

Missouri Guidelines for the Assessment and Management of Childhood Lead Exposure (For Children 6-72 Months of Age) Form Updated: 1/10/2020

Complete/update Lead Risk Questionnaire and provide lead education with parents/guardians at ALL well-child checks ages 6-72 months. (See Lead Resources and Questionnaire information below.) Promptly blood lead test if any positive risk is identified, even at intervals of less than 6 months, and consider blood lead testing for any “unknown” responses. Additionally, consult MO Lead Risk Map to determine if child lives in or visits HIGH RISK areas (more than 10 hours per week) (See Lead Resources, Map below.) Perform a blood lead test annually no matter their responses to the Questionnaire when a child lives in or visits HIGH RISK areas.

Federal requirements are to blood lead test ALL Medicaid children, at a minimum, at ages 12, and 24 months, no matter their response to the lead risk questionnaire or whether they are living or spending time in designated HIGH RISK areas. If target ages missed, catch up at earliest opportunity. Additional blood lead testing may be needed due to questionnaire responses, living in or visiting HIGH RISK areas, or other potential known increased risk factors such as increased mouthing behaviors or increased mobility.

Recommended Blood Lead Testing Schedule and Actions Based on Blood Lead Level (BLL) * LAB is to report/Fax ALL BLL's to DHSS: 573-526-6946

Schedule to Obtain CONFIRMATORY VENOUS Blood Lead Test		Schedule to Obtain FOLLOW-UP (VENOUS) Blood Lead Testing		
CAPILLARY BLL (µg/dL) <small>µg/dL:micrograms/deciliter</small>	Time to VENOUS Confirmation Testing	VENOUS BLL (µg/dL) <small>µg/dL:micrograms/deciliter</small>	EARLY VENOUS Follow-up Testing (2 - 4 tests after initial elevation)	LATER VENOUS Follow-up Testing (after BLL declining)
≥ 5 – 9 *Labs Report within 3 days: 573-526-6946	1–3 months	≥ 5 – 9 *Labs Report within 3 days: 573-526-6946	3 months*	6–9 months
10 – 44 *Labs Report within 3 days: 573-526-6946	1 week–1 month*	10 – 19 *Labs Report within 3 days: 573-526-6946	1–3 months*	3–6 months
45 – 59 *Labs Fax BLL result IMMEDIATELY 573-526-6946. Phone 573-751-6102	Within 48 hours (Request STAT VENOUS lab draw <u>and</u> analysis)	20 – 24 *Labs Report within 3 days: 573-526-6946	1–3 months*	1–3 months
60 – 69 *Labs Fax BLL result IMMEDIATELY to 573-526-6946 and Phone: 573-751-6102	Within 24 hours (Request STAT VENOUS lab draw <u>and</u> analysis)	25 – 44 *Labs Report within 3 days: 573-526-6946	2 weeks–1 month*	1 month
≥ 70 *Labs Fax BLL result IMMEDIATELY to 573-526-6946 and Phone: 573-751-6102	IMMEDIATELY as emergency test (Request STAT VENOUS lab draw <u>and</u> analysis) <i>Note that STAT venous Blood Lead Analysis may not be readily available in all areas of the state particularly during weekends, evenings and nights. Contact DHSS for assistance if needed.</i>	≥ 45 *Labs Fax BLL result IMMEDIATELY to 573-526-6946 and Phone: 573-751-6102	45 - 69: STAT Venous Lead Test and receipt of result before chelation administered; at the end of chelation; 7 days and 21 days* after chelation. ≥ 70: STAT Venous Lead Test blood draw before chelation (but chelation should commence prior to receipt of result) ; at the end of chelation; 7 days & 21 days* after chelation.	As clinically indicated, depending on the level, date of chelation, and child's individual situation.

**The higher the blood lead level on the screening test, the more urgent the need for confirmatory testing.*

Greater exposure to lead in warmer months may necessitate more frequent follow-ups.

**** When a child has a confirmed VENOUS BLL of ≥5 µg/dL, consider testing other members of the residence/family, particularly pregnant women, and children under the age of 72 months.**

***Healthcare providers or case managers may choose to repeat VENOUS blood lead tests within shorter intervals to ensure that the Blood Lead Level is not rising more quickly than anticipated. (i.e. when child's mobility or hand to mouth behaviors increase)**

LEAD RESOURCES

CONTACT INFORMATION

DHSS Lead Risk Questionnaire	https://health.mo.gov/living/environment/lead/pdf/HCYLeadRiskAssessmentGuide.pdf
DHSS Lead Risk Map	https://health.mo.gov/living/environment/lead... (not recently posted)
Pediatric Environmental Health Specialty Unit (PEHSU) Network	www.pehsu.net or 800-421-9916 or 913-588-6638 (Chelation and general management)
Poison Control Center (PCC)	www.aapcc.org or 800-222-1222
Centers for Disease Control and Prevention http://www.cdc.gov/nceh/lead/publications : 2002. <u>Managing Elevated Blood Lead Levels Among Young Children</u> (see updates) 2012. <u>Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention</u> 2015. <u>Educational Interventions for Children Affected by Lead</u>	www.cdc.gov/nceh/lead or 800-232-4636 CDC Capillary Sampling Procedure: https://www.cdc.gov/nceh/lead/publications/1997/pdf/c2.pdf (Chelation) http://pediatrics.aappublications.org/content/pediatrics/116/4/1036.full.pdf page 1042 Journal: Clinical Pediatric Emergency Medicine. Article Title: An Update on Childhood Lead Poisoning Volume 18, Issue 3, September 2017, Pages 181-192
U.S. Environmental Protection Agency	www.epa.gov/lead or 800-424-5323
U.S. Food and Drug Administration: Dangers of Off Label Chelation	www.fda.gov/ForConsumers/ConsumerUpdates/ucm229358.htm
Missouri Department of Health and Senior Services, Bureau of Environmental Epidemiology	http://health.mo.gov/living/environment/lead/index.php or call 573-751-6102
American Academy of Pediatrics	2016. Lead Exposure in Children: Prevention, Detection, and Management.
Department of Elementary and Secondary Education (DESE)	Early Learning, Parents As Teachers: Phone: 573-751-2095 First Steps: Phone: 866-583-2392

Please Note: The following actions are NOT recommended at any Blood Lead Level:

- Searching for gingival lead lines
- Testing of hair, teeth, or fingernails for lead
- X-ray fluorescence of long bones
- Radiographic imaging of long bones
- Testing of neurophysiologic function
- Evaluation of renal function (except during chelation with EDTA)

MO DHSS Recommended Actions Based on **VENOUS** Confirmed Blood Lead Level (BLL) µg/dL

Abbreviation Key:
CM= Case Manager **PCP**= Primary Care Provider
DESE= Dept of Elementary and Secondary Education

<5 µg/dL	5–9 µg/dL	10–19 µg/dL	20–44 µg/dL	45–69 µg/dL <i>Chelation Should Be Considered!</i>	≥70 µg/dL <i>Chelation is Needed Immediately!</i>
<p>PCP Perform routine assessment of nutritional and developmental milestones.</p> <p>PCP provides anticipatory guidance and education about common sources of lead exposure and need to keep child in a lead-safe environment.</p> <p>PCP schedules follow-up blood lead testing at recommended intervals based on child's age and behaviors.</p> <p>*** For any child screened at age <12 months, PCP may consider need for retesting in 3-6 months as lead exposure may increase as the child's mobility and hand to mouth behaviors increase.</p> <p>(CM) Case manager is NOT offered by public health at this low level.</p> <p>Chelation is NOT indicated at this level.</p>	<p>PCP Perform routine assessment of nutritional and developmental milestones.</p> <p>The child's PCP and LPHA or Mo Health Net Health Plan lead case manager have a detailed discussion of the child's environment with child's parent to identify potential sources of lead exposure.</p> <p>**Lead Risk Assessors contact parent to provide verbal and/or written Environmental Lead Education.</p> <p>** An environmental Lead Risk Assessment may be offered depending on the jurisdiction.</p> <p>PCP/CM provide nutritional counseling related to calcium, iron and vitamin C intake.</p> <p>PCP/CM Schedule follow-up blood lead testing at recommended intervals based on child's age and behaviors. (see reverse)</p> <p>CM is offered by public health.</p> <p>Chelation is NOT indicated at this level.</p>	<p>PCP Perform routine assessment of nutritional and developmental milestones.</p> <p>The child's PCP and (LPHA or Mo Health Net Health Plan) lead case manager discuss potential sources of lead in the child's environment with parent. Inform parent that a lead case manager will contact them to offer a home nurse visit. CM Home visit is required at level of ≥15 mcg/dL...</p> <p>A Lead Risk Assessor will contact them to perform an environmental assessment.</p> <p>A Lead Risk Assessment by a Lead Risk Assessor to identify lead sources and lead hazard reduction is REQUIRED.</p> <p>PCP/CM Provide nutritional counseling related to calcium, iron, and vitamin C intake.</p> <p>PCP Consider lab work to assess iron status.</p> <p>PCP/CM Schedule follow-up blood lead testing at recommended intervals. (see reverse)</p> <p>Refer to DESE for BLL > 10 µg/dL.</p> <p>Chelation is NOT indicated at this level.</p>	<p>PCP Perform a complete history, physical exam, and a neuro-developmental assessment.</p> <p>The child's PCP and LPHA or Mo Health Net Health Plan lead case manager discuss potential sources of lead in the child's environment with parent. Inform parent the child's lead case manager will make contact to schedule required home visit/s.</p> <p>A Lead Risk Assessor will contact them to perform an environmental assessment.</p> <p>A Lead Risk Assessment by a Lead Risk Assessor to identify lead sources and lead hazard reduction is REQUIRED.</p> <p>PCP/CM Provide nutritional counseling related to calcium, iron, and vitamin C intake.</p> <p>PCP Orders Lab work:</p> <ul style="list-style-type: none"> Iron status Hemoglobin or hematocrit <p>PCP Orders abdominal X-ray with bowel decontamination if indicated.</p> <p>PCP/CM Schedule follow-up blood lead testing at recommended intervals. (see reverse)</p> <p>Refer to DESE for BLL > 10 µg/dL /dL</p> <p>Chelation is NOT indicated at this level.</p>	<p>PCP Consider prompt administration of IV and/or oral chelation therapy:</p> <ul style="list-style-type: none"> Discuss inpatient or outpatient chelation therapy with a pediatric physician who has experience in administering chelation. Typically, a pediatric toxicologist, or the Pediatric Environmental Health Specialty Unit (www.pehsu.net or 800-421-9916 or 913-588-6638) is consulted. Consider hospitalization if lead-safe (home) environment cannot be assured for duration of IV or oral chelation therapy and follow-up period. <p>PCP/CM Instruct parent/guardian to promptly remove or keep child away from any known or potential lead-contaminated environment or hazard.</p> <p>PCP/CM Inform parent/guardian to expect and respond to phone contacts from the following:</p> <ul style="list-style-type: none"> State licensed lead risk assessor to schedule a home visit within 48 hours. Lead case manager to schedule required nurse visits/home visit/s. <p>PCP perform a complete history and physical exam.</p> <p>PCP perform a complete neurological exam including a neurodevelopmental assessment.</p> <p>The Lead Risk Assessor is REQUIRED to perform an Environmental Lead Risk Assessment to identify lead sources and lead hazard reduction options. A Lead Risk Assessor "clearance" visit is also REQUIRED following completion of the work plan before the child returns to the home. Lead hazard reduction is the financial responsibility of the property owner.</p> <p>PCP/CM Provide Nutritional counseling related to calcium, iron and vitamin C intake.</p> <p>PCP Orders Lab work:</p> <ul style="list-style-type: none"> Repeat Venous BLL (Draw and analyze STAT) Iron status Hemoglobin or hematocrit <p>PCP Orders abdominal X-ray with bowel decontamination, if indicated.</p> <p>A chelated child should NOT be discharged to a home or environment that is not known to be lead-safe for the duration of chelation therapy and follow-up period.</p> <p>Consider need for Social Services referral/s.</p> <p>PCP/CM Schedule follow-up blood lead testing at recommended intervals. (see reverse)</p> <p>PCP/CM Refer to DESE for ongoing developmental monitoring programs throughout grade school.</p>	<p>PCP Arrange for child's IMMEDIATE hospitalization at a pediatric hospital facility with chelation expertise:</p> <ul style="list-style-type: none"> Arrange for prompt administration of IV chelation therapy. Typically, a pediatric physician experienced in administering chelation, such as a pediatric toxicologist, is consulted. Otherwise, consultation with the Pediatric Environmental Health Specialty Unit (www.pehsu.net or 800-421-9916 or 913-588-6638) is appropriate. IV chelation may be followed by oral chelation. <p>PCP/CM Inform parent/ guardian to expect and respond to phone contacts from the following:</p> <ul style="list-style-type: none"> State licensed lead risk assessor to schedule a home visit within 24-48 hours. Lead case manager to schedule required nurse visits/home visit/s. <p>PCP perform a complete history and physical exam.</p> <p>PCP perform a complete neurological exam including a neurodevelopmental assessment.</p> <p>The Lead Risk Assessor is REQUIRED to perform an Environmental Lead Risk Assessment to identify lead sources and lead hazard reduction options. A Lead Risk Assessor "clearance" visit is also REQUIRED following completion of the work plan before the child returns to the home. Lead hazard reduction is the financial responsibility of the property owner.</p> <p>PCP/CM Provide Nutritional counseling related to calcium, iron and vitamin C intake.</p> <p>PCP Orders Lab work:</p> <ul style="list-style-type: none"> Repeat Venous BLL (Draw and analyze STAT) Iron status Hemoglobin or hematocrit <p>PCP Orders abdominal X-ray with bowel decontamination, if indicated.</p> <p>A chelated child should NOT be discharged to a home or environment that is not known to be lead-safe for the duration of chelation therapy and follow-up period.</p> <p>Consider need for Social Services referral/s.</p> <p>PCP/CM Schedule follow-up blood lead testing at recommended intervals. (see reverse)</p> <p>PCP/CM Refer to DESE for ongoing developmental monitoring programs throughout grade school.</p>

Confirmed BLL: One venous blood test (See Missouri Guidelines for the Assessment and Management of Childhood Lead Exposure on reverse side of this form.)

**** Environmental assessments** vary according to local conditions based on jurisdictional requirements and available resources. Contact MO DHSS at 573-751-6102.

Medical history and health forms for daycares, head starts, and schools should include all blood lead testing dates and results. BLL testing dates and results are to be a part of the child's permanent medical record.