How Can Lead in Drinking Water Affect My Child’s Health?

Drinking water with high levels of lead can affect your child’s health in several ways, depending on the child’s age, how much water your child drinks, how long they have been drinking the water, and the amount of lead in the water.

With lead, we are most concerned about children under the age of 6 years because…

• A young child’s brain is still growing and is more easily harmed by lead;
• Young children put their hands and toys in their mouths a lot, making it easy for them to take in dust from lead paint found on the floors and windowsills of older homes; and
• Young children absorb more lead than older children and adults.

In young children, lead can affect brain development, causing learning disabilities and behavioral problems. For older children and adults, ongoing lead exposure can damage the brain, nervous system, and kidneys, and cause high blood pressure.

Where Does Lead in a School or Daycare’s Drinking Water Come From?

When lead is present in drinking water it usually is a result of lead leaching from pipes and plumbing fixtures inside the building or facility and not from the water supply itself. Lead can be found in brass fixtures and fittings, or in solder used on copper plumbing. Before 1987, solder that contained lead was commonly used to join copper pipes; as recently as 2014, plumbing fixtures could have up to 8 percent lead content.

How Does Lead Get from the Plumbing into the Water?

Lead found in pipes (plumbing) can dissolve into water. Certain activities can increase or decrease the amount of lead concentrations in your water:

Lead levels are usually highest after the water has been sitting in the pipes overnight (or for several hours). Reduce your lead levels by running the water (flushing) for a minute or longer. Flushing in this manner every morning will help lower the risk of exposure for children as they use water outlets throughout the day.

Hot water leaches lead from pipes more easily than cold water. Always remember to use cold water for culinary purposes or for filling water bottles.

Aerators are the mesh screens on the end of a tap. They may trap lead particles that dislodge from the plumbing, which may cause higher lead levels. Remember to remove and clean any particles from your aerators on a routine basis.
Understanding Lead Test Results from School Drinking Water

To understand the water test results from your child’s school, it is important to first understand how the water was tested.

First Draw Test
Water tested after it has been sitting in pipes over night (or for more than 6 hours) is called a first draw test. A first draw test will determine if lead is dissolving into the water. Usually, the highest concentrations of lead in water is found in first-draw tests.

Follow-up Flush Test
In a follow-up flush test, the water is tested after it has been run for about 30 seconds. Follow-up flush test results are more representative of lead that is entering the water from piping directly behind the faucet or fountain.

Water test results are reported in parts per billion (ppb). Although there is no level of lead in drinking water that is deemed safe, it is recommended that schools stop using all fixtures with elevated lead concentrations of 4 ppb or higher.

For More Information
To learn more about childhood lead poisoning, sources of lead in the home, and testing your child for lead, visit www.maine.gov/healthyhomes.

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Center for Disease Control and Prevention
Drinking Water Program

Should I Have My Child Tested for Lead?

A blood test will reveal how much lead is in your child’s blood. But, before you have your child tested, you should talk to your child’s doctor. Factors impacting a decision to test or not to test include:

- Your child’s age;
- How much time your child spends at school or daycare, including before or after school care or activities;
- How much water from the school or daycare your child drinks in a typical day;
- The lead levels found in the school or daycare’s drinking water.

You and your child’s doctor should also talk about other ways your child may have contact with lead, including:

- Living or spending time in an older house or apartment that may contain lead paint;
- Living in an older home that is being renovated or that has been renovated in the last 6 months;
- Living with someone who may bring dust from lead paint home on work clothes and shoes (examples: painters, construction workers, metal recyclers);
- Doing certain hobbies, such as making stained glass, using firearms, or casting bullets or lead sinkers;
- Any unusual oral behaviors your child may have such as chewing on woodwork in the home or eating things that are not food.

Should I Test My Home’s Drinking Water for Lead?

Just like schools, homes may have plumbing that contains lead. Since you cannot see, taste, or smell lead in water, testing is the only way to find out if there is lead in your drinking water. And remember: Testing for lead is especially important if young children or pregnant women drink the water.

For more information and a list of labs that can test your water for lead, visit www.wellwater.maine.gov.