

# Lead in Drinking Water FAQ

## for School and Childcare Facilities

This fact sheet answers frequently asked questions about lead and health, how lead may get into the drinking water at your school or childcare facility, and how children, teachers, and staff can avoid exposure. Lead can be found in all parts of the environment. Although lead is found in nature, most exposure comes from human activities or use. Lead-based paint and lead-contaminated dust are the primary sources of exposure for children. Infants, young children, and developing fetuses are most sensitive to the effects of lead because their body systems are not fully developed. Precautions should be taken to minimize lead exposure.

### HOW DOES LEAD GET INTO DRINKING WATER?

In Massachusetts, most drinking water sources from reservoirs and groundwater are lead free. When lead is present in water, it is typically due to the water flowing through lead pipes or plumbing in buildings with lead parts or solder. Service lines, which are the pipes that connect homes, schools, or other buildings to the water main, could have lead in them. Inside the school or facility, there may also be lead pipes, pipes connected with lead solder, or brass faucets or fittings containing lead. Lead levels are highest when the water has been sitting in lead pipes for several hours. Additionally, using hot water can draw lead out of pipes, solder or fixtures, releasing it into the water.

### HOW DOES LEAD GET INTO SOMEONE'S BODY?

Lead is present in typically low levels in a variety of different sources, such as food, drinking water, soil, dust, and air. Individuals are exposed to lead from eating food, drinking water, accidentally swallowing soil and dust, and from breathing air that contains

lead. Other less common sources of lead include some handmade pottery and imported cookware, home remedies, toys, candy, jewelry, and canned food. Lead-based paint and lead-contaminated dust are the primary sources of exposure for children, but drinking water can be an important contributing source to overall exposure.

Since everyone is exposed to small amounts of lead in their daily life, it is not uncommon for a low level of lead to be present in someone's body.

### IS IT SAFE TO BATHE IN WATER WITH ELEVATED LEVELS OF LEAD?

Yes. Lead is not easily absorbed through the skin. It is not a problem to wash hands, bathe, and/or shower in water containing lead.

### WHAT IF LEAD LEVELS IN THE DRINKING WATER AT SCHOOL OR CHILDCARE FACILITIES ARE HIGH?

If the lead levels are higher than the Massachusetts Department of Environmental Protection (MassDEP) action level of 15 parts per billion (ppb), your school or childcare facility should work to determine the source. Once a school is aware of a water lead exceedance, they should prevent access to any tap or fountain above the action level and provide an alternate source of water. MassDEP can provide technical assistance to schools and childcare facilities with regard to testing and follow-up measures. There are a number of ways lead levels can be reduced in school drinking water, such as by replacing pipes and fixtures, reducing the corrosiveness of the water, or initiating a flushing program. Your school or childcare facility should keep parents, teachers, and staff updated



as sampling progresses and informed of the results of the testing and their follow up actions.

Children's exposure to lead in drinking water at school is only a small part of their overall potential exposure. Children typically only drink water in schools and childcare facilities for a portion of the day. While it is unlikely that lead in drinking water at schools or childcare facilities would cause staff or children to have significantly elevated blood lead levels, it can contribute to overall exposure. Risk will vary, however, depending on the individual, the circumstances, and the amount of water consumed. For example, infants who drink formula prepared with lead-contaminated water may be at a higher risk because of the large volume of water they consume relative to their body size.

### **CAN WATER WITH ELEVATED LEAD LEVELS BE USED FOR WASHING OUT CUTS?**

Yes. A brief exposure to elevated levels of lead in water while rinsing a cut does not pose any hazard to health.

### **HOW DOES LEAD MAKE YOU SICK?**

Lead detected above the action level does not necessarily mean a child will have elevated levels of lead in their blood. The amount of lead in a child's body depends on several factors, such as their age, nutritional status, and the various sources of lead in their environment.

Lead can affect every organ system in the body, including the nervous system, kidneys, and cardiovascular system. The developing brains of infants, young children, and developing fetuses are at greatest risk. An exposure to lead that would have little effect on an adult can have a big effect on an infant, young child, and developing fetus. Most children who have lead poisoning or high levels of lead exposure do not look or act sick. The only way to confirm lead poisoning is through a blood lead test. It is important to reduce lead exposure as much as possible, particularly for infants, young children, and pregnant women.

### **WHAT IF I'M PREGNANT OR PLANNING TO BECOME PREGNANT?**

Lead can pass from a mother to her developing fetus. Dust from old lead-based paint can be an important source of exposure for pregnant women (such as during renovation). While drinking water is not usually the most significant source of lead exposure leading to elevated blood lead levels, it can be an important contributing source to overall exposure. Most people are exposed to small amounts of lead every day from other sources like food, soil, dust, and air. Pregnant women should be aware of potential exposure to lead from the workplace, from the use of traditional home remedies, imported cosmetics or lead-glazed pottery from cooking or storing food. Additionally, a craving to eat or mouth nonfood substances, such as soil or jewelry, can expose a person to lead. Talk to your doctor or other health care provider to discuss your lead exposure risks and whether you should be tested.

### **SHOULD I OR MY CHILD HAVE BLOOD TESTING DONE?**

Testing all children following the detection of elevated levels of lead in a school's or a childcare facility's drinking water is not recommended. It is unlikely that lead in drinking water at schools or EEC facilities would cause staff or children to have elevated blood lead levels. The most important thing to do is to identify and remove suspected sources of lead exposure.

Blood tests are commonly used to screen children for lead poisoning. In Massachusetts, young children must have their blood lead levels tested at age 9-12 months, and again at ages 2 and 3, and also sometimes at age 4, depending on where they live. This scheduled approach to blood lead testing helps identify lead poisoned children, and eliminate sources of lead exposure in the most sensitive population. While we do not recommend testing all children at schools or EECs where elevated levels of lead in drinking water have been identified, if your child has never been screened, or you have specific health concerns about your child, you should discuss this with your doctor or other health care provider.

## HOW CAN I REDUCE LEAD EXPOSURE AT SCHOOL AND CHILDCARE FACILITIES?

If you are a student, teacher or staff member, you can help reduce your exposure if lead levels are elevated in tap water.

Easy things to do are:

- Obey signs identifying water outlets that are for handwashing only or shouldn't be used at all.
- Let the water run for 1 minute before you drink from a fountain or faucet.
- Use cold water for drinking and cooking. If you want hot water, run cold water from the faucet and warm it in the microwave or on the stove.
- When mixing powdered baby formula with tap water, always use cold water and do not use hot water. Simply warm formula to serve. Bottled or filtered water should be used when mixing baby formula if lead levels are known to be elevated in tap water. Filters should be NSF-certified to remove lead.

## WHERE CAN I GET MORE INFORMATION?

### For health information contact:

Massachusetts Department of Public Health  
Bureau of Environmental Health  
Phone: 617-624-5757 | Fax: 617-624-5777 | TTY:  
617-624-5286

[www.mass.gov/dph/environmental\\_health](http://www.mass.gov/dph/environmental_health)

Massachusetts Department of Public Health  
Childhood Lead Poisoning Prevention Program  
1-800-532-9571 or [www.mass.gov/dph/clppp](http://www.mass.gov/dph/clppp)

### For additional drinking water information contact:

Massachusetts Department of Environmental  
Protection  
Drinking Water Program  
617-292-5770

Program.Director-DWP@state.ma.us

<http://www.mass.gov/eea/agencies/massdep/water/drinking/lead-in-drinking-water.html>

(and see the "Schools and Childcares" tab)

**NOTE FOR PUBLIC WATER SUPPLIERS:** This FAQ does not fulfill the notification or education requirements of the Lead and Copper Rule 310 CMR 22.06B. Public Water Systems should contact MassDEP for specific Lead and Copper Rule requirements of public water systems to notify consumers of elevated lead results.

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