

## Lead Fact Sheet

see other side for Copper Fact Sheet

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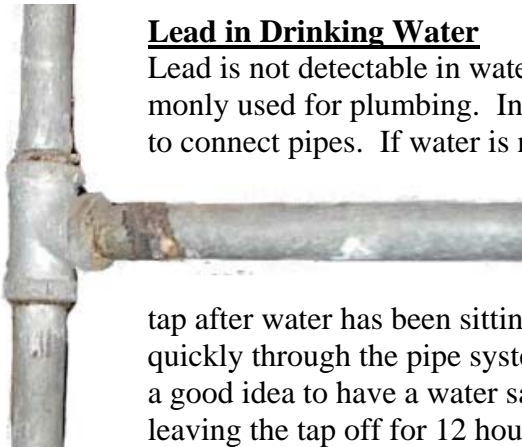
### Lead

Lead is very soft bluish-gray metallic element. It is commonly used in batteries, cable covering, plumbing, ammunition, gasoline additives, radiation shielding equipment, glass production, and traditionally in paints. Lead has been found in moderately high concentrations in natural waters, but usually lead in drinking water comes from plumbing. The degree to which lead from pipes, solder, and fixtures will corrode and introduce lead into drinking water depends on the corrosivity of the water. Dissolved oxygen and low pH are common causes of lead corrosion.



### Lead in Drinking Water

Lead is not detectable in water by smell, taste, or sight. In older homes, lead pipes were commonly used for plumbing. In some newer homes with copper piping, lead solder has been used to connect pipes. If water is not corrosive, a coating will form on the plumbing separating the lead from the water supply. If water is corrosive, the lead from the plumbing is leached into the water supply. Under these corrosive conditions the lead concentration increases as the water sits in contact with the pipes. This means that the first draw from the tap after water has been sitting in the pipes has a higher lead concentration than water that moves quickly through the pipe system. For this reason, if you suspect corrosion of lead plumbing, it is a good idea to have a water sample tested that is taken immediately after turning the tap on after leaving the tap off for 12 hours.



### Health Effects from Lead

The Environmental Protection Agency has set 0.015 mg/L as a drinking water standard for lead. This standard only regulates public water systems by is useful as a guideline for private well owners. High concentrations of lead can cause kidney damage, high blood pressure, and brain damage. Effects can be more severe in children causing delays in physical and mental development.

### Treating for Lead

Hot water will leach more lead from plumbing than cold water, avoid using water from the hot water tap for cooking or drinking. Flush the cold water line by running a few minutes of water before collecting drinking water. You can use cold water to rinse dishes or water plants and then fill jugs for drinking water that can be stored in the fridge.

Alternative choices include replacement of plumbing with PVC or CPVC; water treatment with a neutralizing tank filter or caustic liquid treatment to reduce corrosivity of water; or removal of lead by installing an adsorption (i.e. carbon or charcoal), reverse osmosis, or distillation system at the drinking water tap.

### Additional Resources:

#### **Lead Information Sheet; Water Systems Council**

<http://www.watersystemscouncil.org/wellcare/infosheets.cfm>

#### **EPA Maximum Contaminant Levels and Fact Sheets**

<http://www.epa.gov/safewater/mcl.html>

#### **NSF International Home Water Treatment Devices**

[http://www.nsf.org/consumer/drinking\\_water/dw\\_treatment.asp?program=WaterTre](http://www.nsf.org/consumer/drinking_water/dw_treatment.asp?program=WaterTre)