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## Lead in Water: Questions and Answers

### How does lead get into my tap water?

Measures taken during the last two decades have greatly reduced exposures to lead in tap water. These measures include actions taken under the requirements of the 1986 and 1996 amendments to the Safe Drinking Water Act (<http://www.epa.gov/safewater/sdwa/sdwa.html>) and the EPA's Lead and Copper Rule (<http://www.epa.gov/safewater/leadcop.html>).

Even so, lead still can be found in some metal water taps, interior water pipes, or pipes connecting a house to the main water pipe in the street. Lead found in tap water usually comes from the corrosion of older fixtures or from the solder that connects pipes. When water sits in leaded pipes for several hours, lead can leach into the water supply.

### How do I know if my tap water is contaminated with lead?

The only way to know whether your tap water contains lead is to have it tested. You cannot see, taste, or smell lead in drinking water. Therefore, you must ask your water provider whether your water has lead in it. For homes served by public water systems, data on lead in tap water may be available on the Internet from your local water authority. If your water provider does not post this information, you should call and find out.

### Does a high lead level in my tap water cause health effects?

High levels of lead in tap water can cause health effects if the lead in the water enters the bloodstream and causes an elevated blood lead level.

Most studies show that exposure to lead-contaminated water alone would not be likely to elevate blood lead levels in most adults, even exposure to water with a lead content close to the Environmental Protection Agency's (EPA's) "action level" for lead of 15 parts per billion (ppb). Risk will vary, however, depending upon the individual, the circumstances, and the amount of water consumed. For example, infants who drink formula prepared with lead-contaminated water may be at a higher risk because of the large volume of water they consume relative to their body size.

### What can I do to reduce or eliminate lead in my tap water?

If your tap water contains lead at levels exceeding EPA's action level of 15 ppb, you should take action to minimize your exposure

to the lead in the water.

You should begin by asking your water authority this question:

**1.** Does my water have lead in it above EPA's "action level" of 15 parts per billion (ppb)?

If the answer is no, your water does not contain lead at current levels of concern.

If the answer is "yes," also ask the next question:

**2.** Does the service pipe at the street ("header pipe") have lead in it?

This information is very important. It determines which of the next two actions (A or B) you should follow to protect your household's health.

**A)** If the pipe in the street ("header pipe") does NOT have lead, the lead in your tap water may be coming from fixtures, pipes, or elsewhere inside your home.

Until you eliminate the source, you should take the following steps any time you wish to use tap water for drinking or cooking, especially when the water has been off and sitting in the pipes for **more than 6 hours**:

**a. Before** using any tap water for drinking or cooking, "flush" your water system by running the kitchen tap (or any other tap you take drinking or cooking water from) on **COLD** for **1–2 minutes**;

**b.** Then, fill a clean container(s) with water from this tap. This water will be suitable for drinking, cooking, preparation of baby formula, or other consumption. To conserve water, collect multiple containers of water at once (after you have fully flushed the water from the tap as described).

**B)** If the pipe at the street ("header pipe") **DOES** contain lead, lead in the tap water may be coming from that pipe or connected pipes (it may also be coming from sources inside your home).

Until the lead source is eliminated, you should take the following steps any time you wish to use tap water for drinking or cooking, especially when the water has been off and sitting in the pipes for **more than 6 hours**. Please note that **additional "flushing" is necessary**:

**a. Before** using any tap water for drinking or cooking, run high-volume taps (such as your shower) on **COLD** for **5 minutes or more**;

**b.** Then, run the kitchen tap on **COLD** for **1–2 additional minutes**;

**c.** Fill a clean container(s) with water from this tap.

This water will be suitable for drinking, cooking, preparation of baby formula, or other consumption. To conserve water, collect multiple containers of water at once (after you have fully flushed the water from the tap as described).

**2.** In all situations, drink or cook only with water that comes out of the tap cold. Water that comes out of the tap warm or hot can contain much higher levels of lead. Boiling this water will NOT reduce the amount of lead in your water.

**3.** You can also reduce or eliminate your exposure to lead in drinking water by consuming only bottled water or water from a filtration system that has been certified by an independent testing organization to reduce or eliminate lead. See [resources](#) below.

**4.** Children and pregnant women are especially vulnerable to the effects of lead exposure. Therefore, for homes with children or pregnant women and with water lead levels exceeding EPA's action level of 15 ppb, CDC recommends using only bottled water for cooking, drinking, and baby formula preparation. Because most bottled water does not contain fluoride, a fluoride supplement may be necessary.

Also, be aware that some bottled waters have not been tested and may not be appropriate for consumption. Contact independent testing organizations that certify bottled water. See [resources](#) below.

**5.** Make sure that repairs to copper pipes do not use lead solder.

**If my water has high lead levels, is it safe to take a bath or shower?**

Yes, bathing and showering should be safe for you and your children, even if the water contains lead over EPA's action level. Human skin does not absorb lead in water.

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This information applies to most situations and to a large majority of the population, but individual circumstances may vary. Some situations, such as cases involving highly corrosive water, may require additional recommendations or more stringent actions. At all times, your local water authority remains your first source for testing and identifying lead contamination in your tap water. Many public water authorities have Web sites that include data on drinking water quality, including results of lead testing. Links to such data can be found at the following EPA Web site:

<http://www.epa.gov/safewater/dwinfo.htm>.

**Resources**

Please visit the following sites for more information:

**General:**

[EPA Ground Water & Drinking Water](http://www.epa.gov/safewater/lead/index.html)  
(<http://www.epa.gov/safewater/lead/index.html>)

This site includes comprehensive information on lead in drinking water. Safe Drinking Water Hotline: 1-800-426-4791.

**Water Fluoridation:**

[CDC Oral Health Resources](http://www.cdc.gov/OralHealth/topics/fluoridation.htm)

(<http://www.cdc.gov/OralHealth/topics/fluoridation.htm>)

This site includes water fluoridation fact sheets, frequently asked questions, and publications.

**Bottled Water and Water Filters:**

[NSF International](http://www.nsfconsumer.org/water/bottled_water.asp)

([http://www.nsfconsumer.org/water/bottled\\_water.asp](http://www.nsfconsumer.org/water/bottled_water.asp))

A nonprofit organization that certifies bottled water and water filters. Consumer Affairs Office toll-free hotline: 1-877-867-3435.

[International Bottled Water Association](http://www.bottledwater.org)

(<http://www.bottledwater.org>)

The trade association that represents the bottled water industry. Information Hotline: 1-800-WATER-11.

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Childhood Lead Poisoning Prevention Branch  
National Center for Environmental Health  
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