New York State Department of Health Guidelines for the Identification and Management of Lead Exposure in Children

New York State Public Health Law and Regulations Require Health Care Providers to:

- **Test all children at age 1 year and again at age 2 with a blood lead test.**
- **Assess all children ages 6 months to 6 years at every well child visit** for risk of lead exposure (use assessment questions below), and **obtain a blood lead test** if there is a positive response to any of the questions.
- **Provide anticipatory guidance to all parents** of children less than 6 years old as part of routine care. Use parent handout, "What Your Child's Blood Lead Test Means," (see New York State Department of Health (NYSDOH) website: www.health.ny.gov/publications/2526/).

Additional New York State Department of Health (NYSDOH) Testing Recommendations:

- **Test all foreign-born children up to age 16 years,** particularly refugee and internationally adopted children, upon arrival in the U.S and again 3-6 months after they obtain permanent residences.
- **Test children of any age if lead exposure is suspected.** All children found to have elevated blood lead levels regardless of age require follow-up services (see reverse).

Lead Exposure Risk Assessment Questions for All Children Less than 6 Years

☐ **1. Does your child live in or regularly visit an older home/building with peeling or chipping paint, or with recent or ongoing renovation or remodeling?** New York City banned lead-based paint for residential use in 1960. In 1977, the U.S. Consumer Product Safety Commission banned the use of lead-based paint in residential buildings. Older dwellings may have lead-based paint under new paint. Consider day care, preschool, school, and home of babysitter or relative. Ask if any move, repair, or renovation is planned and provide anticipatory guidance if needed. Children with Medicaid, those entering foster care, and recently arrived refugees are more likely to live in older, poorly maintained housing, and have higher rates of lead poisoning.

☐ **2. Has your child spent any time outside the U.S. in the past year?** All foreign-born children should be tested upon arrival in the U.S., due to higher lead risk in many foreign countries.

☐ **3. Does your child have a brother/sister, housemate/playmate being followed or treated for lead poisoning?**

☐ **4. Does your child eat non-food items (pica)? Does your child often put things in his/her mouth such as toys, jewelry, or keys?** Children with developmental disabilities are at higher risk for pica. Product recall info: www.cpsc.gov

☐ **5. Does your child often come in contact with an adult whose job or hobby involves exposure to lead?** E.g., house painting, plumbing, renovation, construction, auto repair, welding, electronics repair, battery recycling, lead smelting, jewelry, stained glass or pottery making, fishing (weights), making or shooting firearms, or collecting lead or pewter figurines.)

☐ **6. Does your family use traditional medicine, health remedies, cosmetics, powders, spices, or food from other countries?** Lead has been found in items such as: Ayurvedic medicines, alkohl, azarcon (alarcon, luiga, rueda, coral), greta, litargirio, ghasard, pay-loo-ah, bala goli, Daw Tway, Daw Kyin; in cosmetics such as kohl, surma, and sindoor; and in some candies and other products from Mexico. More information available at: www.cdc.gov/nceh/lead/tips/sources.htm

☐ **7. Does your family cook, store, or serve food in leaded crystal, pewter, or pottery from Asia or Latin America?** Lead exposure risk from pottery is higher with: old, cracked/chipped, and painted china; low-fired or terra cotta pottery from Latin America or the Middle East. Also, imported samovars, urns, and kettles could be soldered with lead.

Resources

NYSDOH Website www.health.ny.gov/environmental/lead: Educational materials; management guidelines; CPSC lead hazard recalls; NYS regulations; statistics; and contact information for the following New York State and local resources:

- **Local Health Departments (LHDs):** LHD follow-up services may include, depending on blood lead level (BLL), parent education, environmental investigation, nutritional and developmental assessment, BLL monitoring, service coordination.
- **Regional Lead Resource Centers (RLRCs):** Consultation, referral, technical assistance for care of lead-poisoned child.
- **Children's Environmental Health Centers:** Consultation for pregnant women and children with suspected or known exposures to environmental toxins.

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Management of Children According to Blood Lead Level (BLL)

BLL (µg/dL)	Confirmation of CAPILLARY Test with Venous Test	Follow-Up Venous Testing After CONFIRMED VENOUS BLL ≥ 10 µg/dL	Management Items in blue are required by NYS Public Health Law and regulations. Other actions are recommended based on Centers for Disease Control and other professional guidelines.
< 5	No confirmation needed. Average BLL for U.S. children ages 1-5 years is 1.4 µg/dL.	Not applicable. Refer to Management column.	**• Test all children at age 1 year and again at age 2 years, regardless of initial result.** **• If child < 6 years, assess risk at next well child visit, and test again if lead risk found.** • Provide education.[1]
5-9	No confirmation with venous test unless using LeadCare II (LCII) device. **For LCII BLLs ≥ 8: If venous test can be drawn in the office, retest immediately with venous sample and send for analysis at a Clinical Laboratory Evaluation Program approved laboratory. If venous test cannot be drawn, request venous test within 3 months.**	Not applicable. Refer to Management column.	• For a child whose BLL is approaching 10 µg/dL, more frequent blood lead testing might be appropriate (i.e. in 3-6 months), particularly if the child is aged less than two years old, was tested at the start of warm weather when BLLs tend to increase, or is at high risk for lead exposures. • Monitor development. Consider child at risk for developmental delays and behavior problems. • Provide education.[1]
10-14	Venous test within 3 months.	Test every 3 months until BLLs are declining[2]; then test every 6 months until BLL is <10 µg/dL.	• Conduct lead exposure assessment (see below). **• Provide education[1] and nutritional counseling about adequate intake of iron, vitamin C and calcium.** • Local health departments will track children with BLLs ≥ 10 µg/dL to ensure follow-up.
15-24	Venous test within 1 month.	Test every 1-3 months until BLLs are declining[2]; then test every 3 months until BLL is <15 µg/dL; then proceed as above for BLLs <15 µg/dL.	**• Confirm that local health department is conducting environmental investigation and follow-up services.** **• Conduct lead exposure assessment (see below).** **• Provide education,[1] nutritional assessment including iron status, and developmental screening.** • Consult with Regional Lead Resource Center (RLRC). Information at: **www.health.ny.gov/environmental/lead**.
25-44	Venous test within 1 week.	Test every 2-4 weeks until BLLs are declining[2]; then monthly until BLL is <25 µg/dL; then proceed as above for BLLs <25 µg/dL.	
45-59	Venous test within 48 hours.	Consult with a RLRC. RLRC may recommend a second venous test before initiating chelation. However, if results of the second test are not readily available, treatment should not be delayed. Follow-up testing as per RLRC instructions until advised to follow the testing schedule in these guidelines.	**• Notify local health department within 24 hours for environmental investigation and follow-up services.** • Consult with RLRC within 24 hours to discuss hospitalization and chelation. **• Conduct a lead exposure assessment (see below).** **• Provide education,[1] nutritional assessment including iron status, and developmental screening.** • Hospital discharge only to housing determined to be lead-safe in consultation with the Local Health Department.
60-69	Venous test within 24 hours.		
≥ 70	**This is a medical emergency. Confirm immediately with a venous test.**	Consult with a RLRC. RLRC may recommend a second venous test before initiating chelation. However, if results of the second test are not readily available, treatment should not be delayed. Follow-up testing as per RLRC instructions until advised to follow the testing schedule in these guidelines.	**All actions for BLLs of 45-69 µg/dL, plus:** • Consult *immediately* with RLRC. • Admit *immediately* to a hospital for chelation.

Lead Exposure Assessment for Children with BLLs ≥10 µg/dL [3]

History: *Current Status:* Assess symptoms; previous lead test results; family history of lead poisoning; dietary history; development; country of birth; recent immigrant, refugee or, adoptee.

Potential Paint Sources: Age and condition of home, and other places child spends time (day care, relatives); evidence of chewed or peeling paint on woodwork, furniture, or toys; recent renovations; condition of windows; bare soil in outdoor play areas; methods used to control dust and dirt.

Child Behaviors: Pica; degree of hand-to-mouth activity; chewing on window sills, furniture, or toys; hand washing before eating.

Caregiver Exposures and Behaviors: Occupations and hobbies of household members; painted or unusual materials burned in fireplaces or near home.

Potential Non-paint Sources: Use of imported cosmetics, health remedies, spices, or children's jewelry; food served, stored, or prepared in low-fired pottery from Latin America or Asia, painted china, pewter, or leaded crystal; use of imported vinyl mini-blinds made before 1997.

Physical Exam: Include complete neurologic exam.

Nutritional Assessment: Evaluate growth and adequacy of diet, including iron status.

Developmental Assessment: Pay close attention to psychosocial and language development; achievement of, or regression from, milestones.

Laboratory Tests: Evaluate iron status, hemoglobin, and hematocrit. Arrange follow-up blood lead testing per table above.

Refer To: Early Intervention Program for developmental delays; WIC and Food Stamps for nutritional assistance.

[1]For education, use NYSDOH handout, "What Your Child's Blood Lead Test Means" (see NYSDOH website: www.health.ny.gov/publications/2526/).

[2]Declining BLLs are two subsequent follow up blood lead tests that show a continued downward trend after an initial venous elevated blood lead level.

[3]Adapted: American Academy of Pediatrics, Committee on Environmental Health. Policy Statement. Lead Exposure in Children: Prevention, Detection, and Management. *Pediatrics.* 2005; 116(4):1036-1046.