

Safe Well Water RI

Trusted, expert information

Tip Sheet 5



“Tip sheets helped us learn about our well water.”

Get Tip Sheets at www.rivelltesting.org:

- 14 Tip Sheets about harmful substances
- 10 Tip Sheets about treatment choices
- 3 Tip Sheets about other topics of concern

Well water is groundwater, meaning that it comes from the water stored in the earth and rocks below ground. Even though groundwater is *under* the surface, substances *on* the surface, such as gas from a lawnmower or animal waste, can seep down and pollute it. Some natural substances stored in rocks and soil can also affect the smell, taste, color, and safety of well water.

Copper in Drinking Water Wells

Copper: A metal not common in Rhode Island groundwater, but sometimes found in drinking water

Very small amounts of copper are natural in the human body, but too much can cause problems. If copper is present in drinking water, it likely comes from corroded (worn away) plumbing pipes or fittings.

If you have seen rust on a metal surface, you have seen an example of corrosion (wearing away). Corrosion from pipes or fittings that adds copper to well water is common in Rhode Island.

What health problems can too much copper cause?

Copper in drinking water can cause:

- Stomach upsets
- Cramps
- Diarrhea
- Vomiting

Over time, high doses can cause **damage to your liver or kidneys**. People with Wilson’s Disease should consult their personal doctor if the amount of copper in their water is higher than the safety limit stated on the next page.

How does copper get into well water?

Copper in well water usually comes from the corrosion (wearing away) of pipes and plumbing. The amount of copper in water also depends on the types and amounts of minerals in the water, how long water stays in the pipes, and how acidic the water is. Water with a low pH (below 7) is acidic and can more easily corrode or wear away plumbing. This is common in Rhode Island.



How will I know if I have too much copper in my well water?

You won't know for sure unless you test your water. If you have copper pipes or fixtures, test!

Copper may cause a bitter metallic **taste** as well as blue-green **stains** on plumbing fixtures. Too much copper may also result in health problems.

Use a State-certified lab to test your water.

Find a list here: www.health.ri.gov/find/labs/drinkingwater.

Compare the numbers and letters on your lab test results with the standards (limits) set by the United States Environmental Protection Agency (EPA).

The EPA standard for copper is a Maximum Contaminant Level Goal (MCLG). MCLG is a water quality standard for substances that can harm health.

EPA limit (MCLG) for copper:

1.3 mg/L (milligrams per liter)

1.3 ppm (parts per million)

What can I do about too much copper in my well water?

Three possible solutions if your well water tests high for copper:

- 1. Replacing the plumbing:** The best treatment is to find the source and replace the plumbing with approved plastic. This may be too costly unless the plumbing is old and due for an upgrade.
- 2. Flushing the pipes:** This is a simple treatment that may work. Whenever water remains unused for more than 6 hours (such as first thing in the morning or after work):
 - Let the water run as cold as it can get for at least 1 minute before using.
 - Do not use water from the hot water faucet for cooking, drinking or making baby formula. Use cold water and heat it up on the stove.If you try flushing to lower the level of copper, check it! Use a State-certified lab to test your water after flushing. This is the only way to know if this treatment works.
- 3. Using home treatment:** A neutralizing filter treats the water for low pH. See Tip Sheet 12 about pH of Well Water for information about this treatment system.

Important: Before you install a treatment system, call us for expert advice. *Before* you buy a system, ask how it will be installed and whether this costs extra. Get at least 3 price quotes. Learn the questions to ask. See Tip Sheet 16. *After* you buy a system, be sure to:

1. Keep all the paperwork and directions.
2. Learn what you must do to maintain the system and do it.

Learn more

Get Tip Sheets about choosing and buying water treatment systems at www.riwelltesting.org.