LEAD POISONING

CHILD MEDICAL MANAGEMENT
Quick Guide for Lead Testing & Treatment

Initial Capillary Blood Lead Level
Schedule For Obtaining Venous Sample

<table>
<thead>
<tr>
<th>Capillary Blood Lead</th>
<th>Confirm With Venous Test</th>
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</thead>
<tbody>
<tr>
<td>&lt; 5 mcg/dL</td>
<td>Confirmation not necessary unless other risk factors. Test child &lt; 12 mos. old in 3 - 6 months as BLL may increase with mobility. Retest child at 1 and 2 years old.</td>
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<tr>
<td>5 – 9 mcg/dL</td>
<td>Within 1 month</td>
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<tr>
<td>10 - 19 mcg/dL</td>
<td>Within 2 weeks</td>
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<tr>
<td>20 - 44 mcg/dL</td>
<td>Within in 1 week</td>
</tr>
<tr>
<td>45 - 64 mcg/dL</td>
<td>Re-Test: Wash child’s hands with soap and water. Collect new sample and retest. If same results: confirm within 48 hours.*</td>
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<tr>
<td>65+ mcg/dL ‘HIGH’ result on Lead Care II.</td>
<td>Confirm BLL immediately - emergency test. Contact NH Lead RN: 1-800-897-5323</td>
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*Some providers may choose to repeat BLL tests within 1 month to ensure BLL is not rising quicker than anticipated.

Initial Venous Blood Lead Level

<table>
<thead>
<tr>
<th>Venous</th>
<th>Follow-Up and Re-testing</th>
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<tbody>
<tr>
<td>&lt; 5 mcg/dL</td>
<td>Retest child at 1 and 2 years old. Retest child in 6 – 12 months if child is at high risk, or risk changes during time frame.</td>
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<tr>
<td>5 - 9 mcg/dL</td>
<td>Every 3 months* Child enters nurse case management.</td>
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<tr>
<td>10 - 19 mcg/dL</td>
<td>Every 3 months</td>
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<tr>
<td>20 - 39 mcg/dL</td>
<td>Every 1-2 months</td>
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<tr>
<td>40 - 64 mcg/dL</td>
<td>Every 1-2 weeks (even after chelation)</td>
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<tr>
<td>65+ mcg/dL</td>
<td>Initiate chelation and re-test within 1-2 weeks</td>
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Clinical Treatment Guidelines for Venous Confirmed Blood Lead Levels

<table>
<thead>
<tr>
<th>3 - 4.9 mcg/dL</th>
<th>5 - 44 mcg/dL</th>
<th>45 - 64 mcg/dL</th>
<th>65 + mcg/dL</th>
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</thead>
<tbody>
<tr>
<td>• Provide parents three factsheets -Lead &amp; Children -Lead &amp; Nutrition -Lead Hazards</td>
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<tr>
<td>• Follow-up BLL monitoring</td>
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<tr>
<td>• Retest infants earlier than 3-6 months</td>
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<tr>
<td>• Test siblings for EBLL</td>
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<tr>
<td>• The HHLPPP sends letter notifying parents of EBLL</td>
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<td>Continue management, AND:</td>
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<tr>
<td>• Rule out iron deficiency &amp; prescribe iron if needed</td>
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<tr>
<td>• Neurodevelopmental monitoring &amp; consider referral for evaluation</td>
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<tr>
<td>• For BLL 25 - 44mcg/dL, CHEMET (succimer) is NOT recommended as there is no cognitive benefit</td>
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<tr>
<td>• The HHLPPP provides nurse case management &amp; an environmental lead investigation.</td>
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<tr>
<td>EMERGENCY!</td>
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<tr>
<td>• Contact Northern New England Poison Control for immediate consultation on lead toxicity therapy at 1-800-222-1222. Available 24/7.</td>
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<tr>
<td>• Contact NH Lead RN: 1-800-897-5323</td>
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<tr>
<td>• Stop iron therapy prior to chelation</td>
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<tr>
<td>• Begin chelation in consultation with clinician experienced in lead toxicity therapy</td>
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<tr>
<td>• Consider directly observed therapy with CHEMET (succimer)</td>
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<tr>
<td>• Child should be discharged to a lead-free environment.</td>
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<tr>
<td>EMERGENCY! AND:</td>
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<tr>
<td>• Hospitalize even if asymptomatic</td>
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1-800-897-LEAD (5323) or LeadRN@dhhs.nh.gov
LEAD POISONING

NH UNIVERSAL TESTING LAW

- Test all children at 12 mos. and again at 24 mos. (2 tests)
- Test all children 3 to 6 yrs. old who haven’t been tested

Lead Risk Questions To Ask Parents of Children with EBLL’s ≥ 5 mcg/dL

- Developmental delays or learning disabilities?
- Behavioral problems? (e.g. aggression & attention issues)
- Excessive mouthing or pica behavior?
- Ingestion of non-food items?
- Living in pre-1978 housing?
- Attending child care in pre-1978 building?
- Recent renovations in pre-1978 housing?
- Recent renovations in pre-1978 child care?
- Recent immigrant, refugee, or international adoption?
- Parent occupation or hobbies have lead exposure?
  (e.g. renovations, painting, welding, fishing, target shooting, stain glass, jewelry making)
- Imported ethnic spices/ powders that contain lead?
  (e.g. sindoor, surma, greta, orange shringar, asafetida, turmeric)
- Does child have sibling or playmate with an EBLL?

Interventions to Help Limit Exposure

Educate caregivers by providing three DHHS factsheets: “Lead and Nutrition”, “Lead and Children” and “Lead Hazards”

- Hand washing with soap and water
- Clean child’s toys, bottles & pacifiers often
- Feed child foods with Calcium, Iron & Vitamin C daily
- Have barriers blocking access to lead hazards
- Wet wipe window sill, door jams, & door frames
- Wet mop floors and stairs once a week or more
- Use HEPA filter vacuum to clean up dust and paint chips

Developmental Assessment & Intervention for Children with EBLL

For any child with a venous BLL ≥ 5mcg/dL
- Annual developmental surveillance and screening at ages 3, 4 and 5 years is recommended
- Developmental surveillance at annual visit for all ages to identify emerging/unaddressed behavioral, cognitive, or developmental concerns

For any child with a venous ≥ 20 mcg/dL or persistently ≥ 15 mcg/dL with other developmental risk factors: neurodevelopmental monitoring is needed

Action Steps

- Long term developmental monitoring should be a component of the child’s management plan.
- A history of EBLL should be included in the problem list maintained in the child’s permanent medical record, even if BLL is reduced.
- Refer child to early intervention or child-check for developmental screening.
- Recommend early childhood education and stimulation programs.
- Refer to NH Division of Developmental Services for a list of local Family-Centered Early Supports & Services at (603)-271-5143

Developmental Surveillance should include:

- Vigilance for physical, social, emotional, academic challenges at critical transition points in childhood (e.g. preschool, 1st, 4th, 6th & 7th grades).
- Vigilance for in-attention, distractibility, aggression, anti-social behavior, irritability, hyperactivity, low impulse control and poor emotional regulation.
- Refer children experiencing neurodevelopmental problems for a complete diagnostic medical evaluation.
- Continue to monitor development through a child’s early and middle-school years, even if BLL is reduced.

For children of any age: if issues arise between annual visits, encourage parents to bring them to attention of the medical office and school personnel.

Nurse Case Management Services

- Children with EBLLs ≥ 5 mcg/dL enter nurse case management.
- Public health nurse visits home and provides family education.
- Environmental lead investigation to determine source(s) of lead exposure provided.

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NH Department of Health & Human Services, Division of Public Health Services

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