

Quick Facts about Lead Poisoning in Montana Children

- In 2023-2024, 343 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.
- 3 in 5 (59%) cases were potentially exposed to lead-based paint or dust in pre-1978 homes/buildings.
- 2 in 5 (41%) cases among children ages 2-5 years potentially ingested lead through pica behavior. The most frequently reported ingested item was dirt, which can be contaminated with lead.
- 1 in 5 (22%) cases were potentially exposed to lead through household members who work with lead or have hobbies involving lead. The most frequently reported activities were welding, renovating older buildings, auto repair and shooting or handling lead ammunition.
- Almost half of Montana housing was 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. Residing or playing near these sites can increase the risk of exposure to lead.

Data Sources: Montana Infectious Disease Information System, 2023-2024; 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, 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

All children ages 6 months through 6 years of age should be screened for lead exposure at well-child visits using the **Childhood Lead Risk Questionnaire** from the **Montana Childhood Lead Poisoning Screening Plan** unless they are already receiving a blood lead test during that visit. Any child with a known or suspected lead exposure or clinical suspicion for lead poisoning should receive a blood lead test.

Per the state screening plan, the following children should receive a blood lead test at ages 12 and 24 months of age or at least once between 24-72 months of age if they have never been tested:

- Enrolled in Medicaid or Healthy Montana Kids (required per CMS)
- Participates in WIC, Head Start/Early Head Start or Foster Care
- Is an international adoptee
- Resides in a targeted zip code for child blood lead testing. A list of targeted zip codes in Montana can be found in the state screening plan.

Children who are a newly arrived refugee or international adoptee should also be tested for lead within 90 days of arrival.



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 in the screening plan.

Rocky Mountain Poison and Drug Safety and the Pediatric Environmental Health Specialty Unit in Region 8 both provide medical consultations to Montana healthcare providers who are treating a patient with lead poisoning.

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 Unit: 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:

