

FREQUENTLY ASKED QUESTIONS: LEAD POISONING

What is lead?

Lead is a metal that occurs naturally in the earth's crust. Human activity – like mining, burning fossil fuels, and manufacturing – has caused it to become more widespread. Lead was also once a key ingredient in paint and gasoline and is still used in batteries, pipes, pottery, roofing materials, and some cosmetics.

What is lead poisoning and how is it caused?

Lead poisoning occurs when lead builds up in the body, often over a period of months or years. Even small amounts of lead can cause health problems.

Lead-based paint and lead-contaminated dust in older buildings are the most common sources of lead poisoning in children. Other sources include contaminated air, water, and soil. Adults who work with batteries, do home renovations or work in auto repair shops also may be exposed to lead.

Who is most at risk of lead poisoning?

Children

Children under 6 years old are most at risk. Lead is particularly dangerous to children because their growing bodies absorb more lead than adults do and their brains and nervous systems are more sensitive to the damaging effects of lead.

Even low levels of lead in the blood of children can result in:

- Behavior and learning problems
- Lower IQ and hyperactivity
- Slowed growth
- Hearing problems
- Anemia

In rare cases, ingestion of lead can cause seizures, coma, and even death.

Pregnant women

Lead can accumulate in our bodies over time, where it is stored in bones along with calcium. During pregnancy, lead is released from bones as maternal calcium and is used to help form the bones of the fetus. This is particularly true if a woman does not have enough dietary calcium. Lead can also cross the fetal barrier exposing the fetus to lead. This can result in serious effects to the mother and her developing fetus, including:

- Reduced growth of the fetus
- Premature birth

Adults

Although children and pregnant women are most at risk, lead is also harmful to other adults. Adults exposed to lead can suffer from:

- Cardiovascular effects, increased blood pressure and incidence of hypertension
- Decreased kidney function
- Reproductive problems (in both men and women)

What should a parent look for to know if their child might have been exposed to lead?

Most lead exposures do not have any symptoms, or may manifest similarly to other common conditions such as stomachache, constipation, and irritability. Parents who think their child may have been in contact with lead should talk to their health care provider and decide together whether to test the child's blood to see if the child has high levels of lead. A blood lead test is the only way to find out if a child has absorbed any lead into their bloodstream. Children should also be tested during early childhood, even if lead exposure is not suspected.

What should I do if I think my child or I have been exposed to lead?

Talk to your pediatrician, general physician, health care provider, or local health agency about what you can do. A simple blood test can check you or your child for lead exposure.

Does the Department of Health conduct lead testing in children?

No, the department does not conduct lead testing. Lead testing in childhood is covered as a preventive service for children under the Affordable Care Act, EPSDT for Medical Assistance, and is recommended by the American Academy of Pediatrics' Bright Futures Recommendations. However, Pennsylvania does not have a legislative mandate for children to receive a lead test.

What is required to be reported regarding lead testing in Pennsylvania?

Any time a lead test is conducted, physicians are required to report the results – no matter what level of blood lead is found – into PA-NEDSS, the mandatory electronic disease reporting application for Pennsylvania. Reporting of lead levels is required by Pennsylvania law.

What is the Treatment for Lead Poisoning?

For children and adults with relatively low levels, avoiding exposure to lead may be enough to reduce blood lead levels. The following might be recommended for more severe cases:

- **Chelation therapy.** In this treatment, you take a medication that binds with the lead so that it's passed in your urine.
- **EDTA therapy.** Doctors treat adults with lead levels greater than 45 mcg/dL of blood with one or more of three drugs, most commonly a chemical called ethylenediaminetetraacetic acid (EDTA). In severe cases, however, it may not be possible to reverse damage that has already occurred.

What is Pennsylvania doing about lead poisoning?

The Wolf Administration takes the issue of lead exposure very seriously and state agencies will continue to work together on their coordinated response to address lead exposure in communities across the commonwealth. The Administration and the Department of Health support universal testing of ALL Pennsylvania children and are considering what steps might reasonably be taken to have the most positive impact on improving outcomes for children.

We are in the process of reviewing the available data as well as funding sources for additional lead abatement. We are also working with health care providers to develop a plan to increase the number of tests performed on high risk children between the ages of 1 and 2.

The problem of lead in housing has health, education, behavioral, and economic implications and cannot be addressed by a single agency or organization. Combined efforts of state and local agencies has led to a decrease over time in the number and percentage of children with elevated blood lead levels but will not be fully prevented until lead is removed from homes and the environment, through regulations, education, and remediation resources.

What is the Pennsylvania Department of Health's role in lead prevention in the commonwealth?

All blood lead level testing results are reportable to the department. The Pennsylvania Department of Health compiles childhood lead test data as reported by laboratories to identify potential high risk areas and make data available for state or community needs assessments. Department of Health staff collaborate with the Pennsylvania Department of Human Services to share data between the medical assistance claims database and the lead surveillance database.

The Department of Health's Community Health Nurses (CHN) monitor elevated lead levels ($\geq 5\mu\text{g}/\text{dL}$) in children ages seven and under living in Pennsylvania. The CHNs contact the family to provide education on laboratory results, sources of lead exposure, actions to take to prevent/decrease the risk of exposure and help facilitate follow-up testing between client's and their health care providers. In cases where there is significant lead exposure, CHNs will work with the health care provider and facilitate referrals to obtain home inspections which can identify the source of exposure as well as provide hands-on education to parents.

The department also staffs a toll-free Lead Information Line (1-800-440-LEAD), to provide information and referrals for concerned parents or professionals. Through its Lead and Healthy Homes Program, the department provides education about lead, as well as other housing hazards to vulnerable populations across the state. Since its implementation in 2013, the Lead and Healthy Homes Program has provided primary prevention home assessments in nearly 3,000 homes across the commonwealth and provided more than 400 environmental inspections for children with elevated blood lead levels.

Do we need a universal testing law? What are the CDC recommendations?

Pennsylvania has historically had a low lead testing rate for children. The Centers for Disease Control and Prevention (CDC) recommends that children be screened around age 1 and 2 or before age 7 if they have not had a prior test. In 2014, about 14% of children under age 7 and 26% of 1 and 2 year-olds had a recorded test. In order to adequately identify risk of exposure for children and to understand the degree of the problem of lead poisoning in Pennsylvania, there should be a universal testing requirement.

The Wolf Administration takes the issue of lead exposure very seriously and supports universal testing. State agencies will continue to work together on their coordinated response to address lead exposure in Pennsylvania communities.

Does the lead poisoning surveillance project monitor water hazards?

The Department of Health childhood lead surveillance program does not monitor water hazards. The Department of Environmental Protection oversees the content of lead in drinking water and conducts all testing for water hazards.

Additional Information

For more information on lead poisoning, click [here](#) or visit www.health.pa.gov.