



# Lead in Drinking Water: Information for Child Care Centers, Schools and Families

## What are the health effects of lead exposure?

Childhood lead poisoning is one of the leading environmental threats to the health of children. There is no known safe level of lead exposure. Lead is most dangerous for infants and children under 6 years old and pregnant women. In young children, lead exposure can cause lower IQs, hearing problems, problems with attention, hyperactivity, developmental delays, and poor classroom performance. At very high levels, lead can cause damage to the brain, red blood cells and kidneys. Pregnant women are also vulnerable to lead exposure. Lead can harm the developing fetus, causing lower birth weight and developmental delays.

## What are common sources of lead exposure for children?

Children can be exposed to lead from a number of sources. Common sources of lead exposure include lead-based paint found in older homes and buildings, dust and soil contaminated with lead, and parents' occupations. Lead can also be found in a number of consumer products, including certain types of pottery, pewter, brass fixtures, foods, and cosmetics. The primary source of lead exposure for most children with elevated lead levels in their blood is lead-based paint.

## Lead in Drinking Water

Lead exposure from tap water comes from the decay of plumbing or the solder that connects pipes. The risk is higher in older buildings. Water that remains in pipes overnight when child care centers are not in session stays in contact with lead pipes or lead solder and could contain higher levels of lead.

The US Environmental Protection Agency (EPA) estimates that drinking water can make up 20 percent or more of a person's total exposure to lead. Formula-fed infants can receive up to 60 percent of their exposure to lead from drinking water.

## Young Children at Greatest Risk

Children younger than 6 years are at greatest risk from exposures to lead. The impact of exposure to lead in drinking water depends on the child's age, source of water consumption, the potential concentration of lead in drinking water, and other sources of lead exposure.

- Children younger than 6 years, particularly toddlers, are most likely to engage in frequent hand-to-mouth activities which increase the potential for them to ingest lead-based paint chips and dust.
- Infants who drink formula mixed with water containing lead are ingesting much more lead than older children who receive most of their nourishment through food.
- Young children absorb more lead through their stomach than older children or adults.
- Young children have developing brains and nervous systems which make them the most vulnerable to lead's health effects.

## Should children be tested if lead is found in the water at their child care center or school?

If parents have concerns about their child's exposure to lead, they should consult with their child's doctor about blood testing. While lead in drinking water is a source of concern, lead-based paint chips and dust remain the most significant exposure to lead.

## Who Should Be Tested?

The TN Childhood Lead Poisoning Prevention Program recommends testing for all children at 12 and 24 months of age, children ages 36 to 72 months of age who do not have a previously documented blood lead level, children whose parent/guardian requests a blood lead level, or children whose parent/guardian answers "yes" or "don't know" to any questions on the [risk assessment questionnaire](#) used at well-child checks.

## Testing for Lead in Drinking Water

- Public water systems (PWSs) are required by federal standards to test for lead throughout the distribution system to identify system-wide problems. They do not sample individual buildings or taps.
- EPA developed the *3Ts (Training, Testing, and Telling) for Reducing Lead in Drinking Water Toolkit*. More information can be found here:  
<https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit>

### Did You Know?

Effective January 1, 2019, public schools in Tennessee built prior to January 1, 1998 are required to test for lead in drinking water (T.C.A., Title 49, Chapter 2 Part 1). See Resources section below.

## Free Testing for Lead in Drinking Water in Child Care Centers and schools

As part of the Water Infrastructure Improvements for the Nation Act (WIIN Act), the Tennessee Department of Environment and Conservation (TDEC) will be receiving funds to assist child care programs and schools in testing for lead in drinking water

Free lead testing kits will be made available beginning in October 2020. Child Care Centers and Schools can request test kits by contacting Tennessee Department of Health Laboratory Services staff by phone at (615) 262-6300 or by email at [Lead\\_Testing.Support@tn.gov](mailto:Lead_Testing.Support@tn.gov)

Participating facilities will be provided a lead testing kit with bottles, instructions and pre-paid return shipping labels. Testing results will be shared with the facility as soon as possible, but no later than two weeks following the completion of testing.

### Did You Know?

Buildings built before 1986 are more likely to have lead pipes, fixtures, and solder.

## Tips to Reduce Potential Drinking Water Lead Exposure at Home

- If water in a particular faucet is not used for six hours or longer, "flush" the pipes by running cold water through it until the water is noticeably colder—about one minute. The more time water sits in your home's pipes, the more lead and other dissolved metals the water may contain.
- Use only cold water for drinking, cooking, and making baby formula. Hot water may contain higher levels of lead.
- Clean the screens and aerators in faucets frequently to remove captured lead particles.
- If building or remodeling, only use "lead free" piping and materials for plumbing.
- A home water filter which is NSF-certified for lead removal (NSF/ANSI Standard 53 or 58) can reduce lead levels in your water below the federal standard for lead. It is important to maintain home water filters according to the manufacturer's instructions.
- Lead is odorless, tasteless, and colorless so the only way to determine if lead is in your drinking water is to have the water tested.
- If you test your drinking water and find the levels of lead are above the federal standard of 15 ppb, you should stop using this water for drinking and cooking. Use a NSF-certified filter for lead removal or drink and prepare food with bottled water.

## Resources

### • TN Department of Health

Choose Safe Places for Early Care and Education – Drinking Water:

<https://www.tn.gov/health/cedep/environmental/safe-places/safe-operation/drinking-water.html>

**TN Childhood Lead Poisoning Prevention Program:**

<https://www.tn.gov/health/health-program-areas/mch-lead.html>

### • TN Department of Environment and Conservation - Water Resources, visit:

<http://www.tn.gov/environment/section/wr-water-resources>