

Information about Lead

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What is lead?

Lead is a toxic metal that is harmful if inhaled or swallowed. Exposure to lead is a public health risk, especially for pregnant woman and children under the age of six. There are many sources of lead, and thus the potential for lead exposure varies greatly between individuals.

What are the health effects of lead exposure¹?

In Children

Even low levels of lead in the blood of children can result in:

- Behavior and learning problems
- Lower IQ and hyperactivity
- Slowed growth
- Hearing problems
- Anemia

In rare cases, ingestion of lead can cause seizures, coma and even death.

In Pregnant Women

Lead can accumulate in our bodies over time, where it is stored in bones along with calcium. During pregnancy, lead is released from bones as maternal calcium and is used to help form the bones of the fetus. This is particularly true if a woman does not have enough dietary calcium. Lead can also cross the

placental barrier exposing the fetus to lead. This can result in serious health effects to the mother and her developing fetus, including:

- Reduced growth of the fetus
- Premature birth

In Adults

Lead is also harmful to adults. Adults exposed to lead can suffer from:

- Cardiovascular effects, increased blood pressure, and incidence of hypertension
- Decreased kidney function
- Reproductive problems (in both men and women)

¹ <https://www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water#health>

What are the known sources of lead exposure²?

1. Older homes and buildings-

- If your home was built before 1978, there is a good chance it has lead-based paint. In 1978, the federal government banned consumer uses of lead-containing paint. Lead from paint, including lead-contaminated dust, is one of the most common causes of lead poisoning.

2. Soil, Yards and Playgrounds-

- Lead is naturally-occurring, and it can be found in high concentrations in some areas. In addition, soil, yards, and playgrounds can become contaminated when exterior lead-based paint from houses or buildings flakes or peels and gets into the soil. Soil may also be contaminated from past use of leaded gasoline in cars, from industrial sources, or even from contaminated sites, including former lead smelters.

3. Dust-

- Lead in household dust results from indoor sources such as old lead paint on surfaces that are frequently in motion or bump or rub together (such as window frames), deteriorating lead paint on any surface, home repair activities, tracking lead contaminated soil from the outdoors into the indoor environment, or even from lead dust on clothing worn at a job site.

4. Products-

- Painted toys, furniture, and toy jewelry— That favorite dump truck or rocking chair handed down in the family, antique doll furniture, or toy jewelry could contain lead-based paint or contain lead in the material it is made from. Biting or swallowing toys or toy jewelry that contain lead can cause a child to suffer from lead poisoning.
- Cosmetics— Visit the U.S. Food and Drug Administration’s web site to read questions and answers on lipstick and lead at:
<http://www.fda.gov/cosmetics/productsingredients/products/ucm137224.htm>
- Food or liquid containers— Food and liquids stored or served in lead crystal or lead-glazed pottery or porcelain can become contaminated because lead can leach from these containers into the food or liquid. Visit the Food and Drug Administration for more information on lead in food and containers at:
<http://www.fda.gov/cosmetics/productsingredients/products/ucm137224.htm>

5. Drinking Water-

- Lead can enter drinking water through corrosion of plumbing materials. Corrosion is a dissolving or wearing away of metal caused by a chemical reaction between water and plumbing. A number of factors are involved in the extent to which lead enters the water including the chemistry of the water (acidity and alkalinity), the amount of lead it comes into contact with, how long the water stays in the plumbing materials, and the presence of protective scales or coatings inside the plumbing materials.

² <https://www.epa.gov/lead/protect-your-family-exposures-lead#sl-home>

How could lead get into my drinking water?

Water is essentially lead-free when it leaves the water filtration plant, but lead can be released when the water comes into contact with pipe and plumbing fixtures that contain lead. The reaction that may occur when water comes into contact with lead pipes or solder that causes the leaching of lead is known as corrosion. Corrosion is more likely to occur if the water contains high dissolved oxygen, low pH (acidic), and low mineral content.

The WMWA has an active and extensive corrosion control program in place in order to prevent corrosion from occurring in the distribution system. Water quality parameters, such as pH and mineral content are continuously measured at the filtration plant to ensure the treated water is not corrosive. Despite all efforts to reduce the corrosivity of the water supplied, the potential for lead to enter drinking water still exists under certain circumstances. However, many steps are able to be taken to lessen a person’s exposure to lead in drinking water.

It was common practice for lead service pipes to be installed until the mid-1950's. The service line consists of the section of pipe that connects the water main in the street to the household plumbing. The WMWA is responsible for the portion up to and including the curb stop, and the property owner is responsible for the portion after the curb stop, leading into the home. Some older homes may still have lead service pipes on the WMWA portion of the service line, the customer portion of the service line, or both. The WMWA replaces their portion of lead service lines as they are discovered during emergency repair work or as they are identified during planned capital projects. The homeowner is **STRONGLY ENCOURAGED** to evaluate the type of plumbing on their portion of the service line at that time and replace it, if it is determined to be lead or galvanized pipe.

Other household plumbing items that may be evaluated for their contribution to lead in drinking water include³:

Lead Solder- Solder is the material that connects copper pipes in household plumbing. Before it was banned in 1987, it was widely used in household plumbing. Therefore, if your home was built before 1987, your plumbing may contain lead solder.

Brass Faucets, Valves, or Fittings- Almost all faucets, valves, and fittings have brass components. Any of these components made and sold before 2014 may have been labeled "lead-free" but still may contain up to 8% lead. The "Reduction of Lead in Drinking Water Act" which was effective in 2014 only allows these components to contain a maximum of 0.25% lead.

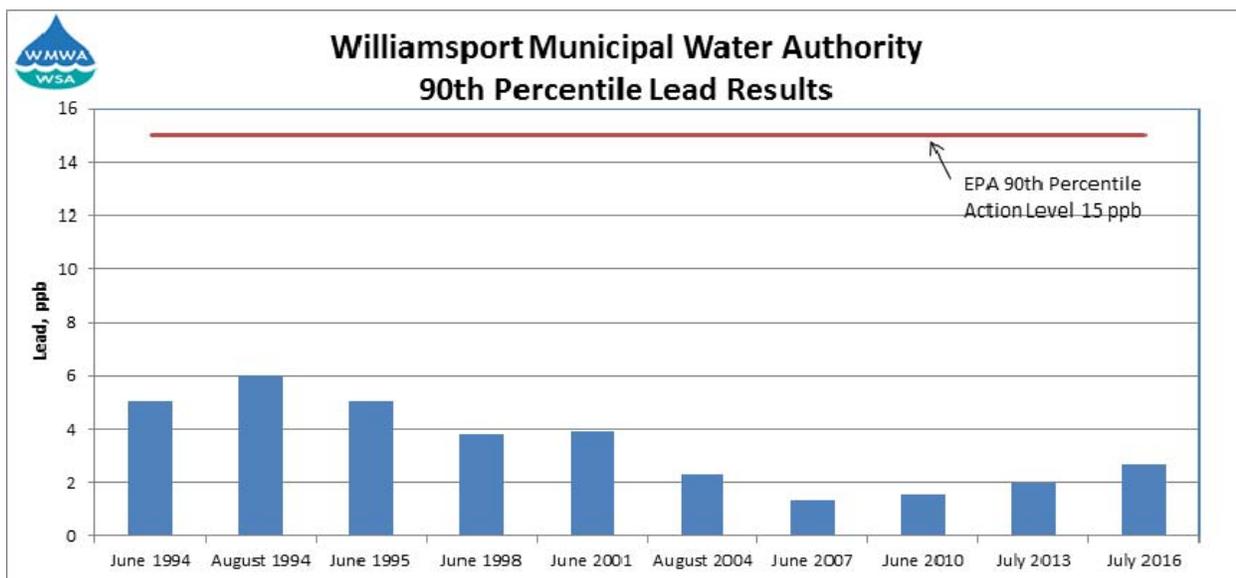
Galvanized Iron Pipes- Many homes built before the 1960s contain galvanized pipes, which are now old and corroded. If the property has, or has previously had, a lead service pipe, the galvanized pipes can release lead that has accumulated on the interior corroded walls of the pipes over time.

³ <https://www.dewater.com/lead/default.cfm>

How does the WMWA minimize lead in the drinking water?

- The WMWA applies corrosion control treatment at the filtration plant to minimize pipe corrosion in the distribution system and customer households.
- The WMWA replaces their portion of lead service lines as they are discovered during emergency repairs or identified during planned capital projects and strongly encourages the homeowners to evaluate and replace their portion also.
- The WMWA complies with the Environmental Protection Agency's (EPA) Lead and Copper Rule.
- The WMWA completes regulatory lead testing and reports results to the Pennsylvania DEP.

What are the WMWA lead test results?



What can I do to minimize lead in my drinking water?

- Use only cold water for drinking and cooking. Never cook or mix infant formula using hot water from the tap. Hot water can cause a greater amount of lead to release from plumbing and may contain metals that build up in the water heater.
- Do not consume water that has sat in your home's plumbing for more than six hours. Make sure to run the water until you feel the temperature change before cooking, drinking, or brushing your teeth. Make it a practice to run the water at each tap for 30 seconds to 2 minutes before use. Lead and other metals can dissolve in water when it sits in pipes for a few hours.
- Remove and clean faucet aerators. Lead particles and sediment can collect in the aerator screen located at the tip of your faucet. Aerators should be replaced once a year and are available at local hardware stores.
- Evaluate your household plumbing to determine if your portion of the service line is composed of lead or galvanized pipe, your household plumbing is connected with lead solder, and/or the faucets, valves, and fittings in your home are composed of more than 0.25% lead. If any or all of these are the case, replace these items.

Where can I find additional information from reliable sources?

[Environmental Protection Agency](#)

