

Lead Education and Sampling

What is lead?

Lead is a naturally occurring element found in small amounts in the earth's crust. While it has some beneficial uses, it can be toxic to humans and animals, causing health effects.

What are the sources of lead?

Lead can be found in all parts of the environment – the air, the soil, the water and even our homes. A lot of our exposure comes from industrial facilities and past human activities, such as the past use of leaded gasoline, lead based paints, batteries, ammunition and cosmetics. Lead in drinking water can be a significant contributor to overall lead exposure. Lead can enter drinking water through the corrosion of plumbing materials, especially where the water has high acidity or low mineral content that corrodes pipes and fixtures. Various drinking water outlets (e.g., water fountains and faucets) can be the primary contributors of lead in drinking water in schools and child care facilities.

What are the health effects of lead?

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and young children are especially susceptible to its effects. Lead exposure can cause decreases in IQ and attention span in children and can also lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risk of heart disease, high blood pressure, kidney, or nervous system problems.

What are some steps you can take to reduce their exposure to lead in drinking water?

- Flush water taps before use
- Avoid using hot water (for food, drink, and baby formula preparation)
 - Note: boiling water does not reduce lead
- Install filters at the tap

Community water systems are required to offer sampling for lead to all schools and child care facilities they serve. Continue reading to learn more about how your school or child care facility should prepare for lead sampling.

How should your facility identify outlets for sampling?

- **Schools** should identify five (5) outlets for sampling. These outlets should include two (2) drinking water fountains, one (1) kitchen faucet (used for food and drink preparation), one (1) classroom faucet (or other outlet) used for drinking, and one (1) nurse's office faucet, as available.
- **Child Care Facilities** should identify two (2) outlets for sampling. These outlets should include one (1) drinking water fountain, and one of either (1) kitchen faucet or (1) classroom faucet used for drinking or food preparation.

If fewer than the required number of outlet types are available, then all outlets used for consumption must be sampled. Additionally, outlets with point-of-use (POU) devices installed cannot be sample sites unless all outlets used for consumption have POU devices installed.

How should your facility prepare for sampling?

- Water must remain stagnant in the building's plumbing system for at least 8 hours but no more than 18 hours before sampling. The best time to collect samples may be in the morning, prior to student and staff arrival at your facility.
- Each sample will be a first draw sample immediately collected after turning on a cold-water outlet.
- Any appropriately trained individual from the water system, school, or child care facility may collect the samples.
- Labels can be placed on each outlet identified for sampling to indicate which sites are being sampled. Facilities may also place “do not use signs” on the outlets and/or cover them with a plastic bag at the start of the stagnation period, to ensure that they are not used before sampling.

How will your facility receive the lead testing results after sampling?

Your water system will provide analytical results as soon as practicable but no later than 30 days after receipt of the results to the school or child care facility.

If lead is found, how should your facility respond? (Remediation Tips)

Short-term Control Measures can be used until long-term or permanent solutions are made to reduce the risk of lead exposure.

- Shut off outlets that show elevated levels of lead (>15ppb) and post “do not use” signs.
- Routine maintenance
 - Post signs to flush taps prior to use (refer to routine flushing practices in the 3Ts)
 - Cleaning aerators and filters regularly
 - Use cold water for drinking and food preparation
- Provide bottled water

Permanent Control Measures can be used to permanently reduce lead originating in plumbing fixtures.

- Routine maintenance and sampling
- Replacing outlets
- Installing and maintaining filters certified to remove lead
- Reconfigure or update plumbing

Your facility can find more information about sampling for lead in school and child care facilities in the 3Ts for Reducing Lead in Drinking Water Toolkit provided by the EPA. This toolkit provides materials about training, testing, and taking action to reduce exposure to lead.

*Insert Link/QR code to TCEQ LCRR website for additional 3Ts information