

INTRODUCTION

There is no safe amount of lead exposure for a child. Screening at the mandated times helps identify children that have been exposed to lead. The current state mandate requires blood lead testing twice before the age of 36 months, as well as annually between 36 and 72 months in special populations. In addition, yearly lead screening questionnaires should be performed from 3-6 years of age

The effects of lead are irreversible. It has been demonstrated that even at low lead levels, children have slowed growth and development, learning difficulties, and behavior problems. Identifying exposed children and preventing further exposure is crucial.

INITIAL EVALUATION AND MANAGEMENT

Current Connecticut (CT) state mandate requires that providers:

1. Conduct annual lead tests (venous or capillary) on all children 9 months to 35 months of age (most doctors test at 12 months and 24 months of age to meet this requirement)
2. All children between the ages of 36 and 72 months must be tested
 - a. if not previously tested for lead in blood
 - b. if at an elevated risk based on:
 - i. medical assistance program enrollment
 - ii. 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
3. Conduct a medical risk assessment (*see Appendix A*) at least annually for each child 36 to 72 months of age and obtain a lead test if risk assessment is positive
4. Conduct a lead test on children under 72 months of age if they have developmental delays
5. Conduct a lead test for immigrants or refugee children ages 6 months – 17 years of age
 - a. If the initial lead level is elevated ≥ 3.5 µg/dL: follow the algorithm below
 - b. If lead is < 3.5 µg/dL: repeat lead level in 3-6 months for those < 72 months of age or for any age if risk factors identified

INITIAL MANAGEMENT for venous lead level ≥ 3.5 µg/dL (*See Appendix C: Lead Management Algorithm*)

- Complete an environmental assessment to help identify the lead source (*See Appendix B*)
- Review cleaning guidelines (*See Family Handout*)
- Review nutritional guidance (*See Family Handout*)
- Assess development and place referral to Birth to Three if delays are identified **OR** if lead level is ≥ 10 µg/dL

When to repeat capillary lead test with a VENOUS lead level:

Consider obtaining confirmatory venous blood lead test immediately

Blood Lead Level (µg/dL)	Time to Confirmation Testing*
< 3.5	Routine
$\geq 3.5 - 9$	Within 3 months
10 – 19	Within 1 month
20 – 44	Within 2 weeks
≥ 45	Within 48 hours

*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.

When to repeat venous lead results:

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

Venous blood lead levels (µg/dL)	Step 1: After 1 st 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.

*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.

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

REPORTING REQUIREMENTS:

- All capillary lead results need to be reported by the practice using the **CT DPH – Laboratory Report of Significant Findings, OL-15C form**.
 - If capillary lead level is ≥3.5 µg/dL: report within 48 hours
 - If capillary lead level is <3.5 µg/dL: report monthly
- All venous lead results will be automatically reported by the lab

WHEN TO REFER

ROUTINE REFERRAL: We recommend any child with a venous lead level ≥3.5ug/dL be referred to Connecticut Children's Lead Treatment Center for further management.

URGENT REFERRAL: Please refer any patient with a venous lead ≥15ug/dL to Connecticut Children's Lead Treatment Center within 2 weeks of the result.

IMMEDIATE REFERRAL TO THE EMERGENCY ROOM FOR ANY VENOUS LEVEL ≥45 µg/dL.

HOW TO REFER

Referral to The Connecticut Children's Lead Treatment Center via Children's One Call Access Center
[Make a Referral - Connecticut Children's \(connecticutchildrens.org\)](https://connecticutchildrens.org)

Phone: 833.733.7669 **Fax:** 833.226.2329

- Appointments available in Hartford or via telehealth
- Consultations and questions can be addressed directly at 860-837-9901

Information to be included with the referral:

- All previous lead levels
- Recent CBC results if available (of note, CBC will be obtained at Lead Clinic visit)

WHAT TO EXPECT**What to expect from Connecticut Children's Visit:**

- Complete environmental history
- Further laboratory testing
- Dietary review and nutritional guidance
- Guidance on prevention
- Referrals to CT Children's Healthy Homes Program when indicated
- Coordination with the local and state health departments
- Continued care and follow up until the child has 1 lead level less than 3.5ug/dL
- Close communication with primary care providers

APPENDIX A: Lead Screening Questionnaire (36-72 month old)

1. Does your child live in or visit a home or daycare built before 1978?
2. Does your child live in, or visit, a home or daycare with on-going repairs or chipping/peeling paint?
3. Does your child have a brother or sister, housemate, or playmate being followed or treated for lead poisoning?
4. Does your child put things in his/her mouth, eat or chew on non-food things such as paint chips or dirt?
5. Does your child frequently come in contact with an adult whose job or hobby involves exposure to lead (such as construction, house painting, car repairs, welding)?
6. Does your family use any imported products, such as spices, foods, vitamins ethnic home remedies or ethnic cosmetics? *Examples include azarcon (also known as rueda, Maria Luisa, alarcon, liga); albayalde; greta; pay-loo-ah; ghasard; bala goli; kandu; kohl, litargirio, bebetina, and chyawan prash.*

If the answer to any of the above questions is YES, then the 36 to 72 month old child is considered to be at risk and should be screened with a blood lead test.

APPENDIX B: Lead Environmental Questionnaire

1. Does your child live in or regularly visit a house that was built before 1978?
 - Have there been any recent renovations to your home?
 - Is there any chipping, peeling paint or cracked paint (including windows/sills, doors, doorframes, walls, baseboards)?
 - Is there any peeling paint on the outside of the home (siding, porches, stairs)?
 - Is there any exposed soil in the yard?
2. Does your child have a brother or sister, housemate, or playmate being followed or treated for lead poisoning?
3. Does your child frequently come in contact with an adult whose job or hobby involves exposure to lead
 - construction, welding, firing range, metal fabrication, weapon manufacturing, electronics, other trades practiced in your community, stained glass making; using lead solder, artist paints or ceramic glazes
4. Has your child been exposed to any imported products, such as spices, foods, vitamins ethnic home remedies or ethnic cosmetics?
 - Examples include: azarcon (also known as rueda, Maria Luisa, alarcon, liga), albayalde, greta, pay-loo-ah, ghasard, bala goli, kandu, kohl, litargirio, bebetina, and chyawan prash

ADDITIONAL RESOURCES:

- **Family Handout: Nutritional Guidelines to Prevent Lead Poisoning**
- **Family Handout: Reducing Lead Hazards in the Home**
- **Family Handout: Lead Poisoning Prevention**

Of note: These handouts can be found in many languages on the DPH website at [Educational Materials \(ct.gov\)](https://www.ct.gov/dph/education/lead-poisoning-prevention)

APPENDIX C: Lead Management Algorithm

