

Lead Testing in Schools

**Prepared by the Chautauqua County Department of Health and Human Services,
Public Health Division**

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Background

On September 6, 2016 the Governor signed into law legislation requiring all public schools in the state to test their drinking water fixtures for lead. The intention of this law was to sample drinking fountains, sinks and other water fixtures used for drinking or cooking to see if they contained elevated levels of lead, because lead can cause serious health problems, especially for pregnant women and young children.

These new regulations were prepared by the NYSDOH and because they were enacted under “emergency legislation” there was little time to develop guidance for the schools. Samples from elementary schools were required to be collected by September 30, 2016 and samples from junior-senior high schools are required to be collected by October 31, 2016. Future samples must be collected every five years starting in 2020.

Lead Action Level

If samples from fixtures contain lead above a certain level, referred to as the “Action Level,” then remedial measures must be taken to reduce lead at those fixtures. The action level for lead in schools was set by the NYSDOH at 15 parts per billion (ppb).

Samples that exceed the action level must be reported to the local health department within 24 hours of receiving sample results from the lab and reported to parents and staff within 10 days.

Sample Locations

Samples must be collected from all water fixtures that are used for drinking or cooking but many fixtures in schools do not fall in this category and therefore are not required to be sampled. However, guidance from the NYSDOH on what specific fixtures are exempt from sampling was late in coming. Therefore many schools sampled every water fixture.

The fixtures required to be sampled include: drinking fountains, kitchen sinks, ice machines (by melting the ice), classroom sinks and bubblers, home economics sinks, nurse’s office sinks, staff room sinks, fixtures used to fill Gatorade jugs, concession stand sinks and bathroom sinks.

Fixtures that are not required to be sampled include: art and lab sinks (as long as food and drinks are prohibited in those rooms with strict enforcement), custodial slop sinks with limited access, showers, outside hose bibs and other fixtures that will obviously not be used for drinking or cooking.

Samples from fixtures not used for drinking or cooking are not required to be reported but it is recommended that they be included anyway for full disclosure.

Sampling Protocols

Samples are required to be collected after the water has been motionless in the pipes for at least eight hours. These “first draw” water samples represent worst case condition because the water can leach lead out of the pipes and fixtures when stagnant. Once water begins to flow through the pipes and fixtures, lead levels drop. There are many fixtures in schools that are rarely used and samples from these fixtures contain the highest lead levels. In many cases these fixtures are not even used for drinking water but were sampled anyway.

Sources of Lead

Lead is a common metal found in the environment. Drinking water is one possible source of lead exposure. The main sources of lead exposure are lead-based paint, lead-contaminated dust or soil, and some plumbing materials. In addition, lead can be found in certain types of pottery, pewter, brass fixtures, food, and cosmetics.

Water in contact with copper plumbing with lead soldered joints or brass fixtures containing lead can leach lead out of the plumbing. The use of lead solder in plumbing was banned by EPA in 1987 and in 2014 EPA reduced the amount of lead that plumbing fixtures can contain from 8% to less than 1%.

EPA estimates that 10 to 20 percent of a person’s potential exposure to lead may come from drinking water. Infants who consume mostly formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water.

Health Effects of Lead

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.

Water Sample Results

Results from several school districts have been received by DHHS and show that between 10 and 30% of samples have exceeded the action level. A thorough review of sample results has not been completed but initial reviews indicate samples from taps not used for drinking/cooking and that have low water use contain the highest lead levels.

Initial & Remedial Response Actions

The following steps are to be taken to reduce lead exposure from drinking water in fixtures that exceeded the Action Level:

1. If the fixture is a drinking fountain, a bubbler, a classroom or office sink then it is to be turned off immediately.
2. If the fixture is located in the cafeteria kitchen then it is to be turned off immediately and an alternate water source used for preparing food. Signs are to be posted that the water should not be used for cooking.
3. If the fixture was a bathroom sink or shower then signs are to be posted that the water should not be used for drinking.

4. If the fixture is a lab sink not used for drinking then signs are to be posted that the water should not be used for drinking.
5. If the fixture is a custodial sink or other sink not typically used for drinking water then signs are to be posted that the water should not be used for drinking.
6. If the fixture is an outside tap then it must be locked or the handle removed.

Further testing will be conducted on these drinking and cooking water fixtures to determine if the source of lead contamination is from the plumbing or from the fixtures. If lead contamination is found to be from a fixture, then it will be scheduled for replacement and retested. If lead contamination is found to be from the plumbing, consideration is to be given to replacing the pipes with plastic or another approved material as soon as possible depending on the amount of work and cost involved.

Steps to Take To Reduce Lead Exposure

1. ***Run your water to flush out lead.*** Run water for 15-30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking, if it hasn't been used for several hours. This flushes lead-containing water from the pipes.
2. ***Use cold water for cooking and preparing baby formula.*** Do not cook with or drink water from the hot water tap; lead dissolves more easily into hot water. Do not use water from the hot water tap to make baby formula.
3. ***Do not boil water to remove lead.*** Boiling water will not reduce lead.
4. Don't forget about other sources of lead including lead paint, lead dust, and lead in soil. Wash your children's hands and toys often as they can come into contact with dirt and dust containing lead.

All Children Should be Tested for Lead

New York Public Health Law requires primary health care providers to screen each child for blood lead levels at one and two years of age. In addition, at each routine well-child visit, or at least annually if a child has not had routine well-child visits, primary health care providers assess each child who is at least six-months of age, but under six years of age, for high lead exposure. Children found to be at risk for high lead are screened or referred for lead screening.

If a child has not had routine well-child visits since the age of one year and there is a concern about lead exposure, consult the CCDHHS or a healthcare provider to find out how to get a child tested for lead.

For More Information

Contact the Chautauqua County Department of Health and Human Services, Public Health Division at 716-753-4481 or the New York State Department of Health at (518) 402-7650, or by email at bpwsp@health.state.ny.us. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at www.epa.gov/lead, or call the National Lead Information Center at 1-800-424-LEAD.