



CHOICE OF MEDICAL MANAGEMENT BASED ON  
**SYMPTOMS AND BLOOD LEAD CONCENTRATION**

Guidelines for the Detection and Management of Lead Poisoning  
 for Physicians and Health Care Providers

Illinois Lead Program • 866-909-3572

**ASYMPTOMATIC CHILDREN  
 BEFORE TREATMENT, MEASURE VENOUS BLOOD LEAD**

Clinical Presentation	Treatment	Comments
BLL 1 - 4 µg/dL	<ul style="list-style-type: none"> <li>As recommended by guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that all blood lead test results are reported to Illinois Department of Public Health</li> </ul>
BLL 5 - 9 µg/dL	<ul style="list-style-type: none"> <li>Consider repeat BLL sooner than annually based on risks</li> </ul>	<ul style="list-style-type: none"> <li>Consider repeating the blood lead test especially for a child aged &lt;2 years (blood lead is likely to be on the rise in this age group), or if testing was done in winter or spring (when blood lead results are generally lower)</li> </ul>
BLL 10 - 14 µg/dL	<ul style="list-style-type: none"> <li>Medical evaluation</li> <li>Monitor BLLs every three to six months or more often, as indicated</li> <li>Screen for iron deficiency</li> </ul>	<ul style="list-style-type: none"> <li>Provide education regarding nutrition and cleanliness and information for source identification and avoidance</li> <li>Refer to public health department for environmental investigation and public health nurse visit as required by law</li> <li>All Illinois children aged 36 months and younger with confirmed blood lead levels ≥10 µg/dL are to receive a home inspection</li> </ul>
BLL 15 - 19 µg/dL	Above actions, plus: <ul style="list-style-type: none"> <li>Monitor BLLs every one to three months or more often, as indicated</li> </ul>	All above actions
BLL 20 - 44 µg/dL	Above actions, plus: <ul style="list-style-type: none"> <li>Monitor BLLs monthly until stable and falling, and lead hazards have been identified and remediated, then can lengthen testing intervals</li> </ul>	All above actions, plus: <ul style="list-style-type: none"> <li>Refer to latest CDC and American Academy of Pediatrics recommendations related to chelation management</li> </ul>
BLL 45 - 69 µg/dL	Above actions, plus: <ul style="list-style-type: none"> <li>Succimer (oral, 350 mg/m<sup>2</sup>/dose) or CaNa<sub>2</sub>EDTA (IV, 1000 mg/m<sup>2</sup>/day x 5 days, in divided doses)</li> <li>Abdominal radiograph to check for lead chips, evacuate bowel as needed</li> <li>Hospitalize, as necessary, to ensure lead-safe environment and medical management</li> </ul>	All above actions, plus: <ul style="list-style-type: none"> <li>Hospitalize if acute symptoms are present and monitor BLLs</li> <li>Additional treatment may be needed depending on blood lead level rebound</li> </ul>
BLL ≥70 µg/dL	Above actions, plus: <ul style="list-style-type: none"> <li>Hospitalize and monitor BLLs</li> <li>Begin management with BAL (IM, BAL 450 mg/m<sup>2</sup>/day, Q4 hours, x up to three days; four hours after first BAL dose initiate CaNa<sub>2</sub>EDTA (this transiently increases blood lead levels, while BAL does not)</li> <li>Ensure adequate hydration</li> <li>Monitor urine for heme</li> </ul>	All above actions, plus: <ul style="list-style-type: none"> <li>Do not start iron therapy if on CaNa<sub>2</sub>EDTA</li> <li>Additional treatment may be needed depending on blood lead level rebound</li> </ul>
<b>SYMPTOMATIC CHILDREN</b>	Above actions with these modifications: <ul style="list-style-type: none"> <li>Use BAL, as above x three days and CaNa<sub>2</sub>EDTA 1500 mg/m<sup>2</sup>/day x five days</li> <li>Interrupt therapy for two days and repeat treatment, as necessary</li> </ul>	All above actions, plus: <ul style="list-style-type: none"> <li>Additional treatment may be needed depending on blood lead level rebound</li> </ul>

**NOTE:** For more comprehensive treatment guidelines, refer to the *Preventing and Screening for Childhood Lead Poisoning – A Reference Guide for Physicians and Health Care Providers*.

Some local health departments may conduct nurse home visits and/or refer and conduct home inspections at lower levels.



# Illinois Lead Program Assessment and Screening Algorithm

Child presents for a Well Child Visit between the ages of 12 and 84 months

<p><b>Is the child currently enrolled in Medicaid, All Kids, or Head Start?</b></p> <p>(All children enrolled in Illinois Department of Healthcare and Family Services' Medical Programs are expected to receive a blood lead test no matter where they live.)</p>	<b>YES</b>	<p><b>ACTION</b></p> <p>Perform blood lead test (venous or capillary).</p>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• Ages 12 and 24 months or</li> <li>• Between 24 months and 72 months if no record of previous test exists</li> </ul>
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<p><b>Does the child live in a high risk ZIP code area?</b></p> <p>(See reverse of Lead Risk Assessment Questionnaire for listing of high risk ZIP codes. Note: All Chicago ZIP codes are high risk.)</p>	<b>YES</b>	<p><b>ACTION</b></p> <p>Perform capillary or venous screening for BLL beginning at 9-12 months. After two sequential BLLs are &lt;10 µg/dL (most recent at ≥age 2 years), further BLL tests not indicated unless exposures increase.</p>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• Ages 12 and 24 months or</li> <li>• Upon Well Child Visit as indicated</li> <li>• The city of Chicago requires blood test to be performed at 6, 12, 18, 24 and 36 months or 9, 15, 24 and 36 months.</li> </ul>
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<p><b>Does the child live in a low risk ZIP code area?</b></p>	<b>YES</b>	<p><b>ACTION</b></p> <p>Complete the Risk Assessment Questionnaire (If there is a "yes" or "don't know" answer, test immediately.)</p>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• Annually at Well Child Visits</li> <li>• Particularly at ages 1 and 2 years, and to evaluate changes in lead exposures for older children</li> </ul>
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<p><b>Is parent/guardian requesting child be tested for lead</b></p>	<b>YES</b>	<p><b>ACTION</b></p> <p>Perform blood lead test (venous or capillary).</p>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• Immediately</li> </ul>
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<p><b>Has child had one previous BLL &lt;10 µg/dL?</b></p>	<b>YES</b>	<p><b>ACTION</b></p> <ul style="list-style-type: none"> <li>• Reassess risks</li> <li>• Obtain BLL if risks increase</li> </ul>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• Annually at Well Child Visits</li> </ul>
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<p><b>Has child had two prior sequential BLLs &lt;10 µg/dL with no change in status of housing or potential exposure since last screening and one test at age ≥2 years?</b></p>	<b>YES</b>	<p><b>ACTION</b></p> <ul style="list-style-type: none"> <li>• No further action</li> </ul>	<p><b>WHEN</b></p>
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<p><b>Has child had previous BLL ≥ 10 µg/dL?</b></p>	<b>YES</b>	<p><b>ACTION</b></p> <ul style="list-style-type: none"> <li>• Assess and obtain BLLs</li> </ul>	<p><b>WHEN</b></p> <ul style="list-style-type: none"> <li>• As advised for the specific level</li> </ul>
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<p><b>&lt;10 µg/dL</b></p> <p>Reapply risk assessment instrument or obtain blood lead annually at Well Child Visits.</p>	<p><b>10-19 µg/dL</b></p> <p>Follow up with venous test within three months (or sooner if there is concern for increasing BLL or the child is younger than 1 year old.)</p>	<p><b>20-44 µg/dL</b></p> <p>Follow up with venous test within one week to one month.</p>	<p><b>45-59 µg/dL</b></p> <p>Follow up with venous test within 48 hours</p>	<p><b>60-69 µg/dL</b></p> <p>Follow up with venous test within 24 hours.</p>	<p><b>≥70 µg/dL</b></p> <p>Do venous testing immediately.</p>
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Recommendations for subsequent assessment, screening, and/or treatment are based on the follow-up blood test.