minimal, using a clean source of water for brushing your teeth is advisable.

How do I know if there is arsenic in my water?

If you are connected to a public water system, you can check with the operator of that system to verify that the arsenic in your water is below the MCL limits. If you are on a private well or an unregulated water system (less than 5 connections), you should have your water tested. Cattaraugus County Health Department (CCHD) recommends testing your water for bacteria (E.coli and coliform) and toxins (like arsenic) to ensure your water supply is safe.

What should I do if there are elevated arsenic levels in my water?

Water for drinking and cooking should come from an approved or known safe source such as a public water system or buying bottled water for drinking purposes. Remember to use very clean drinking water containers for water transport or storage. Do NOT use containers that have been used for food or milk since these containers are very difficult to get clean for this purpose. Do not attempt to remove arsenic by boiling the water. Water treatment may be used for treating elevated levels of arsenic. As a homeowner that has their own water well, the owner may consider installing a Point-of-Use water filter device under sink.

Arsenic in Drinking Water FAQs contd.

Where can I have my well water tested for arsenic?

Please contact the Cattaraugus County Health Department ([information below](#)) for information on this process.

What is the role of the Cattaraugus County Health Department in protecting the water supply in protecting the water supply in public systems and private drinking water wells?

As the regulatory agency for public water systems, CCHD is responsible for enforcing State and local codes which govern all new and existing water supplies. These codes require new and existing water supplies to be in compliance with bacteriological and chemical regulations designed to ensure the safety of drinking water supply for human consumption. Public systems are tested routinely for compliance with drinking water standards and directed to take corrective actions if MCLs are exceeded. Private well owners are responsible for ensuring the potability of their own water supply.

Cattaraugus County Health Department:

contact: Tim Zerfas at 716-701-3388 or email tdzerfas@cattco.org

Additional Resources:

Arsenic in Drinking Water: <https://www.epa.gov/dwreginfo/chemical-contaminant-rules>

Arsenic Health Effects: <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=3>

Your Private Well: <https://www.epa.gov/privatewells>