

# Guidelines for Childhood Lead Poisoning Testing

## Guideline History

Original Approve Date	01/07
Review/Revise Dates	1/09, 1/10, 1/12, 1/14, 1/16, 1/18
Next Review Date	01/20

**No level of lead in the blood is safe. In 2012, the CDC established a new reference value of (5 mcg/dl), thereby lowering the level at which evaluation and intervention is recommended by the CDC.**

Note: Confirm elevated blood lead levels 5 µg /dL. A ‘confirmed’ elevated blood lead level (EBLL) is defined as a single elevated venous test 5 µg /dL or two elevated capillary tests within 84 days/12 weeks. A venous sample is required for environmental investigations. Virginia regulations require reporting of blood level 5 µg /dL s (using the EPI-1 form) to the Office of Epidemiology. Regulations 12 VAC 5-120 require laboratories and point of care providers using CLIA-waived devices to report all blood lead tests on children under the age of six within ten days of analysis.

**MANAGEMENT OF CHILDREN WITH CONFIRMED ELEVATED BLOOD LEAD LEVELS**

BLOOD LEAD LEVEL (µg /dL)	(Case manager assures coordinated action and follow-up)	TIME FRAME (Begin intervention)
5-14	<ul style="list-style-type: none"> <li>• Provide caregiver lead education: dietary and environmental</li> <li>• Follow-up blood lead testing within 30 days to assure not rising</li> <li>• Refer to WIC and social services, if needed</li> </ul>	Within 30 days
15-19	<ul style="list-style-type: none"> <li>• Above action, plus:</li> <li>• Proceed according to actions for 20-40 µg /dL if: A follow-up blood lead is 15 or above, or the blood lead level is increasing</li> </ul>	Within 2 weeks
20-44	<ul style="list-style-type: none"> <li>• Above actions, plus:</li> <li>• Provide coordination of care (case management)</li> <li>• Provide environmental investigation and control lead hazards</li> </ul>	Within 1 week
45-69	<ul style="list-style-type: none"> <li>• Above actions</li> </ul>	Within 48 hours
70 and above	<ul style="list-style-type: none"> <li>• Above actions, plus:</li> <li>• Hospitalize child and begin medical treatment (chelation therapy as appropriate) immediately.</li> <li>• Contact Emergency Lead Healthcare line below.</li> </ul>	Within 24 hours

Current CDC management recommendations adapted from Managing Elevated Blood Lead Levels among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention (CDC 2002). \*Investigations may be required where babies or multiple children in a household have elevated blood lead levels. Follow-up care is described in more detail in the VDH “Care Coordination Manual: Children with Lead Poisoning in Virginia”.  
<http://www.cdc.gov/nceh/lead/casemanagement/managingEBLLs.pdf>

Emergency Lead Healthcare Information Line  
 TOLL FREE EMERGENCY (866) 767-5323  
 (866) SOS-LEAD

Note: For questions related to your local area, refer to your local health department. Local health policy and lead ordinances may have additional requirements. Richmond City has a lead ordinance that requires an investigation at 10 µg /dL. Developed by the Virginia Department of Health Lead Elimination Plan Medical Committee, following CDC Guidelines and Virginia Regulations. Funded by the Centers for Disease Control and Prevention and the Virginia Department of Health. Revised May 2009. (Last updated 12/2015)

# Lead Questionnaire

**Blood lead levels shall be obtained in children at ages 1 and 2 if they meet ANY one of the criteria noted below. In addition, children ages 3-5 years of age who have not previously been tested and meet ANY one of the criteria below shall also be tested.**

1. Eligible for or receiving Medicaid, or WIC benefits? \_\_\_\_\_
2. Living in a ZIP code determined to be high risk based on age of housing and other factors? (Appendix 1)
3. Living in or regularly visiting a house or day care center built before 1950? \_\_\_\_\_
4. Are you living in or regularly visiting a house built before 1978? \_\_\_\_\_ Are you living in a home with peeling or chipping paint or recent ongoing or planned renovation (within the last 6 months)? \_\_\_\_\_
5. Living with or regularly visiting a sibling, housemate, or playmate with lead poisoning? \_\_\_\_\_
6. Living with an adult whose job or hobby involves exposure to lead? (Check all that apply)  

<input type="checkbox"/> Radiator repair	<input type="checkbox"/> Battery Manufacture or repair	<input type="checkbox"/> Welding
<input type="checkbox"/> Housing renovation	<input type="checkbox"/> Making pottery	<input type="checkbox"/> Chemical preparation
<input type="checkbox"/> Stained glass w/ lead solders	<input type="checkbox"/> Valve/pipe fittings	<input type="checkbox"/> Going to a firing range
<input type="checkbox"/> Brass/Copper/Foundry	<input type="checkbox"/> Smelting	<input type="checkbox"/> Refinishing furniture
<input type="checkbox"/> Burning lead painted Wood	<input type="checkbox"/> Casting ammunition, fishing weights, or toy soldiers	
<input type="checkbox"/> Automotive repair shop	<input type="checkbox"/> Bridge, tunnel and industrial machinery and equipment	
7. Living near an active lead smelter, battery-recycling plant, or other industry likely to release lead? \_\_\_\_\_
8. Have any other members of the family had elevated blood lead levels? \_\_\_\_\_
9. Is your child a refugee? \_\_\_\_\_
10. Is your child's history unknown? \_\_\_\_\_

\_\_\_\_\_  
Signature of Legal Guardian

\_\_\_\_\_  
Date

## What You Should Know Childhood Lead Poisoning

Low levels of lead in the blood can affect IQ cause learning disabilities, behavioral problems, and at very high levels, seizures, coma, and even death. The effects of lead exposure are not reversible.

### How Are Children Exposed to Lead?

Major sources of lead exposure among U.S. children are lead-based paint and lead-contaminated dust found in deteriorating buildings and housing built before 1978.

Other sources of lead poisoning include:

- Home health remedies (i.e. arzacon, greta, pay-loo-ah),
  - Some imported candies (specifically those from Mexico),
  - Imported toy jewelry and make up.
  - Drinking water (lead pipes, solder, brass fixtures, and valves can all leach lead),
  - Work (recycling or making automobile batteries), and
  - Hobbies (making stained-glass windows, pottery). Imported items including clay pots
- Certain Imported home remedies

### Those at risk include children:

- Under the age of 6 years
- Live in older housing built before 1978
- Living at or below the poverty line
- Some racial and ethnic groups

### Preventing Lead Poisoning

The key to protecting children from lead exposure is to prevent lead exposure before it happens by keeping children from coming into contact with lead and treating children who have been poisoned by lead.

- Identify and safely remove all lead hazards.
- Parental guidance and education on lead poisoning
- Test and treat for lead poisoning as needed

### Decrease your exposure to lead by:

- Getting your child (ren) tested if you are concerned about a possible lead exposure.
- Getting your home tested for lead if you live in a house or apartment built before 1978, especially if young children live with you or visit you.
- Damp-mop floors; damp-wipe surfaces; and frequently wash a child's hands, pacifiers, and toys
- Avoid using home remedies and cosmetics that contain lead (i.e. arzacon, greta, pay-loo-ah, kohl, alkohol)
- Children and pregnant women should not eat candies imported from Mexico.
- Use cold water from the tap for drinking, cooking, and making baby formula.

**Source:** Adapted from CDC (October 2012) Blood Lead Levels in Children Fact Sheet [PDF-168 KB] Retrieved December 10, 2015 [http://www.cdc.gov/nceh/lead/ACCLPP/blood\\_lead\\_levels.htm](http://www.cdc.gov/nceh/lead/ACCLPP/blood_lead_levels.htm).

## **Guidelines for Childhood Lead Poisoning Testing Resources**

Lead-Safe Virginia Program      [www.vahealth.org/leadsafe](http://www.vahealth.org/leadsafe)

CDC      [www.cdc.gov/nceh/lead/](http://www.cdc.gov/nceh/lead/)

The Office of Lead Hazard Control and Healthy Homes (OLHCHH)

Childhood Lead Poisoning Prevention Program Community Awareness Project (CLPPP  
CAP)

United States Environmental Protection Agency (EPA)

National Center for Environmental Health/Division of Emergency and Environmental  
Health Services (EEHS)

## References

1. Lead-Safe Virginia Program. Childhood Lead Poisoning Prevention Program 2010 Surveillance Summary Report. Retrieved from the Virginia Department of Health December 10, 2015 at: <http://www.vdh.virginia.gov>  
<http://www.vdh.virginia.gov/leadsafe/documents/2011/pdf/2010%20Surveillance%20Report.pdf>
2. Optima Health Clinical Guidelines (reviewed and updated 01/2016). Lead Questionnaire. Retrieved December 2015 from <http://www.optimahealth.com/>
3. Virginia Department of Health (Last updated 10/2014). Childhood Lead Poisoning Prevention. Retrieved from Lead-Safe Virginia at <http://www.vahealth.org/leadsafe/>
4. Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention. Report of the Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention. [http://www.cdc.gov/nceh/lead/acclpp/final\\_document\\_030712.pdf](http://www.cdc.gov/nceh/lead/acclpp/final_document_030712.pdf)
5. Lead Poisoning in Children. American Family Physician, 2010 March 15; 81(6) 751-757

Appendix 1

Virginia High-Risk Zip Codes*									
<b>Accomack</b>	<b>Augusta</b>	<b>Charlotte</b>	<b>Falls Church City</b>	<b>Hampton City</b>	<b>Lunenburg</b>	<b>Norfolk City</b>	<b>Powhatan</b>	<b>Rockingham</b>	<b>Surry</b>
23301	22843	23923	22046	23651	23938	23503	23139	22811	23839
23302	22939	23934	<b>Fauquier</b>	23661	23944	23504	<b>Prince Edward</b>	22812	23846
23308	24430	23937	22639	23665	23952	23505	23901	22815	23881
23336	24432	23962	22643	<b>Hanover</b>	23974	23507	23942	22820	<b>Sussex</b>
23356	24437	23964	22734	23047	<b>Lynchburg City</b>	23508	<b>Prince George</b>	22821	23867
23357	24459	<b>Charlottesville City</b>	<b>Floyd</b>	23069	24501	23509	23942	22832	23888
23359	24467	22903	24072	<b>Henrico</b>	24503	23510	<b>Prince William</b>	22834	23890
23395	24476	<b>Chesapeake City</b>	24091	23226	24504	23511	22134	22841	<b>Tazewell</b>
23399	24479	23324	24105	23227	<b>Madison</b>	23517	<b>Pulaski</b>	22846	24602
23404	24485	<b>Clarke</b>	24380	23229	22709	23523	24301	22853	24605
23407	24486	22611	<b>Fluvanna</b>	23230	22719	<b>Northampton</b>	24347	24471	24613
23409	<b>Bath</b>	22620	23022	23231	22727	23310	<b>Radford City</b>	<b>Russell</b>	24622
23410	24445	22663	23084	<b>Henry</b>	22732	23350	24141	24237	24651
23417	24460	<b>Covington City</b>	<b>Franklin City</b>	24088	<b>Martinsville City</b>	23354	<b>Rappahannock</b>	24649	<b>Virginia Beach City</b>
23418	24484	24426	23851	<b>Highland</b>	24112	23405	22002	<b>Scott</b>	23521
23420	24487	<b>Craig</b>	<b>Frederick</b>	24413	<b>Mathews</b>	23413	22716	24245	<b>Warren</b>
23421	<b>Bedford</b>	24127	22645	24433	23021	<b>Northumberland</b>	22740	24250	22642
23426	24526	24131	22654	24442	23025	22435	22746	24251	22649
23440	<b>Bland</b>	<b>Culpeper</b>	<b>Fredericksburg City</b>	24458	23045	22473	22747	24258	<b>Washington</b>
23442	24315	22713	22401	24465	23066	22539	22749	<b>Shenandoah</b>	24236
<b>Albermarle</b>	24318	22718	<b>Galax City</b>	24468	23109	22579	<b>Richmond City</b>	22644	24270
22901	24366	22726	24333	<b>Isle of Wright</b>	23125	<b>Norton City</b>	23219	22657	24340
22931	<b>Botetourt</b>	22729	<b>Giles</b>	23315	23130	24273	23220	22660	<b>Waynesboro City</b>
22937	24066	22736	24086	<b>James City</b>	<b>Mecklenburg</b>	<b>Nottoway</b>	23221	22664	22980
22943	24085	<b>Cumberland</b>	24093	23185	23915	23222	23222	22810	<b>Westmoreland</b>
22947	24090	23027	24094	<b>King and Queen</b>	23924	23922	23223	22824	22488
22959	<b>Bristol</b>	<b>Danville City</b>	24124	23023	23968	23930	23224	22842	<b>Winchester City</b>
24590	24201	24540	24128	23108	23970	<b>Orange</b>	23225	22844	22601
<b>Alexandria City</b>	<b>Brunswick</b>	24541	24134	23110	<b>Middlesex</b>	22972	<b>Roanoke City</b>	22847	<b>Wise</b>
22301	23821	<b>Dickenson</b>	24147	23156	23079	<b>Page</b>	24011	<b>Smyth</b>	24216
22302	23868	24226	24150	23177	23149	22650	24013	24316	24219
22305	23920	24272	<b>Goochland</b>	<b>King George</b>	23176	22835	24014	24319	24230
22314	<b>Buchanan</b>	24289	23038	22448	23180	22849	24015	24370	24283
<b>Alleghany</b>	24639	<b>Dinwiddie</b>	23153	<b>King William</b>	<b>Montgomery</b>	22851	24016	24375	24285
24422	<b>Buckingham</b>	23850	<b>Grayson</b>	23009	24138	<b>Patrick</b>	<b>Rockbridge</b>	<b>Southampton</b>	24293
<b>Amelia</b>	23936	23840	24292	23181	24149	24185	24435	23827	<b>Wythe</b>
23083	<b>Buena Vista City</b>	23850	24326	<b>Lancaster</b>	<b>Nelson</b>	<b>Petersburg City</b>	24439	23828	24312
<b>Appomattox</b>	24416	23872	24330	22480	22938	23803	24472	23829	24322
23958	<b>Caroline</b>	23894	24378	22503	22964	<b>Pittsylvania</b>	24473	23837	24323
<b>Arlington</b>	22427	<b>Emporia</b>	<b>Greene</b>	<b>Lee</b>	22969	24139	24483	23844	24350
22201	22514	23847	22935	24221	22971	24531	24555	23866	24368
22203	<b>Carroll</b>	<b>Essex</b>	<b>Hallfax</b>	24265	24464	24594	24578	23874	24382
22204	24325	22454	24534	24277	24553	<b>Portsmouth City</b>	24579	<b>Staunton City</b>	
22205	24343	22504	24539	24282	<b>Newport News City</b>	23701		24401	
22206	24352	22509	24577	<b>Lexington City</b>	23604	23702		<b>Suffolk City</b>	
22207		22560	24592	24450	23607	23704		23432	
22211		<b>Fairfax</b>	24598	<b>Louisa</b>		23707		23434	
		22307	23024						

\* Areas with these ZIP Codes have >27% of housing built before 1950 and/or an increased prevalence of children with elevated blood lead levels per available data. ZIP Codes are from the 2000 U.S.Census. View <http://www.vahealth.org/leadsafe> for updates and information on childhood lead poisoning in Virginia and access to publications available to medical professionals, parents and others. Toll free phone (877) 668-7987.

Virginia Department of Health, Revised June 2003