

Lead and Copper in Drinking Water

Under the authority of the Safe Drinking Water Act, EPA set the action level for lead in drinking water at 0.015 mg/L and 1.3 mg/L for copper. This means utilities must ensure that water from the customer's tap does not exceed these levels in at least 90 percent of the sites sampled (90th percentile value). The action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. If water from the tap does exceed this limit, then the utility must take certain steps to correct the problem. Because lead may pose serious health risks, the EPA set a Maximum Contaminant Level Goal (MCLG) of zero for lead. The MCLG is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

What Are The Health Effects of Lead?

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

What Are the Health Effects of Copper?

Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.

What Are The Sources of Lead and Copper?

Lead is a common metal found in the environment. The main sources of lead exposure are lead-based paint and lead-contaminated dust or soil. Drinking water is also a possible source of lead exposure. Most sources of drinking water have no lead or very low levels of lead. Most lead gets into drinking water after the water leaves the local well or treatment plant and comes into contact with plumbing materials containing lead. These include lead pipes, lead solder (commonly used until 1986), as well as faucets, valves, and other components made of brass. Copper works its way into the water by dissolving from copper pipes in the household plumbing. The longer the water has stood idle in the pipes, the more copper it is likely to have absorbed. Newer homes with copper pipes may be more likely to have a problem. Over time, a coating forms on the inside of the pipes and can insulate the water from the copper in the pipes. In newer homes, this coating has not yet had a chance to develop.

What Can I Do To Reduce Exposure to Lead and Copper in Drinking Water?

Run your water to flush out lead and copper if water hasn't been used for several hours, run water for 15-30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking. This flushes lead and copper-containing water from the pipes.

- Use cold water for cooking and preparing baby formula.

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- Do not boil water to remove lead or copper.
- Look for alternative sources or treatment of water.
- Test your water for lead or copper.
- Identify if your plumbing fixtures contain lead or copper.

For More Information

Visit the UM Facilities Services Web site or call us at 406-243-2127. For more information on reducing lead exposure at work and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, call the National Lead Information Center at 800-424-LEAD, or contact your health care provider. You may also contact Montana Department of Environmental Quality, 406-444-4400, Public Water Supply Program, P.O. Box 200901, Helena, MT 59620-0901.

<http://www.deq.mt.gov/wqinfo/pws/leadcopper.asp>

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The University of Montana- Missoula is a Non-Community/Non-Transient public water system (PWS). Lead and Copper Sampling for Drinking Water, for 2021 reporting period (next test in 2024).

Montana Department of Environmental Health lead and copper guidelines (action levels) for the 90th percentile of the drinking water sampled are: 0.015 mg/L for Lead; and 1.3 mg/L for Copper. The 90th percentile lead and copper levels for our system are: 0.005 mg/L for lead and 0.26 for copper.

Location	Lead mg/L	Copper mg/L
Heating Plant	0.003	0.06
Facilities Services	0.002	0.11
Vehicle Repair	0.005	0.03
Grounds Shop	0.005	0.08
Campus Recreation	ND	0.20
PARTV	0.003	0.19
McGill	0.004	0.26
Education	ND	0.40
Pool	0.001	0.03
Art Annex	ND	0.10
Law	0.001	0.35
Music	0.003	0.06
Liberal Arts (East)	0.003	0.14
Liberal Arts (West)	ND	0.11
Lommasson	ND	0.22
Natural Science	0.003	0.25
Natural Sciences Annex	0.011	0.13
Main Hall	0.002	0.35
Mansfield Library	0.004	0.19
Schreiber Gym	0.001	0.05
Forestry	0.005	ND
Stone Hall	0.002	0.26
Skaggs (Center)	0.006	0.17
Health Sciences	0.003	0.25
Corbin Hall	0.004	0.20
North Corbin	0.003	0.13
Brantley Hall	0.007	0.22
Fine Arts	0.001	0.10
Social Sciences	0.002	0.16
Rankin Hall	0.001	0.24

ND – not detected

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