

# WATER

December 2008



## Lead in H<sub>2</sub>O

### What is lead and where does it come from?

- Lead is a metal that occurs naturally in soil and rock deposits.
- Lead is harmful to human health.
- The greatest exposure to lead is swallowing or breathing in lead paint chips and dust.
- Lead in drinking water can add to that exposure.
- The U.S. Environmental Protection Agency estimates that 10 to 20 percent of human exposure to lead may come from lead in drinking water.

### How does lead get into drinking water?

- All kinds of water may have high levels of lead.
- Typically, lead gets into your water after the water leaves your local treatment plant or your well.
- A common source of lead in your home's water is from corrosion of the pipes, solder, fittings and fixtures in your home's own plumbing.
- Grounding of household electrical systems to plumbing may also promote corrosion.
- Homes built before 1986 are more likely to have lead pipes, fixtures and solder.
- New homes are also at risk: even legally "lead-free" plumbing may contain up to 8 percent lead.
- The most common problem is with brass or chrome-plated brass faucets and fixtures which can leach significant amounts of lead into the water, especially hot water.

### How does lead affect me?

- Lead can affect almost every organ and system in your body.
- Low levels of lead in blood have been associated with reduced Intelligence Quotient (IQ) and attention span, learning disabilities, poor classroom performance, hyperactivity, behavioral problems, impaired growth, and hearing loss.
- Very high blood lead levels can cause severe neurological problems such as coma, convulsions, and even death.

#### Children:

- The health effects of lead are most severe for infants and children.
- These effects may include interference with red blood cell chemistry, delays in normal physical and mental development in babies and young children, slight deficits in the attention span, hearing, and learning abilities of children.
- Children six years old and under are most at risk because this is when the brain is developing. Infants who consume formula (mixed with tap water) can receive 40 to 60 percent of their exposure to lead from drinking water.
- Children spend a significant part of their days at school or in a child care facility.



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- The faucets that provide water used for consumption, including drinking, cooking lunch, and preparing juice and infant formula, should be tested.
- A simple blood test can detect high levels of lead.
- Consult your doctor for advice on testing your children.

**Adults:**

- Adults who drink water containing lead over many years could develop kidney problems or high blood pressure.
- A lifetime exposure to lead above the action level has the potential to cause stroke, kidney disease and cancer.
- Lead also damages the reproductive system.

**Pregnancy:**

- Lead is harmful to the developing fetuses of pregnant women.

## What is being done about lead in drinking water?

- Public water systems are required to test for lead in the water they provide to consumers.
- When the levels of lead are too high, a public water system is required to notify the public of how they can lessen their intake of lead in drinking water and also correct the conditions which are contributing to the high levels of lead.

## Can I have my water tested?

- You cannot see, taste, or smell lead dissolved in water.
- If you want to know if your home's drinking water contains unsafe levels of lead, you can have your water tested by a certified laboratory.
- You may want to have the water in your home tested if your home has lead pipes, if you see signs of corrosion (frequent leaks, rust-colored water, stained dishes or laundry), or if any portion of your household electrical system is grounded to your plumbing system.

## What can I do to reduce lead in drinking water?

- Boiling your water will not get rid of lead and can actually increase the level of lead in your water.
- Use cold water for drinking or cooking.
- Never cook or mix infant formula using hot water from the tap.
- Do not consume water that has been setting in your home's plumbing for more than six hours.
- Make it a practice to run the water until you feel the temperature change before cooking, drinking, or brushing your teeth. The water you run while waiting for the temperature to change can be used to water household plants and for cleaning.
- Some faucet and pitcher filters can remove lead from drinking water.
- If you use a filter, be sure you get one that is certified to remove lead by the NSF International.

### Where can I find more information?

For more information about lead in your drinking water and its health effects, contact Sheri McGuire at the Oklahoma Department of Environmental Quality at (405) 702-8100 or visit our Web site at [www.deq.state.ok.us](http://www.deq.state.ok.us).

Please direct media calls to Skylar McElhaney at (405) 702-7167

You can also view the U.S. Environmental Protection Agency's Web site at [www.epa.gov](http://www.epa.gov) or contact the EPA's lead hotline at 1-800-424-5323.