

# Lead in Drinking Water

## Introduction

Lead is a naturally occurring toxic metal that has been used in many industries and manufacturing processes. It can be found in old paint, soil, dust, certain plumbing fixtures, solder, old pipes and some ceramics.

Lead can be breathed in from contaminated dust or consumed in food and water. If taken in large amounts, it can present a risk to health. Even low levels of exposure over a long period of time can be harmful.

According to the Environmental Protection Agency (EPA), there is no safe level for lead in drinking water. In 1991, the EPA published the Lead and Copper Rule that requires water providers to sample for lead from homes determined to be at high risk of contamination. When more than 10% of homes sampled exceed EPA's 0.015 mg/L action level, then the supplier must treat the water to make it less corrosive.

## How does lead get into drinking water?

Lead in tap water results from the corrosion of lead service lines, pipes, brass plumbing fixtures and lead solder. Soft or acidic water can corrode plumbing materials. As metal pipes wear down, small amounts of lead dissolve into the water. The longer water sits in pipes, the greater the release of lead.

## Houses may be at risk if:

- ◆ Built before 1986
- ◆ Water mains or pipes are made with lead
- ◆ There are copper pipes with lead solder
- ◆ Fxtures were manufactured before 2014
- ◆ Water sits in lead pipes for several hours or longer



## What are the health effects of lead?

Health effects depend on cumulative exposure and how susceptible the person is to lead.

- ◆ Children are generally more susceptible than adults.
- ◆ The EPA estimates that drinking water can contribute 20% or more of a person's lead exposure.
- ◆ Infants may receive as much as 40% to 60% of their exposure to lead from formula made with drinking water.

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## Health effects on children

Some of the health effects on children exposed to lead include:

- ◆ Behavior problems
- ◆ Difficulty learning
- ◆ Lower IQs
- ◆ Slow growth
- ◆ Anemia

## Health effects on adults

Health effects on adults exposed to lead:

- ◆ Neurological effects including fatigue, impaired concentration, hearing loss
- ◆ Impaired kidney function
- ◆ Reproductive problems
- ◆ Cardiovascular effects such as high blood pressure

## What can you do?

If you suspect there is lead in your drinking water, have the water tested by a [State-Certified Laboratory](#) or the Colorado Department of Public Health and Environment's (CDPHE) [Laboratory Services Division](#). If the test indicates the presence of lead in excess of 0.015 mg/L, you have several options:

- ◆ Treat the water with a reverse osmosis unit at taps used for drinking or cooking (lead in tap water is not harmful for showering or bathing)
- ◆ Replace old fixtures with new ones
- ◆ Do NOT use the first draw of water in the morning or after water has been sitting in pipes for 6 hours or more



- ◆ Run the cold water tap a few minutes before preparing food or beverages to flush the line of any lead
- ◆ Do NOT boil water to remove lead, boiling will only concentrate any lead already in the water.

If you are concerned that you may have been exposed to elevated levels of lead in your drinking water, contact your physician for a blood test.

## Additional Questions?

For additional questions, contact Tri-County Health Department at 720-200-1670.

