

Water Facts: Number 4 Is there lead in your drinking water?

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Your local water company may soon ask for a water sample from your home to test for lead.

The Environmental Protection Agency (EPA) recently issued a new rule to limit lead and copper concentrations in drinking water. It requires water suppliers to sample for lead directly from homes at high risk of contamination.

When 10% of homes sampled exceed the standards, then the supplier must test and treat the water for corrosiveness. If your water does not corrode your plumbing, lead is less likely to be released into the tap water. The goal is to protect you from the toxic effects of lead.

You can breathe lead in from the air, or get it from food and water. In large enough amounts, it can damage your brain, kidneys and central nervous system. Low levels of exposure over long periods also can cause serious health problems. Pregnant women, infants, and children are especially susceptible to lead poisoning.

Lead in your tap water results from the corrosion of household lead service lines, brass plumbing fixtures and lead soldering compounds. Soft or acidic water corrodes plumbing materials. As the metal pipes wear down, small amounts of lead will dissolve into the water.

Time contributes to corrosion. The longer water sits in pipes, for example overnight, the greater the release of lead.

Your household may be at high risk of lead contamination if:

- your water main or pipes are made with lead
- your home has copper pipes with lead solder, and
- you live in an area with corrosive water, and
- your home is less than five years old, and
- water sits in your home's pipes for several hours or longer

Consult a testing laboratory if you suspect a problem. Dissolved lead is tasteless and odorless, so a lab test is the only sure way to detect it in your water. A lead analysis may cost around \$40-\$50; check with several labs to get prices and sampling instructions. Your county extension office has a list of state-certified testing labs.

If lab results show lead contamination, you can choose from several home water treatments. Reverse osmosis and distillation units very effectively remove lead from water.

You can mount a reverse osmosis unit at your kitchen faucet. These units may cost several hundred dollars to install and maintain. Following the manufacturer's recommendations for upkeep will ensure the greatest protection from further contamination. You may want to periodically test your water for lead to check the performance of the unit.

You can also install distillation units at the kitchen tap. They can remove many impurities, but may make the water taste flat. It takes much energy to purify water by distillation, so the cost of electricity is important to consider before you purchase a unit. Both reverse osmosis and distillation units are impractical to install for total household use.

Do not boil your water to remove lead because boiling will only concentrate the lead already in the water. If you have not yet had your water tested, but suspect a problem, you can still reduce your exposure to lead. Do not use the first draw of water in the morning for drinking or cooking. Instead, let the cold water tap run a few minutes before preparing any food or beverages to flush the line of any lead that may have accumulated overnight. Also, do not use the hot water tap to prepare foods, because hot water dissolves lead more quickly than cold water.

The above precautions, and testing and treating your water, are simple yet effective means to reduce your health risks from lead.

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