

2016 Maryland Guidelines for the Assessment and Management of Childhood Lead Exposure

For Children 6 Months to 72 Months of Age

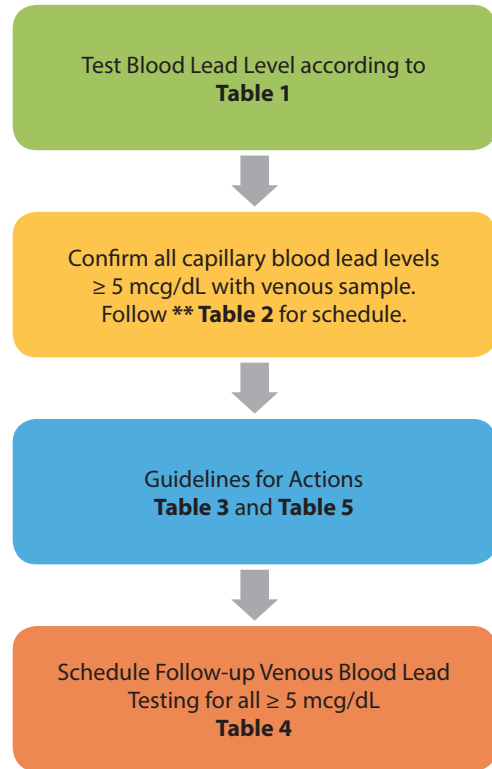


Table 1: Guidelines for Blood Lead Level Testing in Children 6 Months to 72 Months of Age (COMAR 10.11.04, as of 3/28/2016)									
For ALL children born on or after 1/1/15, OR on Medicaid, OR ever lived in a 2004 At-Risk Zip code*									
6 Months	9 Months	12 Months	15 Months	18 Months	24 Months	30 Months	36 Months	48 Months	60 Months
Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen
Test if indicated	Test if indicated	Test Blood Lead Level	Test if indicated	Test if indicated	Test Blood Lead Level	Test if indicated	Test if indicated	Test if indicated	Test if indicated
For children born before 1/1/15, AND not on Medicaid, AND never lived in a 2004 At-Risk ZIP code*									
6 Months	9 Months	12 Months	15 Months	18 Months	24 Months	30 Months	36 Months	48 Months	60 Months
Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen	Screen
Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated	Test if indicated
Screening		<ul style="list-style-type: none"> Perform Lead Risk Assessment Questionnaire (questions found in Lead Risk Assessment Questionnaire section of this document) Clinical assessment, including health history, developmental screening and physical exam Evaluate nutrition and consider iron deficiency Educate parent/guardian about lead hazards 							
Indications for Testing		<ul style="list-style-type: none"> Parental/guardian request Possible lead exposure or symptoms of lead poisoning, either from health history, development assessment, physical exam or newly positive item on Lead Risk Assessment Questionnaire. (Questions can be found in the Lead Risk Assessment Questionnaire section of this document) Follow-up testing on a previously elevated Blood Lead Level (Table 4) Missed screening: If 12 month test was indicated and no proof of test, then perform as soon as possible after 12 months and then again at 24 months. If 24 month test was indicated and no proof of test, then perform test as soon as possible. For more information about lead testing of pregnant and breastfeeding women, see: http://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf. 							

* See back of chart for list of 2004 At-Risk ZIP codes

Table 2: Schedule for Confirmatory Venous Sample after Initial Capillary Test **	
Capillary Screening Test Result	Perform Venous Test Within
< 5 mcg/dL	Not Required
5 – 9 mcg/dL	12 weeks
10 – 44 mcg/dL	4 weeks
45 – 59 mcg/dL	48 hours
60 – 69 mcg/dL	24 hours
70 mcg/dL and above	Immediate Emergency Lab Test

**Requirements for blood lead reporting to the Maryland Childhood Lead Registry are located at COMAR 26.02.01. Reporting is required for all blood lead tests performed on any child 18 years old and younger who resides in Maryland.

Table 3: Abbreviated Clinical Guidance for Management of Lead in Children Ages 6 Months to 72 Months (Full Guidelines in Table 5)		
Blood Lead Level	Follow-up testing	Management
< 5 mcg/dL	On schedule Table 1	<ul style="list-style-type: none"> Continue screening and testing on schedule. Continue education for prevention. If new concern identified by clinician, then retest blood lead level.
5-9 mcg/dL	3 months See Table 4	All of above AND: Investigate for exposure source in environment and notify health department. <ul style="list-style-type: none"> For more detail consult Table 5
≥ 10 mcg/dL	See Table 4	Consult Table 5

Table 4: Schedule for Follow-up Venous Blood Lead Testing after Blood Lead Level ≥ 5 mcg/dL		
Venous Blood Lead Level	Early follow-up testing (2-4 tests after identification)	Later follow-up testing after blood lead level declining
5 – 9 mcg/dL	1 – 3 months***	6 – 9 months
10 – 19 mcg/dL	1 – 3 months***	3 – 6 months
20 – 24 mcg/dL	1 – 3 months***	1 – 3 months
25 – 44 mcg/dL	2 weeks – 1 month	1 month
≥ 45 mcg/dL	As Soon As Possible	As Soon As Possible, based on treatment plan

Seasonal variation of Blood Lead Levels exists, greater exposure in the summer months may necessitate more frequent follow-up.

*** Some clinicians may choose to repeat elevated blood lead test within a month to ensure that their BLL level is not rising quickly. (Advisory Committee on Childhood Lead Poisoning Prevention - CDC 2012)

Table 5: Clinical Guidance for Management of Lead in Children Ages 0 – 6 years

Confirmed Blood Lead Level (mcg/dL) ¹	< 5	5 – 9	10 – 19	20 – 44	45 – 69	≥ 70
Primary Prevention: parent/guardian education about lead hazards ²	X	X	X	X	X	X
Medical/nutritional history and physical	X	X	X	X	X	X
Evaluate/treat for anemia/iron deficiency	X	X	X	X	X	X
Exposure/environmental history ³		X	X	X	X	X
Home environmental investigation		X ⁴	X	X	X	X
Follow-up blood lead monitoring ⁵		X	X	X	X	X
Coordinate care with local health department		X ⁶	X	X	X	X
Obtain developmental and psychological evaluation ⁷			X	X	X	X
Consult with lead specialist, who will also evaluate for chelation therapy				X	X	X
Urgent evaluation for chelation therapy					X	X
Hospitalize for medical emergency						X

¹ Refer to information about confirmation of capillary tests in Table 2.

² Includes discussion of pica and lead sources including house paints (before 1978), ceramics, paint on old furniture, soil, foreign travel, traditional folk medicines, certain imported items (candies, food, jewelry, toys, cosmetics, pottery), and parental occupations that can bring home lead dust and debris (e.g. painting, construction, battery reclamation, ceramics, furniture refinishers, radiator repair).

³ Exposure/environmental history to identify potential lead sources. (see screening questions) Consider Notice of Defect (information at right) for child living in pre-1978 rental property.

⁴ Initial confirmed blood lead of 5 – 9 mcg/dL may not require home environmental investigation. Contact LHD for more guidance.

⁵ Refer to schedule of follow-up blood lead testing in Table 4.

⁶ Contact LHD for more information about care coordination for blood lead levels of 5 - 9 mcg/dL.

⁷ Use validated developmental screen for levels 10 – 19 mcg/dL, such as Ages and Stages Questionnaire (ASQ). Refer children as appropriate for further evaluation. Children with BLL over 20 mcg/dL should be evaluated in consultation with an experienced clinician, specialist, or Local Health Department regarding further evaluation.

Lead Risk Assessment Questionnaire Screening Questions:

1. Lives in or regularly visits a house/building built before 1978 with peeling or chipping paint, recent/ongoing renovation or remodeling?
2. Ever lived outside the United States or recently arrived from a foreign country?
3. Sibling, housemate/playmate being followed or treated for lead poisoning?
4. If born before 1/1/2015, lives in a 2004 "at risk" zip code?
5. Frequently puts things in his/her mouth such as toys, jewelry, or keys, eats non-food items (pica)?
6. Contact with an adult whose job or hobby involves exposure to lead?
7. Lives near an active lead smelter, battery recycling plant, other lead-related industry, or road where soil and dust may be contaminated with lead?
8. Uses products from other countries such as health remedies, spices, or food, or store or serve food in leaded crystal, pottery or pewter?

2004 Maryland Childhood Lead Poisoning Targeting Plan At Risk Areas by ZIP Code

Allegany County	21111 21133 21155 21161 21204 21206 20711 20714 20764 20779 21060 21061 21225 21226 21402	21239 21244 21250 21251 21282 21286	Charles County	21778 21780 21783 21787 21791 21798	Montgomery County	20731 20737 20738 20740 20741 20742 20743 20748 20752 20752 20770 20781 20782 20783 20784 20785 20787 20788 20790 20791 20792 20799 20912 20913	Queen Anne's County	20674 20687 21607 21617 21620 21623 21628 21640 21644 21649 21651 21657 21668 21670	Talbot County	21612 21654 21657 21665 21671 21673 21676	Dorchester County	ALL	Garrett County	ALL	Harford County	20842 20868 20877 21001 21010 21034 21040 21078 21082 21085 21130 21111 21160 21161	Frederick County	20842 21701 21703 21704 21716 21718 21719 21727 21787 21791 21758 21762 21769 21776	Prince George's County	20703 20710 20712 20722	St. Mary's County	20606 20626 20628	Washington County	ALL	Somerset County	ALL	Wicomico County	ALL	Worcester County	ALL
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A Notice of Defect is a written notice that tells the landlord that there is chipping, flaking or peeling paint or structural defect in the home that is in need of repair. A Notice of Defect may also tell the landlord that a 'Person at Risk' (a child under the age of six or a pregnant woman) has a lead level of 10 or above and that repairs need to be made in the home.

The Notice of Defect must be sent by certified mail, return receipt (be certain to retain a copy of the return receipt) and the rental property owner has 30 days to repair the listed defects. It is illegal for a property owner to evict a tenant or raise the rent for reporting problems and/or defects in the home or that a child has been poisoned by lead. A rental property owner CAN evict a tenant if they fail to make timely rental payments. To download a copy of the Notice of Defect form, visit: <http://www.mde.state.md.us/programs/Land/Documents/LeadPamphlets/LeadPamphletMDNoticeOfTenantsRights.pdf>

For more information or assistance with filing a Notice of Defect, contact the Maryland Department of the Environment, Lead Poisoning Prevention Program or the Green & Healthy Homes Initiative.

Clinical Resources

Mid-Atlantic Center for Children's Health & the Environment
Pediatric Environmental Health Specialty Unit
866-622-2431
kidsandenvironment@georgetown.edu
www.pehsu.net/region3.html

Mt. Washington Pediatric Hospital Lead Treatment Program
410-367-2222
www.mwph.org

Maryland Poison Control
800-222-1222

Regulatory Programs and Resources

Maryland Department of Health and Mental Hygiene
866-703-3266
dhmh.envhealth@maryland.gov
<http://phpa.dhmh.maryland.gov/OEHFP/EH/Pages/Lead.aspx>

Maryland Department of the Environment
Lead Poisoning Prevention Program
410-537-3825/800-776-2706
<http://www.mde.state.md.us/programs/Land/LeadPoisoningPrevention/Pages/index.aspx>

Local Health Departments
<http://dhmh.maryland.gov/PAGES/DEPARTMENTS.ASPX>

Centers for Disease Control and Prevention
www.cdc.gov/nceh/lead/

Green & Healthy Homes Initiative
410-534-6447
800-370-5223
www.greenandhealthyhomes.org/