

Lead in drinking water F.A.Q.

This fact sheet addresses common questions about lead and health. It explains how lead enters your drinking water. You'll also find tips on protecting yourself and your family from lead exposure. Lead can be found in all parts of the environment. Most exposure comes from human activities, even though it occurs naturally. Lead exposure is most likely to cause harm during pregnancy, infancy, and early childhood before age 6. It's important to take steps to reduce their risk.



How does lead get in my drinking water?

In Massachusetts, most drinking water sources like reservoirs and groundwater are lead free. Lead in drinking water usually comes from water running through lead pipes or plumbing with lead parts or solder. Service lines, which are the pipes that connect your home to the water main, could have lead in them. You might have lead pipes in your home or copper pipes joined with lead solder. Brass faucets or fittings could also contain lead. Lead levels are highest when the water has been sitting in lead pipes for several hours. Hot water causes lead to enter water faster.

How does lead get into my body?

In many cases, exposure to lead is from paint dust, paint chips, and soil contaminated with lead. 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 to an unborn child during pregnancy. For these reasons, lead in drinking water can be an important source of exposure during pregnancy, infancy (both formula-fed and breastfed), and early childhood before age 6.

Lead is not absorbed through the skin. Bathing or showering in water containing lead should be safe.

Most children 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.

Since everyone is exposed to small amounts of lead in their daily life, it is not uncommon for a low level of lead to be present in someone's body.

It is Massachusetts law that children be tested for lead at ages 9-12 months, 2, 3, and sometimes 4. Ask your doctor about testing your child for lead and discuss the risks of lead exposure.

Lead Exposure Quick Facts

Overview

- Lead exposure is most likely to cause harm during pregnancy, infancy, and early childhood before age 6.
- Most lead exposure results from lead paint dust and chips.
- Most public water sources are lead free in Massachusetts, but lead can be in your water due to lead pipes, solder, or old fixtures.

What to do:

- Talk with your child's doctor about testing your child 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?

There is no safe level of lead. Exposure to lead can cause serious health effects, especially during pregnancy, infancy (both formula-fed and breastfed), and early childhood before age 6. Some health effects to infants and children include decreases in IQ and attention span. Lead exposure can also result in new or worsened learning and behavior problems. The children of those who are exposed to lead before or during pregnancy may be at increased risk of these harmful health effects. Adults have increased risks of heart disease, high blood pressure, kidney or nervous system problems.

Risk of health effects depends on how much a person is exposed to, as well as personal factors such as age, sex, and current health status. An exposure to lead that would have little effect on an adult can have a big effect on an infant or child. Contact your health care provider for more information about your risks.

What is lead poisoning?

Lead poisoning is caused by too much lead in the body. Most children who have lead poisoning do not look or act sick. A lead test is the only way to know if your child has lead poisoning.

What if I'm pregnant or planning to become pregnant?

Lead can pass to a developing baby during pregnancy. The main risks for lead exposure during pregnancy include:

- Workplace exposures
- Recent immigration
- A desire to eat or chew nonfood items, like soil or jewelry, that may be contaminated
- Nutritional status
- Use of traditional home remedies or imported cosmetics
- Dust from old lead-based paint during home renovations.

These factors can increase the chances of lead exposure.



Baby Formula Lead Reduction Tips

When mixing powdered baby formula with tap water:

- Use **COLD** water.
- **DO NOT** use hot water for baby formula – boiling water does not eliminate lead.

Simply warm formula to serve.

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 use helps lower lead levels. It flushes out water that has been sitting in lead pipes for hours. The amount of flushing you need depends on if you have a lead service line. Check with your local water department to see if your service line has lead. For more information about flushing pipes and lead in service lines, check out [Is there lead in my tap water? | Mass.gov](#).

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. Testing typically costs between \$20 and \$60 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 Massachusetts Department of Environmental Protection (MassDEP) has a list of certified labs. You can find it here: [Certified Laboratories | Mass.gov](#).



The EPA action level for lead in drinking water is 15 ppb. This is also shown as “15 µg/L,” “0.015 ppm,” or “0.015 mg/L.” The goal is to lower lead levels as much as possible, especially during pregnancy, infancy, and early childhood.

Lead exposure is most likely to cause harm during pregnancy, infancy, and early childhood before age 6. If you're pregnant or have young kids, avoid drinking water with lead over 15 ppb. The CDC suggests using bottled water or a certified filtration system to reduce lead for cooking, drinking, and making baby formula. For more information about CDC's recommendation, visit: [About Lead in Drinking Water | CDC.gov](#).

If you think you have a lead service line, get your tap water tested for lead. Also, use bottled water or a filter certified to remove lead, especially for infants, children, and during pregnancy.

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

Not all filters reduce lead. They can be pricey and need regular upkeep to work well. A great source for info on filtering drinking water to remove lead is NSF International. Check their website at www.nsf.org/ for specific water filter products.

What else can I do to protect my family?

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. For a list of licensed lead inspectors go to www.mass.gov/eohhs/gov/departments/dph/programs/environmental-health/exposure-topics/lead/delead/.

If you are a tenant, contact your local health department or the DPH Division of Healthy Homes and Childhood Lead Poisoning Prevention (1-800-532-9571) to have your dwelling inspected.

Test your child for lead.

A blood test is the only way to tell if your child has lead poisoning. In Massachusetts, children must be tested at ages 9-12 months, 2, 3, and sometimes 4 depending on where they live. Talk to your doctor about your child's lead test results and discuss the risks of lead exposure. If your child needs testing or you're worried about their health or lead exposure, ask your doctor to do a lead test. A blood test taken from the child's vein is more accurate than a sample taken from the child's finger.

Replace lead pipes and plumbing containing lead.

If you own a home, think about replacing lead pipes, service lines, or fixtures. This is especially important if children or people capable of having children may drink the water. Reach out to your local water department to ask about service line replacement and available financial help.

When replacing water pipes or fixtures in your home, check the label. Use only zero-lead or low-lead materials. Before starting any home renovations, check out how to do it safely. Visit: [Renovating Your Home Safely \(Brochure\) 2015 – English | Mass.gov](#).

Where can I get more information?

For additional health information contact:

Massachusetts Department of Public Health
Bureau of Climate and Environmental Health
Phone: 617-624-5757 | Fax: 617-624-5777
www.mass.gov/dph/environmental_health

Massachusetts Department of Public Health
Division of Healthy Homes and Childhood Lead Poisoning Prevention
1-800-532-9571 or www.mass.gov/dph/clppp

For additional drinking water information:

Massachusetts Department of Environmental Protection
Drinking Water Program
617-292-5770
program.director-dwp@mass.gov
www.mass.gov/lead-in-drinking-water

Massachusetts Department of Environmental Protection - list of state-certified laboratories for drinking water testing at (www.mass.gov/eea/agencies/massdep/water/drinking/certified-laboratories.html#1 - click on MassDEP-Certified Laboratories for Residential Customers & Private Well Owners)

NSF International - nonprofit organization that certifies bottled water and water filters at www.nsf.org/

For additional lead safety information:

List of licensed lead inspectors at www.mass.gov/eohhs/gov/departments/dph/programs/environmental-health/exposure-topics/lead/delead/

Renovate Your Home Safely fact sheet at www.mass.gov/doc/renovating-your-home-safely-brochure-2015-english-0/download

NOTE FOR PUBLIC WATER SUPPLIERS: This FAQ does not fulfill the notification or education requirements of the Lead and Copper Rule 310 CMR 22.06B. Public Water Systems should contact MassDEP for specific Lead and Copper Rule requirements of public water systems to notify consumers of elevated lead results.

