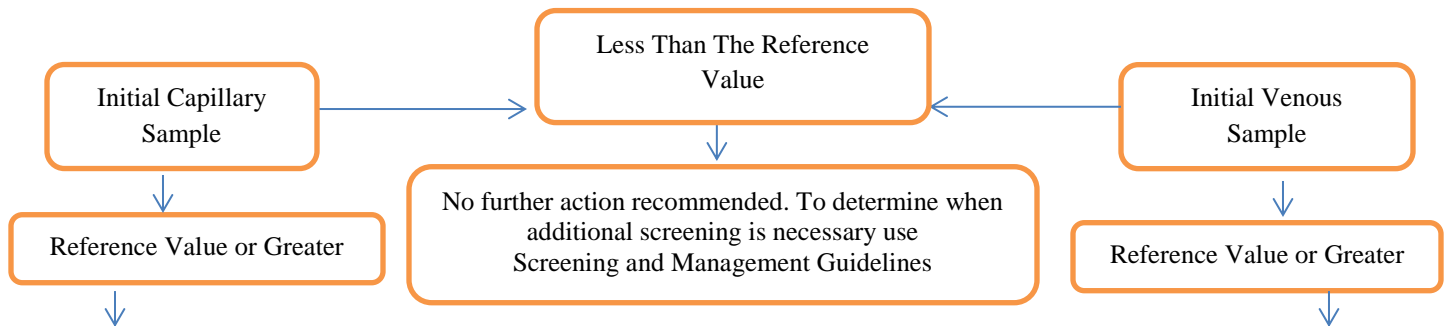


LEAD (Pb) POISONING

Quick Guide for Lead Testing & Treatment of Elevated Blood Lead Levels (EBLLs)



| Schedule For Obtaining Venous Sample | |
|--------------------------------------|------------------------------|
| Capillary Blood Lead Level ug/dL | Time to confirmation testing |
| ≥ Reference value-9 | 1-3 months |
| 10-44 | 1 week-1 month* |
| 45-49 | 48 hours |
| 60-69 | 24 hours |
| ≥ 70 | Urgent as emergency |

*The **higher** the BLL on the screening test, the more urgent the need for **confirmatory venous testing**

| Schedule For Follow-up Blood Lead Testing | | |
|---|---|---|
| Venous Blood Lead level | Early follow up testing(2-4 tests after identification) | Follow up testing after level declining |
| ≥ Reference value-9 ug/dL | 3 months | 6-9 months |
| 10-19 ug/dL | 1-3 months | 3-6 months |
| 20-24 ug/dL | 1-3 months | 1-3 months |
| 25-44 ug/dL | 2 weeks- 1 month | 1 month |
| ≥ 45 ug/dL | As soon as possible | As soon as possible |

Contact MCPHDLPPP @ 317-221-2155

Clinical Treatment Guidelines for Venous Confirmed Blood Lead Levels

| Not yet tested | Ref. value-9 ug/dL | 10-44 ug/dL | 45 -69 ug/dL | 70+ug/dL |
|--|--|---|---|---|
| Screen all children age 1-6 ♦ Need for testing could be based on criteria risks factors. | Confirm result with venous sample ♦ Provide factsheet to parents (Lead and children, Lead & nutrition) ♦ Test sibling and pregnant women for EBLL. Follow-up BLL monitoring MCPHD provides case management and environmental investigation. | Same directions as listed previously AND Neurodevelopmental monitoring. Rule out iron deficiency& prescribe iron if needed. Abdominal X-ray (if particle lead ingestion is suspected) with bowel decontamination if indicated.(BLL of 25-44ug/dL) | Same directions as listed previously AND Stop iron therapy before chelation Begin chelation in consultation with toxicologist on call with the Indiana Poison Control Center: (800)- 222-1222 ♦ Hospitalization for chelation must take place if lead-safe environment cannot be assured. Contact MCPHD to request immediate environmental lead investigation to determine if home is lead-safe. After hours public health emergency # 317-221-2000. | Same directions as previously listed AND Confirm BLL immediately Hospitalize even if asymptomatic |

Medicaid requires all children be tested at ages 1&2. Children not tested between 1&2 must be tested at least once between 3&6

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Quick Guide for Clinical Evaluation & Management

Testing criteria for children*

It is a federal requirement that, regardless of risk factor, lead testing must be performed on all Medicaid eligible children at ages 12 and 24 months, and for children ages 3 to 6 years with no history of a lead test.

For children not Medicaid eligible, assess during health care visits at ages 6 months through 6 years and perform lead screening any of the criteria below is met.

Child

- is enrolled in Medicaid, in Head Start or received WIC
- lives in or regularly visits a house or child care center built before 1978
- has been exposed to repairs, repainting or renovation of a home built before 1978
- has a sibling or playmate who has or who has had lead poisoning
- frequently comes in contact with someone who has a job or hobby using lead
- is a recent immigrant, refugee, adoptee from a foreign country, or minority member
- has family that uses ethnic or folk remedies, cosmetics, or products (such as glazed pottery)
- resides in a high-risk area

*Does not apply to children currently or previously lead poisoned

Further Indications to Test for Lead

Test any child who demonstrates the following risks factors:

- Developmental delays or learning disabilities
- Behavioral problems such as aggression & attention issues
- Excessive mouthing, pica, or hand to mouth behavior
- Ingestion of any object that may contain lead
- Anemia
- Symptoms or signs of lead poisoning including:
 - Irritability, headaches, vomiting or no appetite
 - Seizures or other neurological symptoms
 - Abdominal pain or constipation

Temporary Interventions to Limit Exposure

Provide “Lead and Nutrition”, “Lead Risks” & “Lead Hazards” factsheets to educate parents and caregivers:

- Frequent hand washing
- Clean child’s toys, bottles and pacifiers often
- Feed child RDA of Calcium, Iron, & Vitamin C foods daily
- Block access to lead hazards such as window sills
- Wet wipe window sill, door jams, & door frames
- Wet mop floors and stairs once a week or more
- Use HEPA filter vacuum to clean up dust and paint chips

Developmental Assessment & Intervention for Children with EBLL

For any child with a **venous BLL greater than the reference value:**

- Before age 6 years: Annual developmental surveillance and screening at ages 3, 4 and 5 years is recommended
- At any age: Developmental Surveillance at annual visit to identify emerging/unaddressed behavioral, cognitive, or developmental concerns

For any child with an **EBLL greater than 20ug/dL or persistently greater than 15ug/dL with other developmental risk factors:** neurodevelopmental monitoring is needed

Actions Steps:

- Long term developmental monitoring should be a component of the child’s management plan
- A history of EBLL should be included in the problem list maintained in the child’s permanent medical record, even if BLL is reduced.
- Refer child to early intervention or child-check for developmental screening
- Recommend early childhood education and stimulation programs
- Refer to Family Social Services Administration for a list of local Family-Centered Early Supports Services at 1-800-545-7763

Developmental Surveillance should include:

- Vigilance for physical, social, emotional, academic challenges at critical transition points in childhood (e.g in preschool, 1st, 4th, 6th and 7th grades)
- Vigilance for in-attention, distractibility, aggression, anti-social behavior, irritability, hyperactivity, low impulse control & poor emotional regulation
- Refer children experiencing neurodevelopmental problems for a complete diagnostic medical evaluation
- Continue to monitor development through a child’s early and middle school years, even if BLL is reduced

At any age: If issues arise between annual visits, encourage parents to bring them to attention of the medical office and school personnel.

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Lead Exposure Risks

Home maintenance/repairs
Renovation/remodeling
Blowing Glass
Gardening
Painting and ceramics
Metal casting/smelting
Metal work/welding
Bridge Repair/Painting High Construction Area
Scrap yards
Jewelry making

Examples of Workplaces & Hobbies

Sculpting
Stained Glass
Firearms/Firing Range Electronic soldering Making Bullets/Sinkers Auto mechanics/bodywork Farm/Migrant Farm Work Furniture Refinishing
Recycling electronics
Recycling batteries
Painting roads
Plastics manufacturing

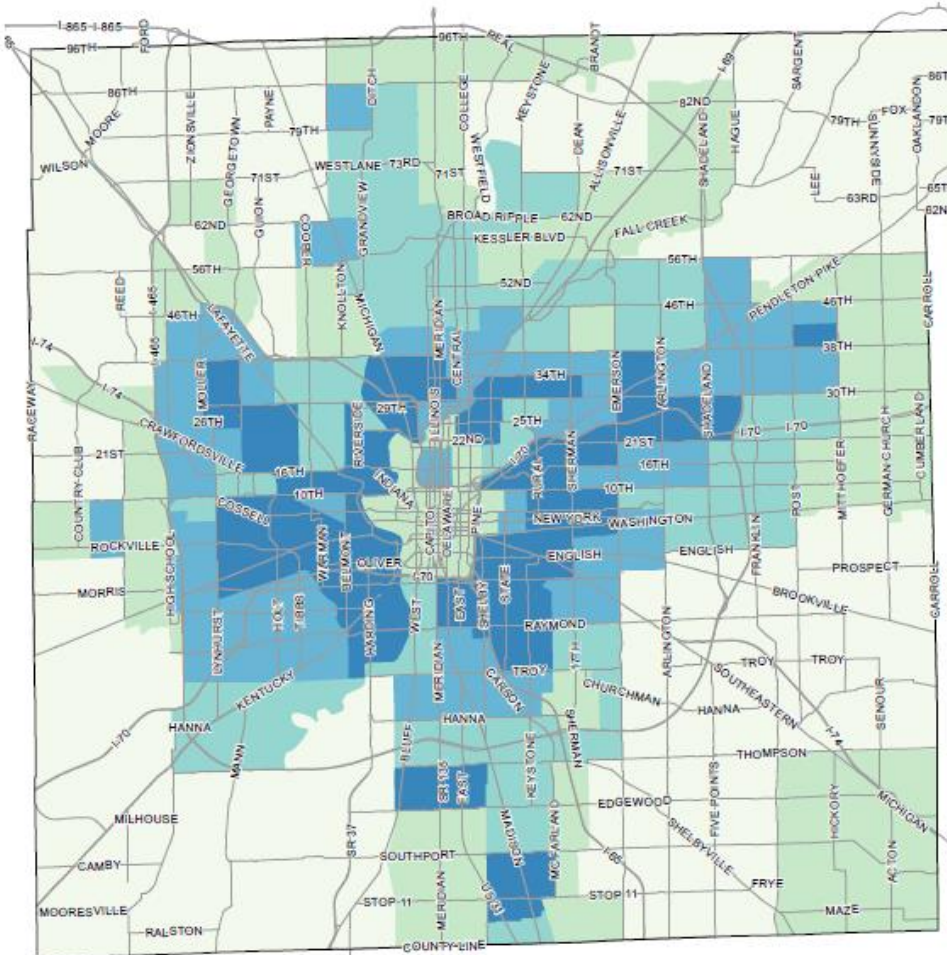
Examples of Folk, Ethnic and/or Cultural Lead-Materials

IMPORTED COSMETICS: Middle East, India, Pakistan, and Africa - Kohl, Surma, Al Koh, Kajal, Sindoor

FOODS: • Middle East - Lozeena • Mexico - Tamarind Candy • Chapulines (dried grasshoppers)

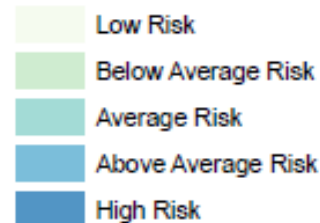
FOLK REMEDIES: •Latin America - Azarcon aka: Other names of Azarcon are: Ruedo, Corol, Maria Luiso, Alarcon, and Ligo: •Mexico - Greta •Dominican Republic - Litargirio •Vietnam/ Hmong Community - Pay-loo-ah- •Asian/ Tibet/ India/Thailand - Ayurvedic medicine •Tibetan Herbal Vitamin •Asia - Bo Ying compound (the “product”) China - Jin Bu Huan, Po Ying Tan, Ba-Baw-San •India - Ghasard •Thailand/Myanmar (Burma) - Daw Tway •Iran - Bint Al Zahab •Saudi Arabia - Santrinj, Bint Dahab •Kuwait - Bokhoor •Other - Bala Goli, Kandu

This information was retrieved from the Kentucky Department for Public Health Childhood Lead Poisoning Prevention lead Poisoning Verbal Risk Assessment Questionnaire.



HIGH RISK AREAS

by 2018 census tract map



HIGH RISK ZIP CODES

46201
46203
46205
46208
46218
46222
46227

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LEAD KEY POINTS

Prevent Childhood Lead Poisoning

Exposure to lead can seriously harm a child's health.



Damage to the brain and nervous system



Slowed growth and development



Learning and behavior problems



Hearing and speech problems

This can cause:



Lower IQ

Decreased ability to pay attention

Underperformance in school



Lead Reference Value and Its Significance

- Beginning 2012, experts use a new reference level to identify children with blood lead levels that are much higher than most children's levels
- This reference value is based on the U.S. population of children ages 1-5 years who are in the highest 2.5% (97.5th percentile) of children when tested for lead in their blood
- As of March, 2018 the reference value is 5 ug/dL
- CDC has stated they will update the reference value every four years using the two most recent National Health and Nutrition Examination Survey (NHANES) data
- A child with a lead level at or above the reference value should receive medical and case management follow up including monitoring blood tests and home environmental investigations (provided by MCPHD)
- What has not changed is the recommendation for when medical treatment is advised for children with high blood lead exposure levels. The new recommendation does not change the guidance that chelation therapy be considered when a child has a confirmed blood lead test result greater than or equal to 45 ug/dL

Lead Screening & Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program

Screening for blood lead toxicity for all children enrolled in Medicaid is a federal requirement

- The Family and Social Services Administration (FSSA) requires that all children enrolled under Medicaid receive a blood lead screening test between 9 months and 12 months and again at 24 months of age
- If the member is at high risk for lead exposure, the initial screening should be performed at the 6-month visit and repeated at the 12-month and 24-month visits
- Children between the ages of 36 months and 72 months of age must receive a blood lead screening if they have not been previously tested for lead poisoning
- Subsequent screenings are required for at-risk patients
- A blood lead test result equal to or greater than the reference value obtained by capillary specimen (finger stick) must be confirmed using a venous blood sample

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