

Manganese in Drinking Water



Some manganese is essential for our health. But too much manganese can be harmful, especially to infants as their brains and nervous systems are still developing.

Tap into the facts about manganese to learn if you should consider testing your drinking water to protect your health.

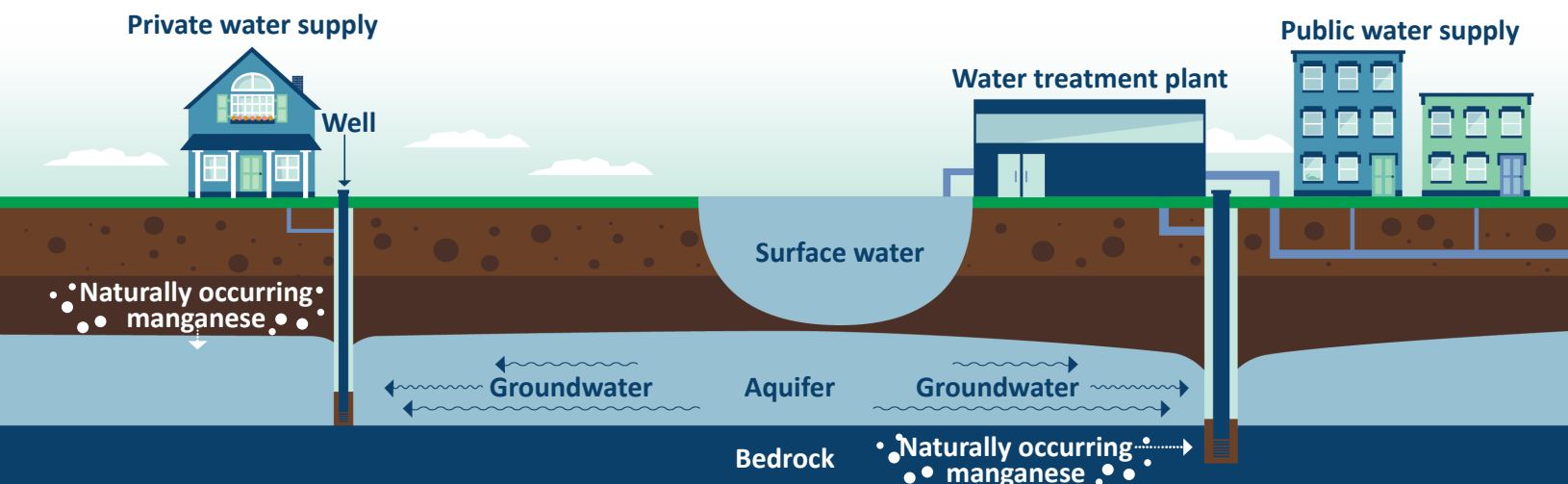
How manganese gets into drinking water

- Manganese is a naturally occurring metal in soil and rocks. As water moves through soil and rocks, manganese can dissolve into it. This is the most common way manganese enters the lakes, rivers or groundwater that become your drinking water.
- Industrial activities may also release manganese into the lakes, rivers or groundwater that become your drinking water.

Problems with manganese in drinking water

- Manganese is usually not harmful. Drinking water with over 0.05 milligrams per liter (mg/L) may taste bitter or metallic. You may notice dark-colored water or stained fixtures.
- Amounts above 0.3 mg/L in drinking water increase the risk of health effects, including harm to the nervous system causing changes to memory, thinking, mood and motor skills.
- Infants are more likely to be at risk. Infant formula usually contains more manganese than human milk. Infants may take in more manganese than needed if the formula is made with drinking water containing manganese. Infants may also retain more manganese from water because less is passed through normal bodily functions.

The Michigan Department of Health and Human Services (MDHHS) recommends you take action to reduce manganese in drinking water if your test result is above 0.3 mg/L. You should consider using a water treatment system to reduce the manganese in drinking water. Use only filtered or bottled water when making food or when mixing powdered infant formula for babies under 1 year old.



How to find out if manganese 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 Michigan.gov/CareforMiDrinkingWater.

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 already be regularly tested for certain contaminants. Those on public water supply should check for results with their local water supply.
- 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/DW5tips and click “Test your water” to learn more about your options

Step 3: Understand a test result for manganese in drinking water.

- To understand the quality of your water, compare your test results with an established drinking water value from the U.S. Environmental Protection Agency (EPA). **For manganese, the EPA recommends no more than 0.05 mg/L to help manage the taste and color of the water.**
- Drinking water with **greater than 0.3 mg/L of manganese could harm your health.**

Things you can do to reduce manganese in drinking water

Before you install a treatment system, work with a certified installer to verify that the system is appropriate for your home.



Install a water softener. Some water softeners can be used to reduce the level of manganese in your water when used regularly.



Install a reverse osmosis (RO) system certified to NSF/ANSI 58 with a claim to reduce metals like lead and arsenic. While not certified to reduce manganese, some RO systems that are certified to remove other metals have been shown to also reduce manganese.

Test your treated water to verify that manganese levels are reduced to below 0.3 mg/L. Be sure to follow the system’s manufacturing instructions to ensure the treatment system continues to reduce manganese levels as expected.

There are other treatment systems or filters that may also be appropriate to remove manganese, but they can be harder to use or do not always filter out manganese.

Things you should not do to reduce manganese in drinking water



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

For More Information

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

List of Local Health Departments
bit.ly/MiHealthDepartment

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

Laboratory Services
Michigan.gov/EGLElab and choose
“Certifications”

