

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



For Children 6 Months to 72 Months of Age

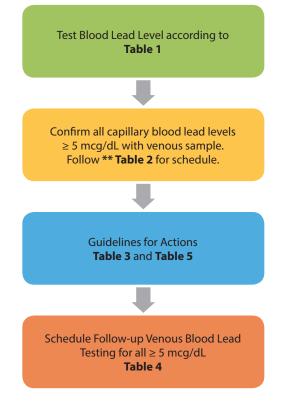


Table 1: Guidelines for Blood Lead Level Testing in Children 6 Months to 72 Months of Age (COMAR 10.11.04, as of 3/28/2016)									
For ALL children born on or after 1/1/15, OR on Medicaid, OR ever lived in a 2004 At-Risk Zip code*									
6 Months	9 Months	12 Months	15 Months	18 Months	24 Months	30 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 • 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									
Lead Risk Asses • Follow-up testi • Missed screenii If 24 month tes • For more inform			oosure or symptom ment Questionnair g on a previously e g: If 12 month test was indicated and ation about lead te	e. (Questions can be levated Blood Lead was indicated and r no proof of test, the	no proof of test, the en perform test as s and breastfeeding w	isk Assessment Ques n perform as soon a oon as possible.	tionnaire section of	this document)	

* 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	 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. • 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	Х	Х	Х	Х	Х	Х	
Medical/nutritional history and physical	Х	Х	Х	Х	Х	Х	
Evaluate/treat for anemia/iron deficiency	Х	Х	Х	Х	Х	Х	
Exposure/environmental history ³		Х	Х	Х	Х	Х	
Home environmental investigation		X4	Х	Х	Х	Х	
Follow-up blood lead monitoring⁵		Х	Х	Х	Х	Х	
Coordinate care with local health department		X ⁶	Х	Х	Х	Х	
Obtain developmental and psychological evaluation ⁷			Х	Х	Х	Х	
Consult with lead specialist, who will also evaluate for chelation therapy				Х	Х	Х	
Jrgent evaluation for chelation therapy					Х	Х	
Hospitalize for medical emergency						Х	

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 mca/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?

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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/ 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.

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/

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

21133	21244	Dorchester	21798	21661	20722	20913	20674
21155	21250	County	Garrett County	21667	20731	Queen Anne's	20687
21161	21251	ALL	ALL	Montgomery	20737	County	Talbot County
21204	21282	Frederick	Harford County	County	20738	21607	21612
21206	21286	County	21001	20783	20740	21617	21654
21207	Baltimore City	20842	21010	20787	20741	21620	21657
21208	ALL	21701	21034	20812	20742	21623	21665
21209	Calvert County	21703	21040	20815	20743	21628	21671
21210	20615	21704	21078	20816	20748	21640	21673
21212	20714	21716	21082	20818	20752	21644	21676
21215	Caroline County	21718	21085	20838	20770	21649	Washington
21219	ALL	21719	21130	20842	20781	21651	County
21220	Carroll County	21727	21111	20868	20782	21657	ALL
21221	21155	21757	21160	20877	20783	21668	Wicomico
21222	21757	21758	21161	20901	20784	21670	County
21224	21787	21762	Howard County	20910	20785	Somerset	ALL
21227	21791	21769	20763	20912	20787	County	Worcester
21228	Cecil County	21776	Kent County	20913	20788	ALL	County
21229	21913	21778	21610	Prince George's	20790	St. Mary's	ALL
21234	Charles County	21780	21620	County	20791	County	
21236	20640	21783	21645	20703	20792	20606	
21237	20658	21787	21650	20710	20799	20626	
21239	20662	21791	21651	20712	20912	20628	

