



# Allegheny County Health Department (ACHD) Recommendations For Case Management of Children Receiving Blood Lead Tests



**Allegheny County requires that all children be tested for lead exposure at approximately 9-12 months old and again at approximately 24 months old.**

**Children who have not had their blood tested at either of those required intervals must be tested as soon as possible before age 6 or entry to kindergarten, whichever comes first**

1. Patients should be initially screened using a capillary or venous test.
2. If the capillary test is at or above 5 µg/dL, it needs to be confirmed with a venous test as soon as possible, but no later than 1 month.
3. If an elevated blood lead level is confirmed, apply medical management recommendations.
4. Once recommendations have been implemented and blood lead levels are declining, follow-up as recommended.

Blood Lead Level (BLL) (µg/dL)	Medical Management Recommendations (based on confirmed blood lead levels)
Capillary or Venous  <5	<ul style="list-style-type: none"> <li>▪ Routine assessment of nutritional and development milestones. *</li> <li>▪ Provide anticipatory guidance about common sources of lead exposure and explain potential health effects (give "Lead is a neurotoxin" brochure). *</li> <li>▪ Explain what the child's BLL means. †</li> <li>▪ Follow-up blood lead level testing at recommended intervals based on child's age (see table below).*</li> <li>▪ Provide family with proof of testing for kindergarten. †</li> <li>▪ Direct family to <a href="http://www.ACHD.net/lead">www.ACHD.net/lead</a> for information about reducing lead hazards in the home †</li> </ul>
Venous  5-9	<p><b>All actions listed above and:</b></p> <ul style="list-style-type: none"> <li>▪ Refer to ACHD Housing Program for a voluntary environmental investigation to identify potential sources of lead exposure: 412.350.4046</li> <li>▪ Discuss potential environmental sources of lead exposure. †</li> <li>▪ Follow-up blood lead level monitoring at recommended intervals (see table below). * Give follow-up brochure – available at <a href="http://ACHD.net/lead">ACHD.net/lead</a></li> <li>▪ Provide nutritional counseling regarding iron, calcium, and vitamin-c intake and give nutrition brochure. *</li> <li>▪ Explain that a level of ≥ 5 µg/dL. qualifies a child between 0-3 years old for Early Intervention services. Refer them to Alliance for Infants &amp; Toddlers (412.885.6000). If the child is 3-5 years old, refer to Allegheny Intermediate Unit, DART program (412.394.5904).</li> <li>▪ Provide information about how to identify lead hazards in the home, including the Safe and Healthy Homes Program brochure (SHHP). Some families may not be eligible for the SHHP, so refer to <a href="http://ACHD.net/lead">ACHD.net/lead</a> or the ACHD Housing Division for information about private lead inspectors and risk assessors in their area. † Housing Division contact: 412.350.4046</li> <li>▪ Provide information about opportunities to remove lead hazards from the home, including the Allegheny County Economic Development Lead Safe Homes Program (give the program brochure with eligibility criteria) and refer to <a href="http://ACHD.net/lead">ACHD.net/lead</a> for links to lead-safe contractors. †</li> </ul>
Venous  10-19	<p><b>All actions listed above and:</b></p> <ul style="list-style-type: none"> <li>▪ Consider lab work to assess iron status. *</li> </ul>
Venous  20-44	<p><b>All actions listed above and:</b></p> <ul style="list-style-type: none"> <li>▪ Complete history and physical exam. *</li> <li>▪ Neurodevelopmental assessment. *</li> <li>▪ Consider status of hemoglobin or hematocrit. *</li> <li>▪ Obtain abdominal X-ray (with bowel decontamination if indicated). *</li> </ul>
Venous  45-69	<p><b>All actions listed above and:</b></p> <ul style="list-style-type: none"> <li>▪ Complete neurological exam including neurodevelopmental assessment. *</li> <li>▪ Oral chelation therapy; consider hospitalization if lead-safe environment cannot be assured. *</li> </ul>
Venous  ≥70	<ul style="list-style-type: none"> <li>▪ Hospitalize and commence chelation therapy in conjunction consultation with a medical toxicologist or a pediatric environmental health specialty unit. *</li> <li>▪ Proceed with additional actions according to interventions for BLLs between 45-69 µg/dL. *</li> </ul>

## Recommended Schedule for Confirmatory Venous Sample on a Capillary Test ≥ 5 µg/dL

BLL (µg/dL)	Time to venous testing
<5	No venous required
5-9	1 week – 1 month <sup>a</sup>
10-44	1 week – 1 month <sup>a</sup>
45-59	48 hours
60-69	24 hours
≥70	Urgently as emergency test

<sup>a</sup> The higher the BLL on the screening test, the more urgent the need for confirmatory testing.

## Schedule for Follow-up Blood Lead Testing After Implementing Case Management Recommendations\*

### BLL (Capillary or Venous) <5µg/dL:

- Test again at age 2 if first test is at age 1. \*
- Consider testing if child moves to a different home, daycare, school, etc. that was built before 1978. \*

Venous BLL (µg/dL)	Early follow Up Testing (2-4 Tests After Identification of Elevated BLL) <sup>b</sup>	Later Follow Up Testing after BLL Declining
5-9	3 months <sup>c</sup>	6-9 months
10-19	1-3 months <sup>c</sup>	3 months
20-24	1-3 months <sup>c</sup>	1-3 months
25-44	2 weeks-1 month	1 month
≥45	As soon as possible	As soon as possible

<sup>b</sup> Seasonal variation of BLLs exists and may be more apparent in colder climate areas. Greater exposure in the summer months may necessitate more frequent follow ups.

<sup>c</sup> Some healthcare providers may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL level is not rising more quickly than anticipated.

### The following actions are NOT recommended at any BLL: \*

- Searching for gingival lead lines
- Evaluation of renal function (except during chelation with EDTA)
- Radiographic imaging of long bones
- Testing of neurophysiologic function
- Testing of hair, teeth, or fingernails for lead
- X-ray fluorescence of long bones

#### Sources:

\* Recommendations are consistent with Centers for Disease Control and Prevention. Recommended Actions Based on Blood Lead Level. [https://www.cdc.gov/nceh/lead/acclpp/actions\\_blls.html](https://www.cdc.gov/nceh/lead/acclpp/actions_blls.html)

† Allegheny County Health Department.

#### Abbreviations:

(µg/dL): micrograms per deciliter