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Lead in the Water in DC Schools
~Frequently Asked Questions~
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Note: This document not only applies to DC Schools (DCPS and Public Charter Schools), but also to recreation centers, day care centers, parochial schools, private schools, and public libraries--in essence, anywhere where children spend extended amounts of time in larger groups and may consume water from tap sources.

1. Is there a "safe" level of lead in water?

No. The only safe level of lead in water is zero. Even low levels of lead in water can raise a child's blood lead level to the Centers for Disease Control and Prevention (CDC) level of "concern" (5 micrograms per deciliter or mg/dL). Accordingly, Environmental Protection Agency EPA's longstanding policy for lead in water embraces zero as the only scientifically-supported health-based target for lead levels at the tap. The 15 parts per billion (ppb) and 20 ppb of lead in the water "cut off" points that schools often use are not health-based standards. They are technical standards set by the EPA and used as guides to trigger remediation recommendations. These standards are not protective of children's health.

*The District government recently (June 2016) announced that it would change its action level from 15 ppb to 1 ppb, for lead tests on drinking water sources in District of Columbia Public Schools (DCPS) and Department of Parks and Recreation (DPR) centers.

2. Are water tests reliable in measuring lead levels in the water?

No, since lead levels can fluctuate (raise and fall) due to many different factors (temperature; season; physical disturbance of lead-bearing plumbing due to construction, heavy traffic, etc.; frequency of water usage; chemicals in the water; etc.). Any single test at any single tap only provides a "snapshot" of lead levels at that tap during the time of the test. *In other words, if a test shows 0 ppb at one time, this does not mean that the tap tested dispenses no lead at other times.*
Water tests are not, and should not be used as, a diagnostic tool to tell us if a tap is "safe" for drinking and cooking. For buildings with lead-bearing plumbing, like our schools, we have to assume that there is always the potential for lead in the water, no matter how "good" our water utility's corrosion control treatment is. This is the only precautionary and science-based way of protecting children from exposure.

Water tests should be used to test the water after a filter has been installed or replaced to ensure that the filter is working properly.

3. What is the safest way to make sure children are not drinking water tainted with lead?

All water that children could ingest (drinking or cooking) should be filtered. If filters cannot be supplied, bottled water is safest; for example, the Baltimore City School district chose this route.

4. When should children be tested for lead in their blood?

If any of the water sources at a DC public school test high for lead, the children attending that school should get tested for lead in the blood immediately. It is important to keep in mind, however, that lead stays in the bloodstream for only a few weeks. Then, it is absorbed in the bones where it is stored and can be released during times of stress. Because lead levels in the water can spike and drop unpredictably, blood lead testing can miss lead spikes in blood that did not occur close to the time of the blood test. Certainly, *it is unconscionable to test children months after exposure because such testing can result in false assurances.*

5. Should water filters only be installed in elementary schools and not at middle schools or high schools?

The exposure rate and risk is highest for fetuses, infants dependent on reconstituted formula, and children under 6 years. However, children and young adults up to 22-25 years of age have developing brains, all schools employ pregnant women, and lead is known to cause harm to every organ in the human body regardless of age. This means that a public-health protective approach to lead in school water must protect everyone.

6. Can flushing the pipes in the morning before school starts remedy the situation?

No, flushing does not get rid of the lead problem. Flushing may get rid of soluble lead for a short period of time, but soluble lead can build up quickly again. Lead particulates can release any time, even soon after flushing. Flushing was used unsuccessfully by the Los Angeles Unified School District (LAUSD) starting in 1990. In 2008, a team of undercover reporters identified persistent failures by school custodians to flush as required and falsification of flushing logs. Flushing is scientifically indefensible and logistically close to impossible. *Flushing is not, and should not be accepted as, a long-term remedy for lead-in-water at DC schools.*

Further Reading:

Edwards, Marc. “Fetal Death and Reduced Birth Rates Associated with Exposure to Lead-Contaminated Drinking Water.” *Environmental Science & Technology* 48 (2014): 739-746.

Edwards, Marc, Simoni Triantafyllidou, and Dana Best. “Elevated Blood Lead in Young Children Due to Lead-Contaminated Drinking Water: Washington, DC, 2001-2004.” *Environmental Science & Technology* 43 (2009): 1618-23.

Lambrinidou, Yanna, Simoni Triantafyllidou, and Marc Edwards. “Failing Our Children: Lead in U.S. School Drinking Water.” *New Solutions: Journal of Environmental and Occupational Health Policy* 20 (2010): 25-47.

Triantafyllidou, Simoni and Marc Edwards. “Lead (Pb) in Tap Water and in Blood: Implications for Lead Exposure in the United States.” *Critical Reviews in Environmental Science and Technology* 42 (2012): 1297-1352.

Triantafyllidou, Simoni, Daniel Gallagher, and Marc Edwards. “Assessing Risk with Increasing Stringent Public Health Goals: The Case of Water Lead and Blood Lead in Children.” *Journal of Water and Health* 12 (2014): 57-68.

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