

Copper in Drinking Water

What is copper?

Copper is found naturally in the environment in ground water and in surface water that is used for drinking water. It also comes from human-made sources, such as farming, mining and wastewater release. Copper is needed for all living things to survive. A person's diet should include small amounts of copper. While copper is important to our health, high amounts can be harmful.

What health problems can copper cause?

Drinking water with high amounts of copper can cause:

- Upset stomach.
- Vomiting.
- Diarrhea.
- Stomach cramps.
- Severe illness, such as kidney and liver damage (when consumed over a period of time).

Infants may be more sensitive to elevated copper levels. Formula-fed children under 12 months already get their needed copper from infant formula.

In addition, people with rare diseases, like Wilson Disease, can have problems getting rid of copper from their body. They should follow their doctor's recommendations, which may include avoiding extra sources of copper in certain foods, multivitamins and drinking water.



How does copper get into my drinking water?

While copper can be found naturally in drinking water, it often comes from a home's pipes or faucets. When copper pipes get older, they may start to break down, letting the metal get into the water.

How much copper is permitted in my water?

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the U.S. Environmental Protection Agency (EPA) limits how much copper and other chemicals can be in municipal drinking water. Currently, the action level is 1.3 parts per million (ppm) for copper in drinking water. When at least 10 percent of tested homes on the same public water supply have copper above 1.3 ppm, the water supplier takes action to lower the amount of copper.

How do I know if copper is in my drinking water?

- Copper in water can cause blue-green stains on plumbing, such as sinks, faucets and pipes. It can cause a metallic or bitter taste in drinking water.
- Testing is the best way to know if copper is in your drinking water.
- Call your local health department or a certified laboratory to get a test kit. To learn more about test kit availability, fees and instructions, visit [Michigan.gov/EGLElab](https://www.michigan.gov/EGLElab) and click on "Drinking Water Laboratory."

How can I reduce copper in my drinking water?



Keep your water moving.

If you have not used your water for several hours, run your water by doing any of the following for several minutes:

- Turn water faucet on all the way and let it run.
- Take a shower.
- Run a load of laundry.
- Run your dishwasher.

Before using the water from any faucet for drinking or cooking, run the cold water again for at least several seconds or until it goes from room temperature to cold.



Using a filter can reduce copper in drinking water.

Identifying the right filter for your household is important. If you have questions, call your local health department or the MDHHS Drinking Water Hotline. They can help you identify a filter that fits your household needs and budget.



- You can consider a filter that reduces copper at the point water is used, such as a faucet. This is called a **point-of-use** filter.
- A filter that removes copper at the point where the water enters your home may also be an option. This is called a **point-of-entry** filter.
- When buying a filter, look for the certification number **NSF/ANSI Standard 53** for copper reduction and **NSF/ANSI Standard 42** for particulate reduction (Class 1). Make sure the box says that it reduces copper. Follow the manufacturer's instructions for filter installation and maintenance.



Do not use hot water for drinking or cooking.

- Do not cook with or drink water from the hot water tap. Copper dissolves more easily into hot water.

Clean your aerator.



- Aerators (the mesh screens on your sink faucet) can trap pieces of copper.
- Clean your drinking water faucet aerator at least every six months.
 - If there is construction or repairs to the public water system or pipes near your home, clean your drinking water faucet aerator every month until the work is done.

When can I use water from a faucet that has not been run for several minutes or is not filtered?

If you have copper in your drinking water, you can use water that is not cold or filtered for:

- Showering or bathing.
- Washing your hands, dishes and clothes.
- Cleaning.

For More Information

Michigan Department of Health and Human Services

MI-TOXIC Hotline 800-648-6942

Michigan.gov/EnviroHealth,

click "Care for Mi Drinking Water."

List of Michigan Local Health Departments

Malph.org/Resources/Directory

Michigan Department of Environment, Great Lakes, and Energy

Michigan.gov/EGLE

Laboratory Services

Michigan.gov/EGLELab,

choose "Drinking Water Laboratory"



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