

Idaho Lead Risk Assessment and Testing Recommendations



Children exposed to lead are vulnerable to long-term health and developmental effects, including intellectual and behavioral deficits. Conducting lead risk assessments and blood lead testing is vital to identify lead-exposed children and to connect them to medical, environmental, and social services to improve health outcomes in Idaho. The Idaho Department of Health and Welfare, Division of Public Health (DPH) through its Environmental Health Program (EHP), with assistance from the Idaho Medicaid Blood Lead Advisory Committee have developed Idaho Lead Risk Assessment and Testing Recommendations for medical providers who care for children in Idaho.

Call to Action

- Perform the required blood lead test at 12 and 24 months, or between 24 months and 21 years of age if they have not been previously tested, for children covered by Medicaid insurance.
- Perform a blood lead test at 12 and 24 months for children not eligible for Medicaid insurance.
- Conduct a lead risk assessment via the questionnaire below during all well child visits from 6 months through 6 years of age. A positive assessment can identify risk of lead exposure within a child's environment so that blood lead testing, environmental exposure assessment, and source identification and removal can occur.
- Lead poisoning is a reportable condition under the Idaho Reportable Disease Rules (Idaho Administrative Procedures Act (IDAPA) 16.02.10).

Key points

- Lead exposure continues to be a significant public health concern impacting children in the U.S.
- There is no safe level of lead in the body.
- Children and pregnant people are more vulnerable to adverse health outcomes with lead exposures.
- The goal is to remove lead sources before exposure occurs (Primary Prevention).
- Lead exposure should be considered as a lifelong exposure, even after blood lead level declines.

Risk Assessment vs. Blood Lead Testing

Risk Assessment: Is the use of specific questions to assess risk factors for lead exposure and to identify children who should have a blood lead test. The Risk Assessment can also be used as a tool to determine lead hazards in environments where a child may spend time and an opportunity for medical providers to share education on removing the source prior to the exposure. Risk Assessment should take place at all well child visits from ages 6 months through 6 years.

Blood Lead Testing: A blood lead test is the best way to determine if a child has been exposed to lead. A blood lead test can be a capillary test or venous blood draw.

- A finger-prick or heel-prick (capillary) test is usually the first step to determine if a child has lead in their blood. While finger-prick tests can provide fast results, they can also 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 is usually followed by a second venous test to confirm.
- A venous blood draw takes blood from the child's vein. This type of test can take a few days to receive results and is often used to confirm elevated blood lead levels identified in the initial capillary test.

Idaho Lead Risk Assessment Questionnaire

If any answer to the questions below results in a "yes" or "does not know" then it is recommended that blood lead levels are tested. The lead risk questionnaire does not replace blood testing when required by law ([Center for Medicare and Medicaid Services, Medicaid Manual section 5123.2.D1](#))

1. Does your child have Medicaid insurance?
2. Do you have concerns about your child's development or behavior including aggressive behavior, hyperactivity, attention deficit, learning disabilities, behavioral disorders, or irritability?
3. Does your child live in or regularly visit a house or building built before 1978? For example: daycares (centers and in-home daycares), schools, or other homes such as a grandparent's, friend's, or neighbor's home.
4. Does your child regularly interact with a brother, sister, relative (such as a cousin, aunt, or uncle) or playmate who has had lead poisoning within the last 6 months?
5. Does your child live with or spend time with an adult whose job involves exposure to lead such as painting, welding, building renovations or repair, mining, plumbing, or working with batteries?
6. Does your child live with or spend time with an adult whose hobbies may involve exposure to lead such as fishing, hunting, shooting ranges, bullet reloading, working with antiques, working with ceramics or stained glass?
7. Does your child live near a smelter, mine, battery recycling plant, or airport that may release lead currently or historically?

8. Does your family use traditional medicines, health remedies, cosmetics, powders, spices, or food from other countries?
9. Does your family use imported or antique pottery, cookware, or ceramicware for cooking, eating, or drinking? For example, cooking pots, pressure cookers, leaded crystal, and pewter or brass utensils.
10. Does your child mouth or eat non-food items such as paint chips, soil, or dirt?
11. Has your child recently visited, or do they frequently visit a historic mine site or mill site?

Other situations when blood lead testing should be included:

1. **As part of diagnostic work-up for developmental problems** such as growth, speech, decreased auditory acuity, or language delays.
2. **As part of diagnostic work-up if a child is exhibiting signs or symptoms consistent with lead poisoning** such as irritability, headaches, vomiting, seizures or other neurological symptoms, anemia, loss of appetite, abdominal pain and cramping, or constipation.
3. **Consumed a nonfood item that may contain lead** such as a toy or jewelry.
4. **Displays pica behavior** and consumes nonfood items such as sand, dirt, clay, or paint chips.
5. **Any refugee or newcomer child or people pregnant or lactating.** There are several factors that place individuals recently arriving in the U.S. at a higher risk for lead exposures including environmental exposures, cultural practices, traditional medicines, and consumer products.

Blood Lead Testing Requirements

See below to learn which children need a blood lead test and when initial, confirmatory, and follow-up testing should be performed.

Who needs a blood lead test?

The Centers for Medicare and Medicaid Services (CMS) requires all children receiving Medicaid be tested for lead exposure at 12 and 24 months of age, or between 24 months and 21 years of age if they have not been previously tested.



It is recommended that a blood lead test is performed at 12 and 24 months for children not eligible for Medicaid insurance or at any age if lead risks were identified in the Lead Risk Assessment Questionnaire.

The Idaho Reportable Disease Rules (Idaho Administrative Procedures Act (IDAPA) 16.02.10) requires blood lead level reportable diseases to report lead poisoning to the Idaho Department of Health and Welfare (Department) or to the Public Health District where the Department’s authority has been delegated within three (3) days.

- a. Ten (10) micrograms or more per deciliter (10 µg/dL) of blood in adults eighteen (18) years and older; or
- b. Five (5) micrograms or more per deciliter (5 µg/dL) of blood in children under eighteen (18) years of age.

CONFIRMATORY TESTING TABLE	
Initial Capillary Blood Lead Test Result (µg/dL):	Obtain a Confirmatory Venous Test Within:
< 3.5	N/A. If child was < 12 months old when tested, recheck in 3-6 months as BLL may increase with mobility.
≥ 3.5 – <10	Within 3 months
10 – <20	Within 1 month
20 – <45	Within 2 weeks
≥ 45	Within 48 hours

If the initial test used a venous sample, the patient does not need another venous draw to confirm.

FOLLOW-UP TESTING TABLE		
Confirmatory Venous Blood Lead Test Result (µg/dL):	Early follow up testing (2-4 tests after identification):	Later follow up testing after BLL declining:
≥ 3.5 – <10	3 months	6-9 months
10 – <20	1-3 months	3-6 months
20 – 45	2 – 4 weeks	1-3 months
≥ 45	ASAP	ASAP

Whenever possible, follow-up blood lead test samples should be venous.

MEDICAL MANAGEMENT

	<p>Share quick guide for families *add link or QR code*.</p> <p>Provide preliminary advice about reducing/eliminating exposures (e.g., wash children's hands/toys frequently; damp-mop floors, windows, and windowsills; leave shoes at home's threshold; place duct-tape or contact paper over chipping/peeling paint; avoid renovations that may create a dust hazard).</p> <p>Perform routine health maintenance.</p> <p>Conduct future lead screening and testing at recommended intervals.</p>
< 3.5 µg/dL	<p><i>Follow recommendations for BLL < 3.5 µg/dL AND:</i></p> <p>Perform follow-up venous blood lead testing at recommended intervals.</p> <p>Work with the state or public health district to conduct environmental exposure history to identify source(s) of exposure, and to arrange for an environmental investigation of the home to identify potential sources of lead (if resources are available).</p> <p>Ensure iron sufficiency with lab testing (CBC, ferritin, reticulocyte count). Consider starting a multivitamin with iron or iron supplementation as indicated.</p> <p>Provide nutritional counseling with a focus on iron, calcium, and vitamins D and C intake. Refer to support services (i.e., WIC) as needed.</p> <p>Perform structured developmental screenings at well child visits. If indicated, refer to therapeutic and special education programs (i.e., early intervention).</p> <p>Include elevated BLL in problem list in the child's medical record.</p>
≥ 3.5 – <20 µg/dL	<p><i>Follow recommendations for BLL ≥ 3.5-20 µg/dL AND:</i></p> <p>Contact the NW PEHSU (206-221-8671, pehsu@uw.edu) or Poison Control Center (1-800-222-1222) for guidance. Any treatment for BLL in this range should be conducted in consultation with an expert.</p> <p>Perform a complete history and physical exam. Determine if child is symptomatic. Symptoms may be subtle and can include anorexia and abdominal discomfort.</p> <p>Consider obtaining abdominal x-ray based on environmental history and investigation. Gastrointestinal decontamination may be considered if radiopaque foreign bodies consistent with ingested lead are visualized on x-ray.</p>
20 – <45 µg/dL	<p><i>Follow recommendations for BLL ≥ 20-45 µg/dL AND:</i></p> <p>Contact the NW PEHSU (206-221-8671, pehsu@uw.edu) or Poison Control Center (1-800-222-1222) for guidance. Any treatment for BLL in this range should be conducted in consultation with an expert.</p> <p>Perform a complete history and physical exam. Determine if child is symptomatic. Symptoms may be subtle and can include anorexia and abdominal discomfort.</p> <p>Consider obtaining abdominal x-ray based on environmental history and investigation. Gastrointestinal decontamination may be considered if radiopaque foreign bodies consistent with ingested lead are visualized on x-ray.</p>

MEDICAL MANAGEMENT

EMERGENCY!

Contact the Poison Control Center (1-800-222-1222) for immediate assistance. Any treatment for BLL in this range should be conducted in consultation with an expert.

Perform a complete history and physical exam, including a detailed neurological exam.

≥ 45 µg/dL

Emergently hospitalize symptomatic children. If significant CNS pathology, consider PICU admission. **Consider hospitalization of asymptomatic children,** particularly if child's home is not lead-safe or if the source of exposure hasn't been identified and further exposure is possible. **If BLL is ≥ 65 µg/dL hospitalize even if asymptomatic.**

Obtain venous blood lead test, CBC, electrolytes, BUN, Cr, LFTs, and urinalysis in anticipation of chelation therapy. Obtain abdominal x-ray to look for radiopaque foreign bodies to determine if gastrointestinal decontamination is indicated.

Resources

1. Idaho Department of Health and Welfare: <https://healthandwelfare.idaho.gov/lead-poisoning>
2. Centers for Disease Control and Prevention, Childhood Lead Poisoning Prevention Program: <https://www.cdc.gov/nceh/lead/default.htm>
3. Northwest Pediatric Environmental Health Specialty Unit: <https://deohs.washington.edu/pehsu/>
4. Pediatric Environmental Health Specialty Units Recommendations on Management of Childhood Lead Exposure: https://www.pehsu.net/_Library/facts/PEHSU_Fact_Sheet_Lead_Management_Health_Professionals_Final.pdf
5. Environmental Protection Agency: <https://www.epa.gov/lead>
6. The American Academy of Pediatrics: [Prevention of Childhood Lead Toxicity | Pediatrics | American Academy of Pediatrics \(aap.org\)](https://www.aap.org/prevention/childhood-lead-toxicity)

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Educate. Test. Prevent.



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