
Lead in Drinking Water FAQ

Madison County Public Health Department

Lead presence in the body can lead to toxic effects especially in children. The good news is the risk of lead exposure, and poisoning, has decreased over the past few decades. However, there still remains a risk. Around half a million children under the age of 5 have blood levels greater than 5 mg/dL, the reference level at which the Centers for Disease Control and Prevention recommends public health actions to be initiated. (CDC)

Exposure to lead can occur from many different sources such as paint, soil, solder and consumer products just to name a few. Exposure to lead-based paint tends to be the most common source especially with children. (<https://www.cdc.gov/nceh/lead/tips.htm>) While not as common, exposure to lead can occur through water sources. This FAQ will focus on the risks of lead exposure via water and ways to decrease one's risk of exposure.

HOW DOES LEAD GET INTO MY BODY?

Most children or adults come into contact with lead by being exposed to the paint in old homes. When old paint that contains lead peels and cracks it creates lead dust and chips. Home renovation may also create significant amounts of lead dust and must be done with caution. Lead dust can be breathed in or get onto hands and toys. Lead intake often occurs when children put their hands and toys in their mouths. Ask your doctor about testing your child or yourself for lead and discuss the risks of lead exposure.

However, lead can also get into your body by drinking or cooking with water containing lead. Young children absorb lead more easily than adults, and lead can be passed from a mother to her unborn child. For these reasons, lead in drinking water can be an important source of exposure for pregnant women, young children, and infants that are fed powdered formula. Bathing or showering in water containing lead should be safe.

LEAD EXPOSURE QUICK FACTS

Overview

- Infants, young children, and pregnant women are especially vulnerable to the harmful effects of lead exposure.
- Most lead exposure results from lead paint dust and chips.
- Most public water sources are lead free in Madison County, but lead can be in your water due to lead pipes, solder, or old fixtures.

What to do:

- Talk with your doctor about testing for lead and about lead exposures.
- Learn if your home has lead paint or lead plumbing/fixtures.
- Use cold water for drinking and cooking.
- Call your local water department to learn about your home's service line and testing your water.

HOW DOES LEAD MAKE YOU SICK?

Lead can affect your organs including harming the brain, kidneys, and nervous system. The developing brains of infants and young children are at greatest risk. An exposure to lead that would have little effect on an adult can have a big effect on an infant or child. While there is no safe level of lead exposure, it is important to reduce lead exposures as much as possible particularly for infants, young children, and pregnant women.

WHAT ARE THE SYMPTOMS OF LEAD POISONING IN CHILDREN?

Most lead-poisoned individuals have no symptoms. At higher lead levels other signs and symptoms can become present.

| Blood Lead Level | Possible Health Effects |
|---------------------|--|
| less than 10 mcg/dL | Decreased IQ, developmental toxicity (No known lower level for effects) |
| 10 - 44 mcg/dL | Behavior problems (hyperactivity, irritability), overt physical symptoms rare |
| 45 - 69 mcg/dL | Apathy/fatigue, anemia, abdominal symptoms (pain, constipation, nausea/vomiting) |
| 70 - 100 mcg/dL | Nephropathy, colic, encephalopathy |
| > 100 mcg/dL | CNS crisis (cerebral edema, ischemia, seizure, coma, possible death) |

<https://www.cdph.ca.gov/programs/CLPPB/Pages/LeadPoisoningOverview.aspx>

For more information on the health effects of lead poisoning, please visit:

<http://www.atsdr.cdc.gov/csem/csem.asp?csem=7&po=10>

As risk varies, depending on the individual and circumstances, **the only way to clearly diagnose lead poisoning is to obtain a lab test of the blood lead level (BLL).** If you are concerned about your or your child's exposure, please talk with your doctor about blood level testing.

RISK FOR WATER BASED LEAD POISONING?

Measures taken during the last two decades in the United States have reduced exposures to lead in tap water. Even so, lead still can be found in some metal water taps, interior water pipes, or pipes connecting a house to the main water pipe in the street. Lead found in tap water usually comes from the corrosion of older fixtures or from the solder that connects pipes. When water sits in leaded pipes for several hours, lead can leach into the water supply. (CDC)

The EPA action level for lead in drinking water – or the level regulators look for water to not exceed – is 15 ppb (also reported as “15 µg/L”, “0.015 ppm”, or “0.015 mg/L”); the goal, however, is to have the lowest possible level of lead in your drinking water.

WHAT CAN I DO RIGHT NOW TO PROTECT MY FAMILY?

1. Run your water before using and use COLD water.

Always use **cold** water for drinking and cooking. **Do not** use hot water for cooking or baby formula. Hot water usually has higher lead levels than cold water.

Running the water before using will usually reduce lead levels by flushing out the water that has been sitting in lead pipes for several hours. However, the amount of time needed to flush out the lead depends on whether or not you have a lead service line. Contact your local water department to find out if your service line contains lead. For more information about flushing your pipes and lead in service lines and household plumbing, visit <http://www.cdc.gov/nceh/lead/tips/water.htm>.

Boiling water does not eliminate lead. If there is lead in your water, boiling it will increase lead levels. You should also periodically unscrew the aerator from the end of the faucet and clean out debris. Sometimes small pieces of lead can collect here.

2. Test your drinking water.

If you have lead in your service line or in pipes inside your home or if you aren't sure if you do, consider testing your water. This is the best way to find out if you have lead in your water.

If you have, or suspect you may have, a lead service line to your home, you should have your tap water tested for lead and use bottled water or water from an appropriate filter that removes lead for pregnant women, infants, and children.

Testing typically costs between \$25 and \$40 and should be done by a certified laboratory. Water samples may be mailed or dropped off. Be sure to follow the lab's sample collection instructions exactly. The Montana State Lab is able to test water samples for \$24.00. Call the Madison County Sanitarian (843-4275) for instructions and water bottles.

2. Consider using a filter to reduce the level of lead in your drinking water.

Not all filters will reduce lead and filters can be expensive, requiring regular maintenance to remain effective. A useful source of information on filtering drinking water to remove lead and on specific water filter products is NSF International http://info.nsf.org/Certified/DWTU/listings_leadreduction.asp?ProductFunction=053|Lead+Reduction&ProductFunction=058|Lead+Reduction&ProductType=&submit2=Search.

WHAT ELSE CAN I DO TO PROTECT MY FAMILY?

1. Consider using Bottled Water.

Infants, children, and pregnant women are especially vulnerable to the effects of lead exposure. If you are a pregnant woman or have young children drinking water with lead levels exceeding EPA's action level of 15 ppb, the federal Centers for Disease Control and Prevention (CDC) recommends you use bottled water or water from a filtration system that has been certified by an independent testing organization to reduce or eliminate lead for cooking, drinking, and baby formula preparation. For more information about CDC's recommendation, visit: <http://www.cdc.gov/nceh/lead/tips/water.htm>.

2. Test your home for lead.

Most children are poisoned from the lead paint and dust in their homes. Hire a lead inspector to test your home to find out if there are lead hazards.

3. Test your child for lead.

A blood test is the only way to tell if your child has lead poisoning. Talk to your doctor about your children's lead test results and discuss the risks of lead exposure. If you have specific concerns about your child's health or exposure to lead, ask your doctor to test your child for lead. A blood test taken from the child's vein is more accurate than a sample taken from the child's finger. Blood lead level tests are available at the Ruby Valley Hospital.

4. Replace lead pipes and plumbing containing lead.

If you own your home, it is advised that you consider replacing any leaded water pipes, service lines, or fixtures, especially if there are children or women of childbearing age present. Contact your local water department about service line replacement and financial incentive and assistance programs that might be available.

If you are replacing water pipes or fixtures inside the home, be sure to check the label and use only zero-lead or low-lead materials. Before doing any home renovations, learn how to renovate your home safely at <https://www.epa.gov/lead/lead-safe-certified-guide-renovate-right>.

WHERE CAN I GET MORE INFORMATION?

- CDC Facts about Lead <http://www.cdc.gov/nceh/lead/>
- Childhood Lead Poisoning Prevention Program <http://www.cdc.gov/nceh/lead/about/program.htm>
- NSF International, a nonprofit organization that certifies bottled water and water filters at <http://www.nsf.org/>

Madison County Public Health Department (406) 843-4295,
<http://madisoncountymt.gov/230/Public-Health>

Montana Dept. of Public Health, Lead Program (406) 444-0273
<http://dphhs.mt.gov/publichealth/cdepi/diseases/lead.aspx>