



Lead Poisoning among Montana Children under 6 years of age

Information for Healthcare Providers

Quick Facts about Lead Poisoning in Montana Children

- Over the past 2 years, 335 Montana children under 6 years of age were identified to have a blood lead level at or above 3.5 µg/dL. Due to low blood lead testing rates, only a fraction of children with lead poisoning are identified.
- 2 in 5 (41%) cases were potentially exposed to lead-based paint in pre-1978 homes/buildings.
- 3 in 10 (29%) cases potentially ingested lead through oral exploratory behavior or pica. The most frequently reported ingested items were dirt and rocks, which can be contaminated with lead.
- 1 in 5 (20%) cases were potentially exposed to lead through household members who work with lead or have hobbies involving lead. The most frequently reported activities were renovating older buildings, auto repair, welding, and handling lead-based ammunition.
- Around half Montana houses were built before lead in house paint was banned in 1978. Children who live in or regularly visit pre-1978 buildings may be at risk of lead exposure through lead-based paint or corroded plumbing.
- Montana is home to several current and former smelting and mining operations where lead is a contaminant. These sites increase the risk of exposure to lead in soil, dust and water.

Data Sources: Montana Infectious Disease Information System, 9/30/2022-9/29/2024; American Community Survey 5-year estimates on housing units by year built, 2019-2023.

LEAD POISONING

The CDC uses the blood lead reference value (BLRV) of **3.5 µg/dL** to identify children with blood lead levels greater than 97.5% of U.S. children between 1 and 5 years of age. The BLRV is not a health-based standard or toxicity threshold. **No safe blood lead level in children has been identified.**

Common sources of lead exposure in children include lead-based paint, dust, soil from gardens and play areas, drinking water, take-home lead from occupations and hobbies, and certain consumer products and imported goods. Children who are crawling, engaging in oral exploratory behavior, or have pica are at high risk of ingesting lead from their environment.

Children under 6 years of age are more vulnerable to the health effects of lead exposure than older children and adults. Lead acts as a neurotoxicant to the developing brain and can lead to cognitive impairment and decreased IQ. Lead can also impact the kidneys, bones, and the cardiovascular, reproductive, immunologic, and endocrine systems. Some effects of lead exposure can be permanent, even at low blood lead levels. Early identification of lead poisoning is key to reducing long-term effects.

A child with lead poisoning may not have visible signs or symptoms. *A blood lead test is the best way to find out if a child has been exposed to lead.*

WHO SHOULD BE TESTED FOR LEAD

Any child with a known lead exposure or clinical suspicion for lead poisoning should be tested.

Children should also be tested for lead who:

- Are enrolled in Medicaid or Healthy Montana Kids; All 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 never been tested
- Participate in WIC, Head Start/Early Head Start, or are in Foster Care
- Live in or spend time in a house or building built before 1978
- Live or spend time with someone who works with lead or has a hobby involving lead
- Are an international adoptee or newly arrived refugee in the U.S.
- Are identified as at-risk of lead exposure through a risk assessment questionnaire



BLOOD LEAD TESTS

A venous blood lead test is the most reliable screening and diagnostic test for recent or ongoing lead exposure. Specimens should be collected in a lead-free specimen collection tube or tubes pre-screened for lead.

A capillary sample may be used for initial blood lead screening in children. If capillary results are at or above the BLRV, a confirmatory venous sample should be taken to rule out lead contamination from skin.

RECOMMENDED ACTIONS FOR BLOOD LEAD AT OR ABOVE BLRV

The most important treatment for lead poisoning is to identify and remove the source of lead.

The CDC recommends that children with blood lead at or above the BLRV receive:

- Routine assessment of developmental milestones
- Environmental exposure history to identify potential sources of lead
- Testing for iron deficiency
- Nutritional counseling related to calcium and iron intake
- Follow-up blood lead testing at recommended intervals

Additional recommended actions for children with blood lead levels ≥ 20 $\mu\text{g}/\text{dL}$ can be found at <https://www.cdc.gov/lead-prevention/hcp/clinical-guidance/index.html>.

Rocky Mountain Poison and Drug Safety provides medical consultations to healthcare providers who are treating a patient with lead poisoning. To request a consultation, call 1-800-222-1222.

REPORTABLE CONDITION

Blood lead is a reportable condition per the Administrative Rules of Montana (37.114). The following blood lead levels must be reported to your local county or tribal health department within 7 days:

- Lead levels in a capillary blood specimen ≥ 3.5 $\mu\text{g}/\text{dL}$ in a person less than 16 years of age
- Lead levels in a venous blood specimen at any level in a person of any age

Some laboratories electronically report blood lead results to the state, satisfying the reporting requirement. If a local health department is unreachable, blood lead labs can be reported via secure fax to Montana Department of Public Health and Human Services at 1-800-616-7460.

Additional Resources for Healthcare Providers

Medical Consultation

Rocky Mountain Poison and Drug Safety: 1-800-222-1222
<https://www.mtpoisoncenter.org/>

Pediatric Environmental Health Specialty Units: 1-877-800-5554
<http://www.pehsu.net>

Product Recalls

United States Consumer Product Safety Commission: 1-800-638-2772
<https://www.cpsc.gov/recalls>

Montana Childhood Lead Poisoning Prevention Program Contacts

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The mission of the **Montana Childhood Lead Poisoning Prevention Program (CLPPP)** is to eliminate and prevent childhood lead poisoning in Montana through the promotion of blood lead testing and surveillance and strengthened linkages to recommended services for exposed children and their families. For resources from MT CLPPP:

