CT Children's CLASP Guideline Algorithm: Lead Poisoning

Reporting Requirements:

Capillary Results:

- All capillary lead results need to be reported by the practice (**CT DPH – Laboratory Report of Significant Findings, OL-15C**)
  - Lead ≥3.5 µg/dL: report within 48 hours
  - Lead <3.5 µg/dL: report monthly

Venous Results:

- All venous lead results will be automatically reported by the lab

Inclusion Criteria: All pediatric patients requiring lead screening

Obtain lead sample (capillary or venous) at the following times:

- Twice prior to 36 months of age (routinely done at 12 months and 24 months of age)
- At 36-72 months of age if not previously tested or if at elevated risk per screening recommendations in state mandate*
- At 36-72 months of age if there is a positive **Lead Screening Questionnaire** (**Appendix A**) at any time
- Children less than 72 months of age with developmental delays
- Immigrants or refugee children ages 6 months – 17 years of age[1]
  - If initial lead is elevated (≥3.5 ug/dL), follow algorithm below
  - If lead is <3.5 ug/dL, repeat lead in 3-6 months for those <72 months or for any age if risk factors identified

***CT 2024 Mandate Screening Requirement:**

- Medical assistance program enrollment
- Residing in a residence in a municipality that presents an elevated risk of lead exposure based on factors, including, but not limited to, the prevalence of housing built prior to January 1, 1960, and the prevalence of children's blood lead levels greater than 5 µg/dL

Capillary lead ≥3.5 ug/dL?

Consider obtaining confirmatory **venous blood lead test** immediately

If unable to obtain immediately:

Blood Lead Level (µg/dL)	Time to Confirmation Testing[2]
≥3.5 – 9	Within 3 months
10 – 19	Within 1 month
20 – 44	Within 2 weeks
≥45	Within 48 hours

[2]The higher the blood lead level is on the initial screening capillary test, the more urgent it is to get a venous sample for confirmatory testing

If confirmatory venous lead level is ≥3.5 ug/dL, please refer to decision tree on the right of this algorithm

Venous lead ≥3.5 ug/dL?

Venous lead 3.5-44 ug/dL

REFERRAL TO LEAD TREATMENT CENTER

- Provide the following education for prevention of further lead poisoning:
  - **Nutritional Guidance to Prevent Lead Poisoning (Family Handout)**
  - **Reducing Lead Hazards in the Home (Family Handout)**
  - Closely monitor growth and development
- **If unable to refer to Lead Treatment Center:**
  - Identify the source by completing **Lead Environmental Questionnaire (Appendix B)**

Lead Level Monitoring

If significant risk for lead exposure is identified, levels should be repeated within a month regardless of the initial elevated screening test result

Venous blood lead levels (µg/dL)	Step 1: After 1st abnormal test (complete 2-4 more lead levels according to schedule below until level begins to decline)	Step 2: Testing schedule after lead level is declining**
≥3.5 - 9	3 months*	6 – 9 months
10 – 19	1 – 3 months*	3 – 6 months
20 – 44	2 weeks – 1 month	1 – 3 months
≥45	IMMEDIATE REFERRAL TO THE EMERGENCY DEPARTMENT	

Note: Changes in blood lead levels due to seasonal weather changes may be more apparent in colder climate areas. Greater exposure in the summer months may necessitate more frequent follow ups.

[3]Some case managers or healthcare providers may choose to repeat blood lead tests on all new patients within a month. Repeated testing may ensure that the patient's blood lead level is not rising more quickly than expected.

[4]Continued care and follow up until the child has 2 lead levels less than 3.5 ug/dL separated by 6 months (and then continue to monitor per routine screening)

Venous lead ≥45 ug/dL

Refer patient to the Emergency Department immediately and follow **ED/ Inpatient Management of Lead Toxicity Clinical Pathway**

© 2010 Connecticut Children's Medical Center. All rights reserved.

Connecticut Children's MEDICAL CENTER

CLASP Connecticut Children's: Leaders in Advanced Solutions for Pediatrics™