

Blood Lead Levels in Children

What Do You Need to Know to Protect Children?

Lead exposure occurs when a child comes in contact with lead by swallowing or breathing in lead or lead dust. After a child inhales or swallows lead, it quickly enters the blood. No safe blood level in children has been identified. Even low levels of lead in blood have been shown to affect a child's learning capacity, ability to pay attention, and academic achievement. The effects of lead exposure can be permanent. The most important step parents, doctors, and others can take is to prevent lead exposure before it occurs.

Top 8 Ways to Protect Children from Lead Exposure

1. **Get a blood test.** Parents can talk to their child's healthcare provider about getting a blood lead test. A blood test is the best way to determine if a child has been exposed to lead. Based on blood lead test results, healthcare providers can recommend follow-up actions and care.
2. **Get the child's home checked.** Have the home checked by a licensed lead inspector if they live in a home or building built before 1978. Those who rent should ask their landlord to have their home checked. [Visit the Environmental Protection Agency's \(EPA\) web page](#) to find a certified inspector or risk assessor.
3. **Hire trained contractors.** When planning renovations, hire contractors who are trained in lead-safe practices. Visit [EPA's web page](#) to find a certified contractor.
4. **Regularly wet-mop floors, windows, and windowsills.** Household dust can be a major source of lead in homes and buildings built before 1978.
5. **Leave shoes by the door or outside.** This is especially important when someone works with lead or has a hobby that involves lead, such as construction or shooting firearms.
6. **Shower and change clothes and shoes after working around lead-based products.** This can keep lead dust from being tracked through the home and prevent families from being exposed.
7. **Protect soil.** Cover bare soil with grass, mulch, or wood chips and prevent children from playing in bare soil that may be contaminated with lead. See the [Lead in soil web page](#) for more information.
8. **Avoid certain children's products and toys.** Some toys, especially imported toys, antique toys, and toy jewelry may contain lead. Visit the [Consumer Product Safety Commission's \(CPSC\) web page](#) for photos and descriptions of currently recalled toys.



Lead can be found in a variety of sources. These include

- Paint in homes and buildings built before 1978
- Water supplied through pipes or plumbing fixtures that contain lead
- Soil contaminated with lead from exterior lead-based paint, car exhaust, and factories
- Some products such as toys and jewelry
- Some imported foods and medicines
- Certain jobs and hobbies



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Update on Blood Lead Levels in Children

- CDC uses a [blood lead “reference value” \(BLRV\)](#) to identify children with higher levels of lead in their blood compared to most children. This level is based on the U.S. population of children ages 1–5 years who are in the top 2.5% of children when tested for lead in their blood, according to data from the [National Health and Nutrition Examination Survey \(NHANES\)](#).
- In October 2021, CDC updated the BLRV to 3.5 micrograms per deciliter (µg/dL).
- Higher blood lead levels are more common among children from some racial and ethnic minority groups, from low-income households, who were born outside of the United States, and who live in housing built before 1978. These groups are less likely to have access to quality housing and may be discriminated against when looking for a safe, healthy place to live. As a result, these groups are more likely to be exposed to lead from living in homes that contain leaded paint, pipes, faucets, and plumbing fixtures.

Additional Recommendations to Prevent Childhood Lead Exposure

- CDC recommends that healthcare providers and public health professionals focus blood lead testing efforts on neighborhoods and children at high risk, based on age of housing and [social and demographic risk factors](#).
 - ◆ The Centers for Medicare and Medicaid Services requires all children enrolled in Medicaid to get tested for lead at ages 12 and 24 months, or age 24–72 months if they have never been tested.
- Federal agencies, health departments, providers, communities, and other partners are encouraged to
 - ◆ Focus resources on children with the highest levels of lead in their blood compared with levels in most children in that age range.
 - ◆ Identify and eliminate sources of lead exposure.
 - ◆ Take more prompt actions to reduce the harmful effects of lead.



Learn more at
www.cdc.gov/nceh/lead