



# Frequently Asked Questions about Lead in Water from Pipes and Plumbing

## **What is lead?**

Lead is a common naturally occurring metallic element that can be found in air, soil and water. It is also a powerful toxin that is harmful to human health. Lead was commonly used in gasoline and paint until the 1970's and is still sometimes found in products such as ceramics, batteries, ammunition and cosmetics.

Lead was used for centuries in plumbing because of its flexibility and resistance to leaks. The word plumbing derives from the [Latin](#) for [lead](#), *plumbum*, as the first effective pipes used in the [Roman era](#) were [lead pipes](#).<sup>[3]</sup>

In 1986, U.S. Congress amended the Safe Drinking Water Act to prohibit the use of pipes, solder or flux that were not “lead free.” At the time “lead free” was defined as solder and flux with no more than 0.2% lead, and pipes with no more than 8%. In 2014, the maximum allowable lead content was reduced from not more than 8% to not more than a weighted average of 0.25% of the wetted surface of pipes, pipe fittings, plumbing fittings and fixtures.

## **Why is lead a health risk?**

Lead is a toxic metal that can cause immediate health effects at high doses and long term health effects if it builds up in the body over many years. Lead can cause brain and kidney damage in addition to effects on the blood and vitamin D metabolism.

Pregnant women and young children are particularly vulnerable because the physical and behavioral effects of lead occur at lower exposure levels in children than in adults. In children, low levels of exposure have been linked to central and peripheral nervous system damage, learning disabilities, shorter stature, impaired hearing, and impaired formation and function of blood cells.

While people are most commonly exposed to lead through paint, soil and dust, U.S. EPA estimates infants who consume mostly mixed formula can receive 40% to 60% of their exposure to lead from drinking water.

## **How does lead get into drinking water?**

Lead is almost never present when water flows from the treatment facility, nor is it present in the water mains running beneath the streets. However, in some older homes, lead may be present in the pipe connecting the home to the water system – known as a service line -- or in the home plumbing. Lead in service pipes, plumbing or fixtures can dissolve or particles can break off into water and end up at the tap.

## Are there lead service lines in Rochester's water system?

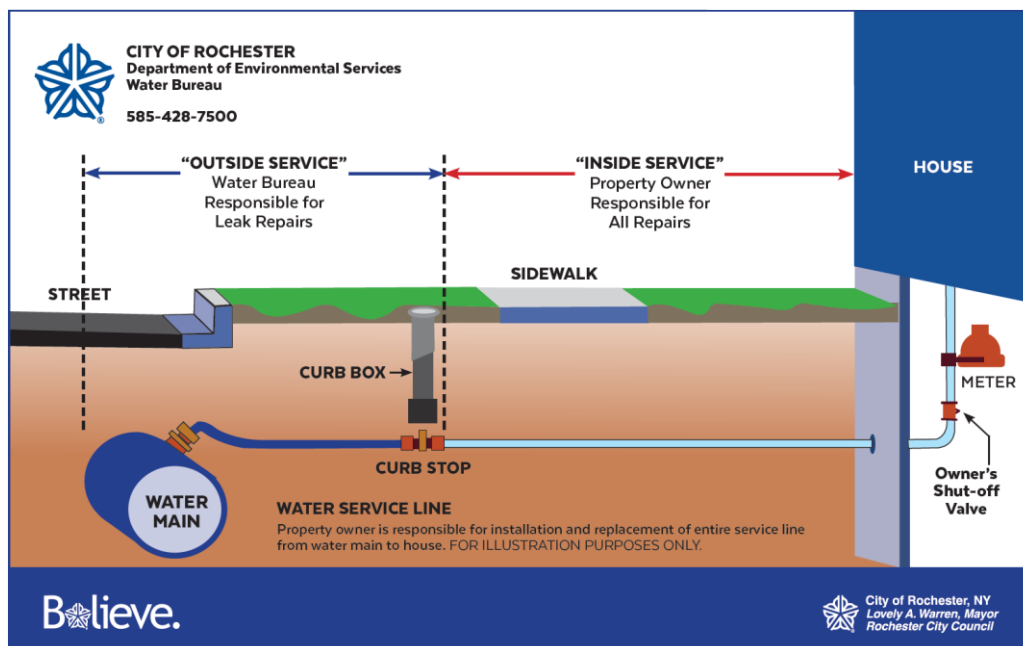
Lead was used as water service line material in Rochester from the 1870's until the 1940's, predominantly in the section of service line located between the water main, which is typically located in the street, and the curb stop, which is typically located near the sidewalk. Available records indicate that there are approximately 28,000 lead containing water service lines in the City.

Many times, different materials were used for a single service. For example, the material used for the section of service line located between the water main and curb stop may be different than the material used for the section of service line located between the curb stop and the house.

If you have a galvanized service line located between the water main and curb stop, it is likely that a short section of lead pipe was used to connect the galvanized pipe to the water main.

## Who owns the lead service line?

Water service line ownership and maintenance responsibilities are defined in the City of Rochester's Water Works Code, Chapter 23. The entire service line between the water main and house is owned by the property owner. The Rochester Water Bureau is responsible for repairing any leaks on the section of service line located between the water main and curb stop. The property owner is responsible for all repairs of the service line located between the curb stop and the house. [The Water Service Line diagram](#) below illustrates these responsibilities.



### ***Is water the only source of lead in homes and businesses?***

No. Childhood lead poisoning is nearly always the result of ingesting lead dust from deteriorated lead-based paint in the home. If you suspect you may have lead paint you can make sure your house or apartment is safe from lead hazards by scheduling a FREE lead inspection with the City by calling (585) 428-6520. Additional information is available from the Coalition to Prevent Lead Poisoning: [www.letsmakeleadhistory.org](http://www.letsmakeleadhistory.org).

Lead in drinking water generally represents only about 20% of total exposure, according to the U.S. Centers for Disease Control and Prevention. However, drinking water can account for higher lead exposure in children because of their lower body weight. Additionally, because no level of lead is considered safe, completely eliminating potential sources of lead is strongly advised.

### ***How much lead in water is too much?***

Lead can be harmful even at very low levels and can accumulate in our bodies over time, so wherever possible, steps should be taken to reduce or eliminate your household's exposure. While risks vary based on individual circumstances and the amount of water consumed, no concentration of lead is considered "safe." Households with pregnant women, infants, or young children are most vulnerable to the harmful effects of lead at low levels.

### ***How do I know whether my drinking water contains lead?***

Take these simple steps to determine if your water might contain lead:

1. Find out if you have a lead service line by visiting [maps.cityofrochester.gov](http://maps.cityofrochester.gov). Enter address and click "Water" tab or call the Water Dispatch office at (585) 428-7500.
2. Have your water tested by a certified laboratory. For a **free** lead test, contact the City of Rochester Water Quality Laboratory by calling 428-6680 x1, or emailing [watertest@cityofrochester.gov](mailto:watertest@cityofrochester.gov).
3. Identify sources of lead in your plumbing. You may be able to determine on your own if your service line is made of lead. Service lines typically enter the home in the basement or crawl space. If the pipe is lead, it will have a dull finish that shines brightly when scratched with a key or coin. Using a magnet can also help you identify a lead pipe, because even a strong magnet will not cling to lead. For more information on how to identify lead plumbing, you can go to [www.lslr-collaborative.org/identifying-service-line-material.html](http://www.lslr-collaborative.org/identifying-service-line-material.html) or contact a licensed plumber: call the City's Bureau of Buildings and Zoning Permit Office at (585) 428-6526 or go to [www.cityofrochester.gov/licensedtrades/](http://www.cityofrochester.gov/licensedtrades/)

### ***What can I do to reduce or eliminate lead from my drinking water?***

The best way to remove risks of lead in water is to completely replace all sources of lead. But there are also steps you can take right away to reduce lead levels in your water.

1. Use ONLY Cold Water –Always use COLD water for drinking, cooking, and preparing baby formula. Hot water dissolves lead more quickly.
2. Flush Your Pipes- Lead levels are usually at their highest when water has been sitting in the pipe for several hours. Clear your pipes by running the cold water for three to five minutes. Water being flushed can be used to water plants or for cleaning. Toilet flushing and showering are also effective ways to run water through your pipes.
3. Periodically Clean Faucet Screens – Routinely remove and clean your faucet screens. Screens can accumulate lead and rust particles.
4. *Filter the Water* – Many home water filters are effective at removing lead. If you purchase a filter, make sure it is certified for lead removal and that you maintain it properly. Find out more on filter certification at [www.nsf.org](http://www.nsf.org).

### ***Do all home filters and other water treatment devices remove lead?***

No. If you purchase a water filter or home treatment device, make sure it is independently certified for lead removal and that you maintain it properly. Filters capable of removing lead are most commonly certified to NSF Standard 53. Find out more on filter certification at [www.nsf.org](http://www.nsf.org). When using a filter, it is important to follow the manufacturer's maintenance instructions, including routine replacement of the filter cartridges.

### ***Can my pets drink water with lead?***

Lead can impact animals the same way it does humans. Because domestic animals consume a relatively high volume of water relative to their body weight, pet owners with lead in their home plumbing may want to take precautions.

### ***Is it safe to shower in water that contains lead?***

Yes. Because lead is not absorbed through the skin, bathing or showering in water containing lead is not considered a health risk.