



Whether you live in an apartment or in a single-family home, in an old or new neighborhood,

lead may be in your environment. It can be found in lead-based paint, soil, household dust, food, and certain types of pottery, porcelain, and pewter. Lead can also be found in tap water in some homes. Lead can pose a risk to your health if too much of it enters the body.

Most cases of lead poisoning are from contact with peeling lead paint and lead paint dust. While lead in tap water is rarely the single cause of lead poisoning, it can increase a person's total lead exposure, particularly in infants who drink baby formula or concentrated juice that is mixed with water. The U.S. Environmental Protection Agency (EPA) estimates that water, in some cases, can make up 20% or more of a person's total exposure to lead. Infants who consume mostly mixed formula can have even higher exposures to lead from drinking water.

The water provided by the Massachusetts Water Resources Authority (MWRA) is lead-free when it leaves the reservoirs. MWRA and local distribution pipes that carry the water to your community are made mostly of iron and steel and therefore do not add lead to water. However, lead can get into tap water through lead service

lines (the pipe between the street and your house), lead solder used in plumbing, and some brass fixtures.

The corrosion or wearing away of these lead-based materials can add lead to tap water, particularly if water sits in the pipes for a long time before use. This brochure explains some simple steps you can take to reduce your exposure to lead in tap water.

Lead and your health

Lead builds up in the body over many years. Excessive amounts of lead in the body can cause damage to the brain, red blood cells, and kidneys. The greatest risk from lead is to young children and pregnant women. Levels of lead that may not hurt adults can slow down normal mental and physical development of growing bodies.

What is being done to reduce lead corrosion?

MWRA and your city or town are concerned about lead in your tap water. Although most homes have very low levels of lead, some homes may have lead levels in their tap water above the EPA Action Level of 15 parts per billion (ppb).

To monitor lead levels, MWRA and your local water department perform a thorough sampling program to test tap water in certain homes in each community. Under EPA regulations, homes that are likely to have high lead levels – usually older homes which may have lead service lines or lead solder – must be tested after water has been sitting overnight. The EPA rule requires that 90% of these worst case samples must have lead levels below the Action Level of 15 ppb.

MWRA has taken steps to make the water less corrosive, thereby reducing the leaching of lead into tap water. Since 1996 MWRA has added sodium carbonate and carbon dioxide to adjust the water's pH and buffering capacity. This change has made the water less likely to leach lead from pipes. Lead levels found in sample tests of tap water have dropped over 90% since this treatment change. Local water departments are also working to decrease lead corrosion by replacing lead service lines.

reduce lead exposure with these simple steps



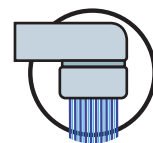
Flush your tap

The longer water remains in contact with plumbing materials containing lead, the greater the chance that lead will dissolve into the water. Let the water run before using: fresh water is better than stale! To save water, fill a pitcher with fresh water and place in the refrigerator for future use. Any time water has gone unused for more than 6 hours, run each faucet used for drinking or cooking until after the water becomes cold.



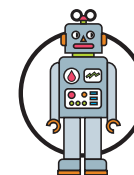
Use only cold water for cooking and drinking

Since hot water may leach more lead than cold water, use cold water for drinking, cooking, making baby formula and mixing juices. If you need hot water for these purposes, heat water on the stove.



Remove loose solder and debris

Every few months, remove the faucet aerator from each faucet in your home, clean it, and run the water for about three to five minutes. This will remove any loose lead solder and debris from your plumbing.



Be mindful of other lead sources in or near your home

There are many sources of lead in the environment, particularly lead-based paint. Children, who are at the highest risk for lead, often come into contact with lead contamination from dirt, dust, and paint chips. It is important to wash children's hands and toys.



Identify and replace plumbing containing excessive amounts of lead

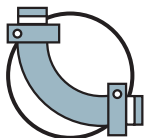
When replacing plumbing in your home, make sure to use materials that conform to new lead-free standards. Note that older brass fixtures contain up to 8% lead.



Test your tap water

In addition to these simple steps, you may want to check the lead levels at your tap. The only way to determine the level of lead in your home's tap water is to have the water tested by a state certified laboratory. The cost of the test is usually between \$10 and \$50. A list of labs is available on-line at www.mwra.com or call MWRA at 617-242-5323.

Sources of information



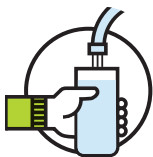
Lead Testing Labs:

Massachusetts Water Resources Authority:
www.mwra.com, or call
617-242-5323

Department of Environmental Protection (DEP):
www.mass.gov/dep, or call
617-292-5770

General information:

Massachusetts Department of Public Health Childhood Lead Prevention Program:
www.mass.gov/dph/clppp, or call
1-800-532-9571.



Water filters:

National Sanitation Foundation:
www.nsf.org, or call
1-877-867-3435

Water system information and water quality data:

Public Works Department or MWRA: www.mwra.com or call
617-242-5323

Massachusetts Water Resources Authority
www.mwra.com
617-242-6000



Lead service lines

A service line is the pipe that connects your house to the water main in the street. Some service lines that run to older homes (typically those constructed before 1940) are made from lead. These service lines are the main source of lead in tap water in homes that have them. Removing lead service lines is a priority to

reduce the potential for lead exposure, particularly if a pregnant woman or child lives in your home.

How do I tell if I have a lead service line?

Your local water department can often check their records. You can also go into your basement and locate the water line entering your home. Lead service lines are generally a dull gray color and very soft. You can identify one by carefully scratching with a key. If the pipe is made of lead, the area you've scratched will turn a bright silver

color. Do not use a knife or other sharp instrument and take care not to puncture a hole in the pipe. Contact your local water department for more information.

How do I replace my lead service line?

Removing the whole lead service line is important. It is the only way to ensure that your service line will not be adding lead to your water. Partial replacements - which remove only the portion in the street - do not lower lead levels, and in many cases, can actually increase lead levels.

How much does it cost?

The cost of service line replacement depends on the length of the service line, the construction method, and the environment where the service line is located. Please contact your local water department to learn more about options for lead service line replacement and any payment assistance available.

MWRA Program to replace lead service lines

To help communities in removing lead service lines, MWRA and its Board of Directors have approved a program to make available \$100 million in zero-interest loans to its member communities to fully replace lead service lines. Under the proposal, each community would develop its own program, tailored to their local circumstances.

Should I buy bottled water? Should I get a home filtration system?

If the water from your tap has elevated levels of lead after flushing, bottled water is an option, but it may cost 100 to 1,000 times more than tap water.

Some water filtration systems can remove lead, but before buying a filter, you should verify the manufacturer's claims. A good resource is the National Sanitation Foundation (www.NSF.ORG), an independent testing agency that evaluates and certifies the performance of filtering devices. Simply flushing your tap, as described above, is usually a cheaper, effective alternative.



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Massachusetts Water
Resources Authority

