

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 connect them to medical, environmental, and social services to improve health outcomes in Idaho.

#### **Call to action**

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

### **Key points**

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

## Risk assessment vs. Blood lead testing

#### Risk assessment

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 provide an opportunity for medical providers to share education on removing the source prior to the exposure. The Risk Assessment should take place during all well child visits from 6 months through 6 years of age.

## **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.

# **Confirmatory testing table**

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

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

## **Reporting requirements**

Each case of lead poisoning must be reported to the Department of Health and Welfare or the public health district within three (3) working days of the identification of the case when determined by symptoms or a blood level of five (5) micrograms of more per deciliter (5  $\mu$ g/dL) of blood in children under eighteen (18) years of age.

# 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
< 45	2 weeks - 4 weeks	1 - 3 months
≥ 45	ASAP	ASAP

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

# Clinical treatment guidelines based on confirmed venous elevated blood lead level (EBLL)

MEDICAL MANAGEMENT		
< 3.5 μg/dL	<ul> <li>Perform routine health maintenance.</li> <li>Conduct future lead screening and testing at recommended intervals.</li> <li>Share resources with families on how to prevent lead exposure.</li> </ul>	
≥ 3.5-19 µg/dL Follow recommendations for BLL < 3.5 µg/dL AND:	<ul> <li>Perform follow-up venous blood lead testing at recommended intervals.</li> <li>Work with local public health districts to complete an 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).</li> <li>Ensure iron sufficiency with lab testing (CBC, ferritin, reticulocyte count). Consider starting a multivitamin with iron or iron supplementation as indicated.</li> <li>Provide nutritional counseling with a focus on iron, calcium, and vitamin C intake. Refer to appropriate support services (e.g., WIC).</li> <li>Perform structured developmental screenings at well child visits. If indicated, refer to therapeutic and special education programs (e.g., early intervention).</li> <li>Include lead exposure or elevated lead level in problem list in the child's medical record.</li> </ul>	

## **MEDICAL MANAGEMENT** Contact the Northwest Pediatric Environmental Health Specialty Unit (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 $< 45 \mu g/dL$ an expert. **Follow** recommendations Perform a complete history and physical exam. Determine if child is for BLL ≥ 3.5-19 symptomatic. Symptoms may be subtle and can include anorexia and µg/dL AND: abdominal discomfort. 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. 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 Perform a complete history and physical exam, including a detailed neurological exam. ≥ 45 µg/dL Hospitalize symptomatic children. If significant CNS pathology, consider PICU **EMERGENCY** 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



## For additional information contact:

Idaho Department of Health and Welfare Environmental Health Program Childhood Lead Poisoning Prevention Program email: eh@dhw.idaho.gov

phone: 800-455-8647

radiopaque foreign bodies.

Website: healthandwelfare.idaho.gov/lead-poisoning





