Cadmium in Drinking Water

Cadmium is a metal that may get into drinking water. Too much cadmium in drinking water could cause health problems.

How cadmium gets into drinking water

- Cadmium is a metal found in rocks and soil. When valuable ores like zinc, lead and copper are mined, the process leaves behind large piles of leftover rocks that may contain cadmium. Then, rainwater or snowmelt may wash the cadmium into the groundwater that becomes your drinking water.
- Galvanized pipes and fittings in home plumbing can contain cadmium and may contaminate drinking water.
- Some batteries contain cadmium. When they are disposed of incorrectly, they end up in landfills and cadmium may seep into the groundwater that becomes your drinking water.
- Manufacturing plants that conduct metal coating or plating, burn coal or produce plastic may release cadmium into the lakes, rivers or groundwater that become your drinking water.

How cadmium in drinking water may affect your health

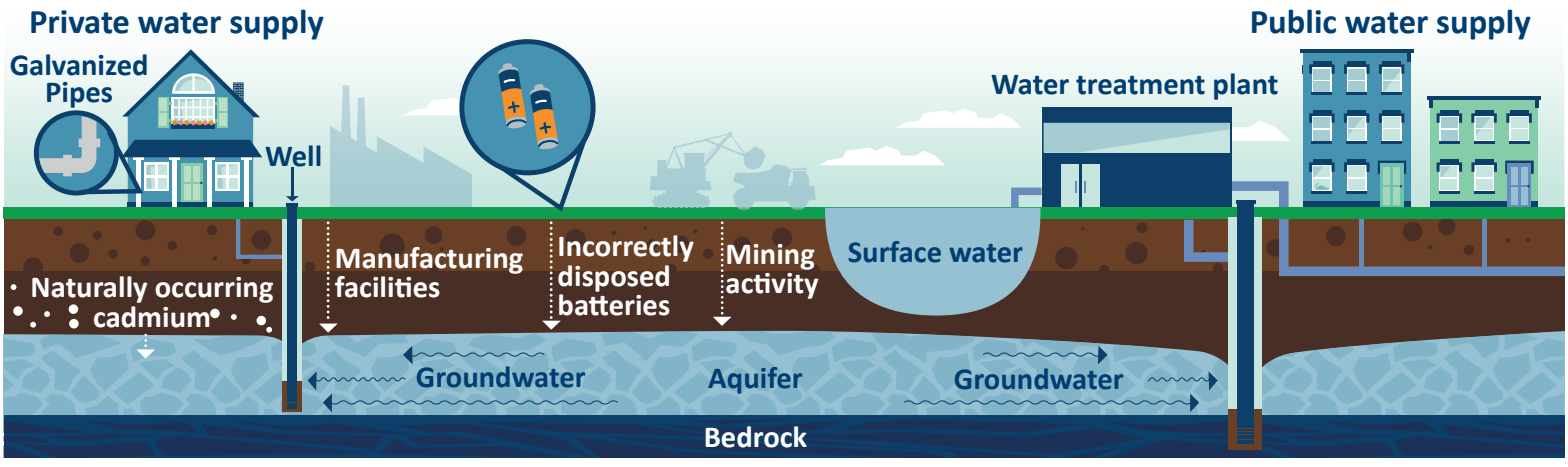
Some people are at an increased risk for health effects from exposure to cadmium in drinking water, including:

- People who live near places where cadmium is or was used, spilled or disposed of in the past (like landfills or mines).
- People who have corrosion in their cadmium-containing plumbing.
- People who eat a lot of food that has cadmium in it like liver, spinach or sunflower seeds.
- People who smoke.

Cadmium stays in the body for a long time and builds up in the kidneys. So, exposure to low levels of cadmium over a lifetime can cause kidney disease in older adults.

Additionally, low levels of cadmium can decrease bone density and disrupt bone structure. Growing bones are most sensitive, so children are at an increased risk.

Exposure to cadmium in drinking water is usually low. But drinking water with high levels of cadmium can irritate the stomach, causing vomiting and diarrhea.



How to find out if cadmium is in your drinking water

Step 1: Know where your water comes from.

- Learn about the different water supply types to determine where your water comes from at Eh.Michigan.gov/DW-Supply-Types.

Step 2: Contact your local health department or a certified drinking water lab to test your drinking water.

- If you are on a **public water supply**, the water coming into your home may be regularly tested for certain contaminants. You should check with your public water supply for results.
- If you have a **private residential well**, water testing is your responsibility. Your local health department may offer drinking water testing, or you can contact a certified private drinking water analysis laboratory directly. The cost for a test may vary between labs and the contaminants you choose to test for. Visit Eh.Michigan.gov/DW-testing and click "Test your water" to learn more about your options.

Step 3: Understand a test result for cadmium.

- To understand the quality of your water, compare your test results to the established drinking water value from the Environmental Protection Agency (EPA). Drinking water with **more than 0.005 mg/L of cadmium** over your entire lifetime could increase your risk of health problems.

How to reduce cadmium in your drinking water

Install a reverse osmosis (RO) system. A reverse osmosis treatment system certified to NSF/ANSI 58 with a claim to reduce cadmium.

Be sure to follow the system's manufacturing instructions to make sure cadmium is reduced as expected. There are other treatment systems or filters that may reduce cadmium but can be harder to use and do not guarantee that all cadmium will be removed from drinking water.

Consider replacing galvanized plumbing, pipes and faucets. Check your plumbing or hire a plumber to know what parts should be replaced to reduce cadmium in your drinking water.

Things you should not do to reduce cadmium in your drinking water

Do not try to remove cadmium by boiling the water. Cadmium is not removed by boiling. Water evaporates during boiling, decreasing the amount of water. The same amount of cadmium remains but in less water.

For More Information

Michigan Department of Health and Human Services Environmental Health Hotline
800-648-6942
Michigan.gov/CareforMiDrinkingWater

List of local health departments
Eh.Michigan.gov/MiHealthDepartment

Laboratory Services
Michigan.gov/EGLElab

Michigan Department of Environment, Great Lakes, and Energy
Michigan.gov/DrinkingWater
Michigan.gov/WaterWellConstruction

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