

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

For Children 6 Months to 72 Months of Age

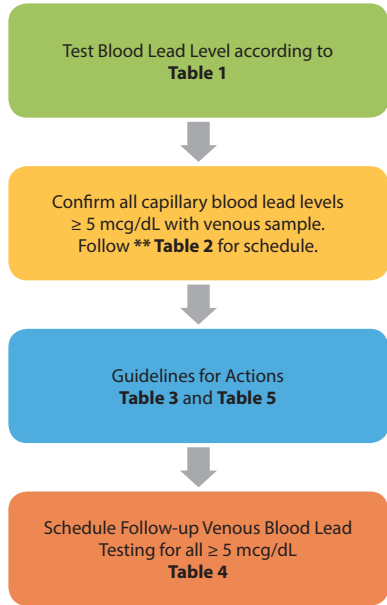


Table 1: Guidelines for Blood Lead Level Testing in Children 6 Months to 72 Months of Age (COMAR 10.11.04, as of 3/28/2016)									
For ALL children born on or after 1/1/15, OR on Medicaid, OR ever lived in a 2004 At-Risk Zip code*									
6 Months	9 Months	12 Months	15 Months	18 Months	24 Months	30 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.

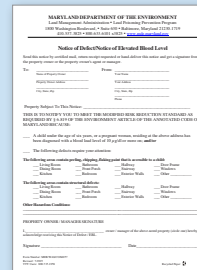
⁵ Refer to schedule of follow-up blood lead testing in Table 4.

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.

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

Allegany County	21111	21239	Charles County	21778	Montgomery County	20731	Queen Anne's County	20674
ALL	21133	21244	20640	21780	20737	20687	20687	
	21155	21250	20658	21783	20738	21607	Talbot County	
Anne Arundel County	21161	21251	20662	21787	20740	21617	21612	
21204	21282	21286	Dorchester County	21791	20741	21620	21654	
20711	21206	21207	ALL	21798	20742	21623	21657	
20714	21208	Baltimore City	ALL	Garrett County	20743	21628	21665	
20764	21209	ALL	Frederick County	ALL	20748	21640	21671	
20779	21210	ALL	20838	20752	21644	21673	21676	
21060	21212	Calvert County	20842	Harford County	20770	21649	Washington County	
21061	21215	20615	20842	21001	20868	21651	21657	
21225	21215	20714	21701	21010	20877	21657	21668	
21226	21219	Caroline County	21703	21034	20901	21670	ALL	
21402	21220	ALL	21704	21040	20910	20784	Somerset County	
	21221	21716	Carroll County	21078	20912	20785	20787	
	21222	21718	21155	21082	20913	20787	St. Mary's County	
	21224	21155	21719	21085	20788	20790	20606	
	21027	21757	21727	21130	Prince George's County	20791	20626	
	21052	21787	21757	21111	20703	20792	20628	
	21071	21791	21758	21160	20710	20799		
	21082	21234	21762	21161	20712	20912		
	21085	21236	Cecil County	21769	20722	20913		
	21093	21237	21913	21776				



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/LeadPamphletMDENoticeOfTenantsRights.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.

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?

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/