



Childhood Lead Poisoning Prevention

Testing Children for Lead Poisoning

A blood lead test is the best way to find out if a child has lead poisoning. A child with lead poisoning may not have visible signs or symptoms. Many children who have lead poisoning look and act healthy. Parents can talk to their child's healthcare provider about getting a blood lead test if their child may have been exposed to lead.

Who should be tested for lead poisoning?

All children who are at risk for lead exposure should be tested for lead poisoning. Some children are more likely to be exposed to lead than others. These include children who

- live or spend time in a house or building built before 1978
- are from low-income households
- are immigrants, refugees, or recently adopted from less developed countries
- live or spend time with someone who works with lead or has hobbies that expose them to lead

Parents should talk to their child's healthcare provider about whether their child needs to be tested for lead. The child's healthcare provider may ask questions to see if the child is at risk for lead poisoning. The best way to know if a child has been exposed to lead is to have their blood tested.

Children enrolled in Medicaid are required to get tested for lead at ages 12 and 24 months, or age 24–72 months if they have no record of ever being tested. For children not enrolled in Medicaid, CDC recommends focusing testing efforts on high-risk neighborhoods and children.

How is the testing done for lead poisoning?

A healthcare provider will test a child's blood for lead. During a blood lead test, a small amount of blood is taken from the finger, heel, or arm and tested for lead.

- A **finger-prick or heel-prick (capillary) sample** is usually the first step to determine if a child has lead in their blood. While finger-prick tests can provide fast results, they also can produce higher results if lead on the skin is captured in the sample. For this reason, a finger-prick test that shows a blood lead level at or above CDC's [blood lead reference value](#) is usually followed by a second test to confirm it.
- A **venous blood draw** takes blood from the child's vein. Blood collected from the vein is less likely to be contaminated with lead during the collection process. However, venous blood cannot currently be tested for lead at the point of care. Because of this, it may take a few days to receive results from the laboratory. A healthcare provider may order a venous blood draw to confirm the blood lead level seen in a test. The table below shows when a child with lead in their blood should receive a venous blood draw to confirm their blood lead level.

Recommended Schedule for Obtaining a Confirmatory Venous Sample

Capillary Blood Lead Level (µg/dL)	Time to Confirmation Testing
≥3.5–9	Within 3 months

Capillary Blood Lead Level (µg/dL)	Time to Confirmation Testing
10–19	Within 1 month
20–44	Within 2 weeks
≥45	Within 48 hours

Healthcare providers and most local health departments can test for lead in the blood. Many private insurance policies cover the cost of testing for lead in the blood. The cost of blood lead testing for children enrolled in Medicaid is covered by the Centers for Medicare & Medicaid Services.

What do blood lead test results mean?

A blood lead test shows how much lead is in a child's blood. The amount of lead in blood is referred to as the blood lead level, which is measured in micrograms of lead per deciliter of blood (µg/dL).

Any amount of lead in the blood means the child has been exposed to lead and may be still exposed to lead in their environment. The healthcare provider [recommends follow-up actions and care based on the child's blood lead level](#).







CDC uses a [blood lead reference value](#) of 3.5 µg/dL to identify children with blood lead levels that are higher than most children's levels in the United States. However, no safe level of lead in children has been identified. Even low levels of lead in the blood can negatively impact a child's health and should be viewed as a concern.

Additional Resources

Web pages

- [Blood Lead Levels in Children](#) – information about children's blood lead levels
- [Blood Lead Reference Value](#) – CDC recommendations on children's blood lead levels
- [Recommended Actions Based on Blood Lead Level](#) – summary of recommendations for follow-up and case management of children based on confirmed blood lead levels

Fact Sheets

- [5 Things You Can Do](#)  [PDF – 234 KB] – information on how to help lower elevated blood lead levels, [in English](#)  [PDF – 234 KB] and [en Español](#)  [PDF – 166 KB]
- [All Children Can Be Exposed to Lead](#) – real-world examples of situations where children have been exposed to lead (Printable PDF  [PDF – 1 MB])
- [Blood Lead Levels in Children](#)  [PDF – 100 KB] – fact sheet with information on blood lead levels in children
- [CDC's Recommended Terminology When Discussing Children's Blood Lead Levels](#)  [PDF – 330 KB]



Videos

- [Mission Unleaded: How to Test Children for Lead with Maximum Accuracy](#) – reducing the risk of contamination during blood collection for lead testing

Scientific Publications

- Ruckart PZ, Jones RL, Courtney JG, LeBlanc TL, Jackson W, Karwowski MP, Cheng P, Allwood P, Svendsen ER, Breyse PN. [Update of the Blood Lead Reference Value — United States, 2021](#). *MMWR*. 2021; 70(43):1509–1512.
- Courtney JG, Chuke SO, Dyke K, Credle K, Lecours C, Egan KB, Leonard M. [Decreases in Young Children Who Received Blood Lead Level Testing During COVID-19 — 34 Jurisdictions, January–May 2020](#). *MMWR*. 2021; 70(5):155–161.

Guidelines and Recommendations

- [HRSA-CDC Letter on Childhood Lead Poisoning Prevention and Blood Lead Testing](#)  [PDF – 213 KB] – In a joint letter, HRSA and CDC provide information for healthcare providers regarding childhood lead poisoning prevention and blood lead testing.
- [CDC. Recommendations for Blood Lead Screening of Medicaid-Eligible Children Aged 1–5 Years: an Updated Approach to Targeting a Group at High Risk.](#) *MMWR*. August 7, 2009; 58(RR09);1–11.
- [CDC. Interpreting and Managing Blood Lead Levels <10 µg/dL in Children and Reducing Childhood Exposures to Lead: Recommendations of CDC’s Advisory Committee on Childhood Lead Poisoning Prevention.](#) *MMWR*. November 2, 2007; 56(RR08):1–14;16.
- [Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials, Centers for Disease Control and Prevention \(1997\)](#)  [PDF – 1.3 MB] – The policy outlined in the document has two main purposes: to increase screening and follow-up care of children who most need these services, and to help communities pursue the most appropriate approach to the prevention of childhood lead poisoning.

Last Reviewed: January 20, 2023