Copper in Drinking Water

What is copper?

Copper is found naturally in the environment and from human-made sources such as farming, mining, and wastewater release. It can also be found in groundwater and surface water used for drinking water. Copper is needed for all living things to survive. A person's diet should include small amounts of copper in order to be healthy. 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, and stomach cramps. High amounts of copper have been linked to liver and kidney damage.

Formula-fed children under the age of one already get their needed copper from infant formula. Higher levels of copper from drinking water may cause an upset stomach or other health issues, as babies may be more sensitive to elevated copper levels.

In addition, people with rare diseases, like Wilson's 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 from copper pipes.

How does copper get into my drinking water?

Copper can be found in groundwater and surface water used for drinking water. However, copper found in drinking water 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 US Environmental Protection Agency (EPA) limits how much copper and other chemicals can be in municipal drinking water. Currently, the action level is 1,300 parts per billion (ppb) for copper in drinking water. When 10 percent of tested homes on the same public water supply have copper above 1,300 parts per billion (ppb) in the water, the water supplier acts to lower the amount of copper in the water.

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.

- However, 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 and click on "Drinking Water Laboratory."

How can I reduce copper in my drinking water?

Flush your pipes before using your water.

If you have not used your water for several hours, flushing your pipes may reduce the amount of copper in your drinking water. To flush the pipes in your home, do any of the following:

- Turn a faucet on all the way until the water runs cold.
- Take a shower.
- Run a load of laundry.
- Run your dishwasher.

Before using the water from any specific faucet for drinking or cooking, run the water again until it runs cold. This flushes out any water that had been sitting in that sink's pipes and faucet.

Using a filter can reduce copper in drinking water.

You can also choose to use a water filter certified to reduce copper in water. If you're buying a filter, look for the certification number NSF Standard 53 and make sure the box says that it reduces copper. Follow the manufacturer's instructions for filter installation and maintenance.

Use cold flushed or filtered water for:

- Drinking, cooking, or rinsing food.
- Mixing powdered infant formula. (You can also choose to use bottled water for this purpose.)
- Brushing your teeth.

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 that is not flushed or filtered?

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

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

For More Information

Michigan Department of Health and Human Services
800-648-6942
Ask for the Drinking Water Investigation Unit

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 and choose "Drinking Water Laboratory"