

Marion County Public Health Department
Lead Poisoning Prevention Program



Protecting Our Communities from Lead:
A Toolkit for Health Care Providers

Protecting Our Communities from Lead: A Toolkit for Health Care Providers

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Introduction

Protecting Our Communities from Lead: A Toolkit for Health Care Providers was created for health care providers as a reference guide of the requirements for blood lead testing and follow-up procedures for children 6 years of age and younger.

This toolkit was developed by the Marion County Public Health Department's Lead Poisoning Prevention Program and contains additional information from the Centers for Disease Control and Prevention (CDC), the American Academy of Pediatrics (AAP) and Indiana Lead and Healthy Homes Division.

Section I contains information for health care providers regarding the significance of blood lead levels in the pediatric population, the current guidelines pertaining to lead screening, reporting of blood lead levels and case management of children with elevated blood lead levels.

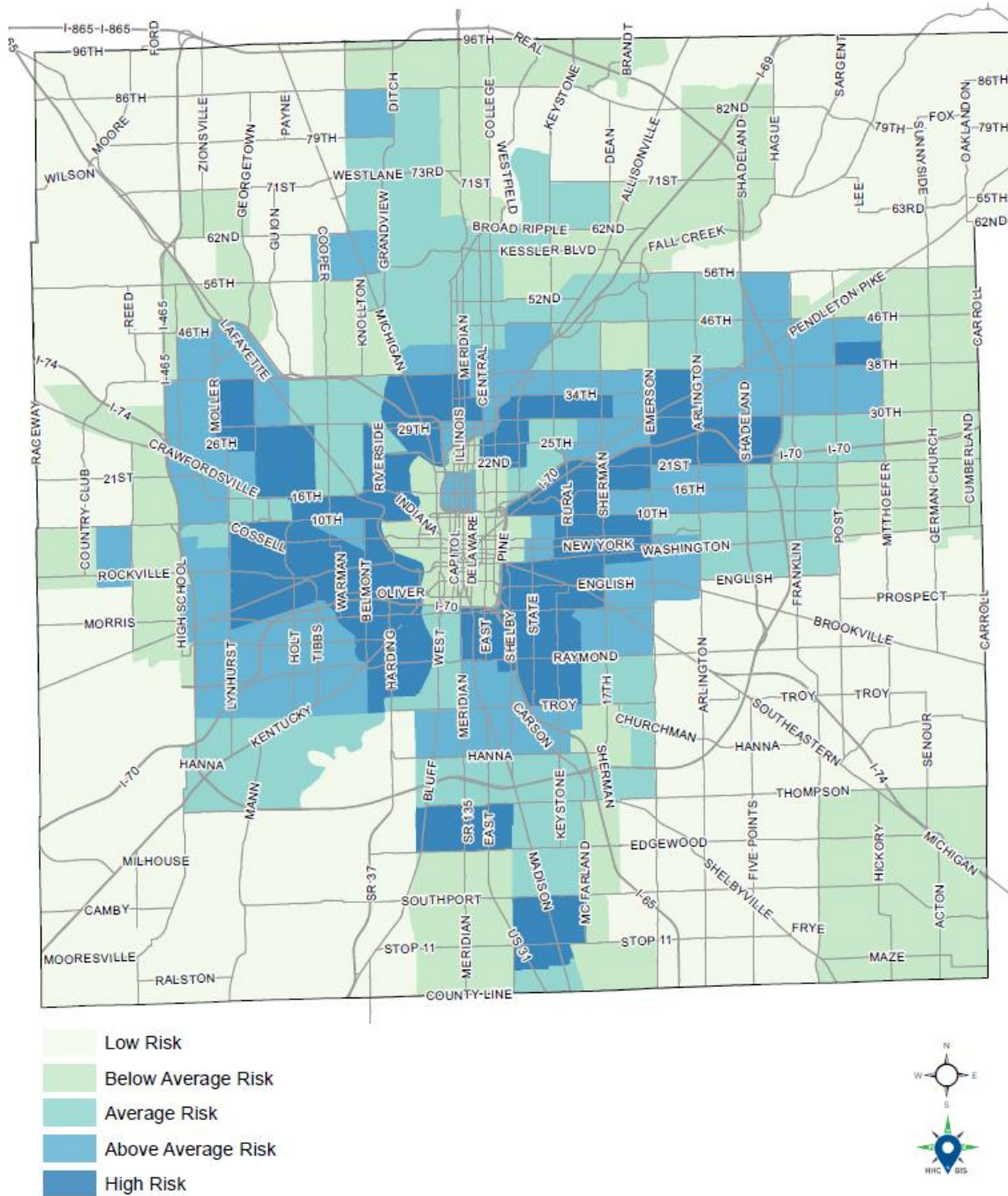
Section 2 contains educational materials that can be printed and distributed to parents and guardians. These materials are designed to help health professionals in providing anticipatory guidance and counseling about the danger of lead poisoning.

- In 2016, only **10%** of children ages 0 to 6 years were screened for elevated blood lead levels in Indiana. This rate was an increase from 2015 when only **7%** of children under 6 years old were screened.
- In 2016, a total of 2,024 of the children tested had at least one blood lead level at or above the CDC reference value of $5\mu\text{g}/\text{dl}$.
- Of those screened, **177** had a confirmed blood level of $10\mu\text{g}/\text{dL}$ or higher.
- **Less than 10%** of children tested reported being Medicaid recipients. Of that subset, **85%** were found to have elevated blood lead levels.



More children 6 years of age and younger need to be tested!

Marion County Lead Risk Index by Census Tracts



Section I: For the Health Care Provider

CDC Update on Blood Lead Levels in Children

- Experts now use a new reference level to identify children with blood lead levels that are much higher than most children's levels. This new level is based on the U.S. population of children ages 1-5 years who are in the highest 2.5% of children when tested for lead in their blood.
- This reference value is based on the 97.5th percentile of the National Health and Nutrition Examination Survey (NHANES)'s blood lead distribution in children. CDC updates the reference value every four years using the two most recent NHANES.
- The reference value means that more children likely will be identified as having lead exposure allowing parents, doctors, public health officials and communities to take action earlier to reduce the child's future exposure to lead.
- Until recently, children were identified as having a blood lead "level of concern" if the test result was 10 ug/dL of lead in blood or higher. CDC is no longer using the term "level of concern" and is instead using the reference value to identify children who have been exposed to lead and who require case management.
- In the past, blood lead level tests below 10 ug/dL of lead in blood may or may not have been reported to parents. The new lower value means that more children will likely be identified as having lead exposure allowing parents, doctors, public health officials and communities to take action earlier to reduce the child's future exposure to lead.
- 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.
- Children can be given a blood test to measure the level of lead in their blood. These tests are covered by Medicaid and most private health insurance. A blood test is the only acceptable sample source for lead testing that is recognized by the CDC.

Key Recommendations & Marion County Public Health Department (MCPHD) Response

CDC Recommendations

CDC should develop and help implement a nationwide primary prevention policy to ensure that no children in the U.S. live or spend significant time in homes, buildings or other environments with lead exposure hazards.

2. Health care providers should provide anticipatory guidance on preventing lead poisoning and assessing the risk for high-dose lead exposure.

3. CDC recommends a lead screening questionnaire used at each routine visit for children age 6 up to 72 months.

4. Primary care providers should test children for elevated lead levels if they live in or visit a home or a child care facility with an identified lead hazard or home built before 1960 that was in poor repair or was renovated in the past 6 months.

Marion County Response

1. MCPHD conducts environmental investigations in residential homes, schools and child care facilities to identify lead hazards. Guidance is provided regarding remediation and abatement options. MCPHD issues notice of violations and enforces housing code standards for lead-safe housing.

2. MCPHD provides education and guidance to local providers regarding lead hazard sources, effects of lead and prevention strategies.

3. MCPHD provides screening questionnaires for provider use at indicated age/risk levels.

4. MCPHD provides capillary lead testing in child care and pre-school settings. A confirmatory (venous) testing is recommended after any elevated lead level. Free clinics are available to perform lead testing for ages 6 months and older.

AAP Recommendations

1. Pediatricians, health care providers, and public health officials should routinely recommend individual environmental assessments of older housing.

2. Primary care providers should provide anticipatory guidance about common sources of environmental lead exposure and ways to reduce exposure.

3. The AAP lead screening questionnaire should be performed at ages 6, 9, 12, 18 and 24 months, and ages 3, 4, 5 and 6 years.

4. Pediatricians and other primary care providers should test asymptomatic children for elevated blood lead concentrations according to federal, local and state (EPSDT) requirements because of the wide variation in lead.

CDC Recommendations

5. It is important to do confirmatory (venous) testing, due to the frequency of capillary blood samples being elevated from residual lead on the skin at the puncture site.

6. Clinicians should ensure that BLL values at or above the reference value are reported to local and state health and/or housing departments and collaborate with these agencies in providing the appropriate services and resources to children and their families.

7. Clinicians should monitor the health status of all children with a confirmed blood lead level (BLL) \geq the reference value for subsequent increase or decrease in BLL until all recommended environmental investigations and mitigation strategies are complete, and should notify the family of all affected children of BLL test results in a timely and appropriate manner

Marion County Response

5. Families may be referred to MCPHD for confirmatory (venous) testing or the confirmatory test may be conducted at the clinician’s office. (See Appendix C for recommended confirmatory testing schedule.)

6. The State of Indiana requires all lead test results regardless of whether elevated blood lead level (EBLL) or not, be reported to the Indiana State Department of Health by whomever is responsible for analyzing the sample. This includes providers with point-of service testing in their offices. Reporting EBLLs to MCPHD is important to initiate case management activities as described below, including lead exposure source identification.

7. The MCPHD will work with the clinician to provide case management and follow-up services to the families. Services include retesting, environmental investigation, nutritional education, developmental and nutritional screening, prevention strategies to lessen exposure to lead, and resource referrals

AAP Recommendations

5. Elevated capillary levels should have confirmation with a venous blood draw since capillary tests can yield frequent false positives.

6. The pediatrician should inform the local or state health department and request an inspection of the child’s house to identify and remediate any lead hazards.

7. For children with EBLLs, primary care providers should work with federal, state and the local health department to ensure that they receive appropriate case management and that a comprehensive environmental inspection is conducted. Screening children for iron deficiency and insufficient dietary calcium intake is also important.

CDC Recommendations

8. Health care providers should check BLL of all refugee children 6 months–16 years of age upon their arrival in the United States (generally within 90 days, preferably within 30 days of arrival). If the child is 6 years old or younger. Also, within 3–6 months post-resettlement, a follow-up blood lead test should be conducted on all refugee children aged 6 months–6 years of age, **regardless of the initial screening BLL result.** Provide daily pediatric multivitamins with iron to all refugee children aged 6 months–6 years of age if presenting poor nutrition or anemia.

Marion County Response

8. MCPHD provides lead testing clinics for refugees and home visits for screening when transportation becomes an issue to get children screened.

AAP Recommendations

8. Immigrant, refugee and internationally adopted children also should be tested for lead concentrations when they arrive in the United States because of their increased risk.

Screening Requirements

Initial sample from a child can be capillary or venous. However, a capillary draw is considered a screening test and a venous draw is considered a **confirmatory test**.

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 if 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 (See Appendix A for high risk area map).

*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 and 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

Examples of Workplaces & Hobbies Using Lead

| | | |
|--------------------------|-------------------------|------------------------|
| Home Maintenance/Repairs | Sculpting | Recycling electronics |
| Renovation/Remodeling | Stained Glass | Recycling Batteries |
| Blowing Glass | Firearms/Firing Range | Painting Roads |
| Gardening | Electronic soldering | Plastics Manufacturing |
| Painting and Ceramics | Making Bullets/Sinkers | Bridge Repair/Painting |
| Metal Casting/Smelting | Auto Mechanics/Bodywork | High Construction Area |
| Metal Work/Welding | Farm/Migrant Farm Work | Scrap Yards |
| Jewelry Making | Furniture Refinishing | |

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, Kandou.

Kentucky Department for Public Health Childhood Lead Poisoning Prevention Program. (2016).



Reporting guidelines

- Medical providers should report all blood lead levels \geq reference value to MCPHDLPP on the Elevated Lead Result Reporting Form (see Appendix B).
- If a result ≥ 45 ug/dl, healthcare provider should immediately call the MCPHDLPP.
- Follow the Schedule for Follow-up Blood Lead Testing chart (See Appendix C Lead Testing & Treatment of Elevated Blood Lead Levels to determine when a child needs a repeated blood lead level test.

Provider's Anticipatory Guidance & Response to Elevated Lead levels

Healthcare providers should encourage families to have their pre 1978 housing tested for lead before an EBLL is identified as well as ensure that patients identified as having EBLL receive appropriate and timely investigations. Interventions should include:

- Review health education and preventive lead poisoning strategies:
 - Discuss with parents: What lead is, the health effects of lead, the importance of follow-up testing and possible sources. Consider the patient's home and other environments in which the child spends time to identify potential sources of lead. Was the home built pre-1978? Are there potential lead-exposures associated with parental occupations and/or hobbies?
 - Assess patient's physical status, including developmental, cognitive, or behavior problems/changes, as well as nutritional status and habits such as placing fingers in mouth or pica.
 - Neurodevelopmental monitoring is important and should be tracked throughout a patient's youth, as some cognitive effects of lead may not be evident until many years after the child's lead level returns below the reference value
- Consider lead poisoning interventions to minimize lead absorption:
 - Certain vitamins and minerals, especially calcium, iron and vitamin C play a specific role in minimizing lead absorption. Regular assessment of the child's nutritional status during well-care can identify children with inadequate intake of calcium, iron, and vitamin C, and allow clinician to proactively recommend supplementation.
 - Patient should be directed to eat several small meals a day, as lead is absorbed at a higher rate when the child's stomach is empty.
 - Iron status evaluation; consider hemoglobin or hematocrit, free erythrocyte protoporphyrin
- Medical interventions should be considered immediately for patients with confirmed lead levels ≥ 45 :
 - Abdominal X-ray (when particulate lead ingestion is suspected) with bowel decontamination if indicated (BLL ≥ 45)
 - Oral chelation therapy; Lead chelation has to be done performed in a safe-lead environment previously checked by the health department housing specialist.
 - Consider hospitalization if lead-safe environment cannot be assured. (BLL ≥ 45)
 - Contact the toxicologist on call at the Indiana Poison Control Center: (800) 222-1222 and the MCPHD Lead Poisoning Prevention Program (317) 221-2155 or emergency line (317) 221-2000.

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* |
| 45-59 | 48 hours |
| 60-69 | 24 hours |
| ≥ 70 | Urgent as emergency test |

*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 siblings 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

Seasonal variation of BLLs exists and may be more apparent in colder climate areas. Greater exposure in the summer months may necessitate more frequent follow ups.

*Some case managers or primary care providers (PCPs) may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL level is not rising more quickly than anticipated.

Marion County Public Health Department Lead Poisoning Prevention Program (LPPP)

The purpose of Marion County Public Health Department Lead Poisoning Prevention Program is to eliminate childhood lead poisoning in Marion County through a comprehensive approach to improve the prevention of lead poisoning and the management of children found to have elevated blood levels.

Activities include:

- Providing lead poisoning education in the community
- Testing homes and consumer products to identify hazards before children are exposed
- Providing blood lead tests primarily for children, pregnant women, and those with jobs or hobbies likely to have exposure to lead hazards
- Assessing home environment for sources of lead exposure
- Enforcing housing code requirements related to lead hazards
- Providing nutritional and developmental screenings
- Providing education to families of children with confirmed elevated lead levels to reduce the lead exposure, limit the amount of lead absorbed, and to combat the negative health effects of exposure
- Monitoring of blood lead levels in children 6 years of age and under
- Making referrals to nutritional and developmental programs and resources

Questions can be directed to Marion County Childhood Lead Poisoning Prevention Program, at (317) 221-2155. Information, including referrals and blood test notifications can be faxed to (317) 221-2296.



Section II: For the Parent

- Actions that may reduce exposure:
 - 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 with a damp cloth.
 - Wet mop floors and stairs once a week or more.
 - Use HEPA filter vacuum to clean up dust and paint chips.

- Factsheets to educate parents and caregivers:
 - "Lead and Children"
 - "Lead Hazards"
 - "Nutrition & Lead Poisoning"



LEAD POISONING



MARION COUNTY
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Lead and Children

Children are at a Special Risk for Lead Poisoning

Is My Child at risk For Lead Poisoning?

The only way to know if your child is poisoned is to get a blood test. Many factors can put your child at risk for lead exposure.

- Living in a home built before 1978
- Spending time in a building built before 1978 with ongoing repair or remodeling
- Attending a daycare built before 1978
- Spending time with a sibling, relative or playmate with lead poisoning
- Spending time with someone who works with lead in a job or hobby (ex: fishing, painting, auto repair)
- Eating or drinking food stored in glazed pottery or leaded crystal
- Using traditional home remedies and imported products (ex. Kohl, Azarcon, Alarcon, Greta, Pay-loo-ah)
- Swallowing or mouthing small metal charms, trinkets and jewelry
- Playing in contaminated soil
- Contact your doctor or the MCPHD to learn about other risks

SYMPTOMS OF LEAD POISONING

Most children with lead poisoning DO NOT look sick. The only way to know if your child has lead poisoning is to get tested. Some children might experience:

- Stomach ache
- Headache
- Trouble paying attention
- Trouble eating or sleeping
- Irritability

LONG-TERM EFFECTS

Lead can affect all parts of the body and mind.

- Lower IQ
- Hearing and speech problems
- Slowed growth and development
- Hyperactivity and attention problems
- Damage to the brain, kidneys and nerves

PROTECTING YOUR CHILD

Remove the lead source and look out for lead hazards.

Lead poisoning occurs when children ingest lead

- Keep your house clean and dust free
- Keep children away from lead paint and dust
- Have your home tested for lead
- Look out for contaminated soil or water
- Avoid imported foods and candies
- Be careful with small metal charms, trinkets and jewelry
- Don't use recalled products and toys

PROVIDE EARLY INTERVENTIONS & STIMULATION

Engaging children in activities may stimulate learning.

- Enroll children in reading programs, play groups, classes and learning activities
- Read to and play games with your child

Adapted from NH Department of Health & Human Services, Division of Public Health Services

Marion County Lead Poisoning Prevention Program

(317) 221-2155 / Emergency # (317) 221-2000

LEAD POISONING



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Lead and Children

What do Blood Lead Levels Mean for Your Child's Health?

Any amount of Lead is dangerous and can cause health and behavior problems at all ages. A blood test is the only way to tell if your child has lead poisoning. A capillary finger stick is quick and can be done in the doctor's office, but it is not as accurate as the venous arm test. Confirm a capillary blood lead test with a venous test

| Blood Lead Level (micrograms/deciliter) | Capillary Or Venous | When to retest | What can I do to help? |
|---|---------------------|---|---|
| <5 | C | Retest annually from the time they crawl to 6 years based on risk | Talk to your child's doctor <ul style="list-style-type: none"> • Feed child foods high in Calcium, Iron and Vitamin C • Wash hands frequently • Clean floor and window sills with disposable wipes or wet mop |
| | V | | |
| 5-9 | C | Retest in 3-6 months if under 3 years, otherwise retest based on risk | Continue with above AND <ul style="list-style-type: none"> • Control known lead hazards • Keep up good nutrition (Calcium, Iron & Vitamin C) • Consider testing other children in the home and pregnant women |
| | V | | |
| 10-19 | C | Confirm within 1 month | Continue with above AND <ul style="list-style-type: none"> • Test siblings younger than 6 years • Ensure child has proper diet • Work with MCPHD for education, case management and environmental assessment • Consider developmental evaluation if elevated blood lead levels persist |
| | V | Retest within 3 months if under 3 years, otherwise retest based on risk | |
| 20-44 | C | Confirm within 1 week | Continue with above AND <ul style="list-style-type: none"> • Remove child from lead hazards |
| | V | Retest every 1-2 months until <20 ug/dL | |
| 45-69 | C | Confirm within 48 hours | Continue with above AND <ul style="list-style-type: none"> • Child needs immediate treatment and may need hospitalization • Ensure child returns to a lead-safe environment |
| | V | Seek immediate medical attention and test weekly afterwards | |
| ≥70 | C V | IMMEDIATE ACTION NEEDED | TAKE CHILD TO HOSPITAL FOR TREATMENT! Then continue with above. |

Marion County Lead Poisoning Prevention Program

(317) 221-2155 / Emergency # (317) 221-2000

LEAD POISONING



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Lead Hazards Looking for Lead Hazards in Your Home

OLDER HOMES

Homes built before 1978 may contain lead paint. Lead paint was banned from residential use in 1978. While not all paint is a lead exposure hazard, the condition or location of lead paint is what puts a child at risk for lead poisoning.

LOOK OUT FOR LEAD

Looking for lead paint in your home

Lead paint was inexpensive, durable and used mostly on:

- Woodwork and trim
- Walls in bathrooms and kitchens
- Doors, windows, baseboards
- Floors and stairs
- Exteriors and porches

MAINTENANCE

Keep paint in good condition.

Follow these guidelines to prevent lead hazards in your home:

- Touch up chipping paint in your home
- Avoid paint removal that makes lead dust
- Watch out for moisture, which causes paint to deteriorate.
- Follow EPA guidelines when doing work on your home
- Renovate/Remodel/Repair using certified lead abatement or Renovation, Repair and Painting (RRP) EPA certified contractors.

LEAD SAFE CLEANING

Proper clean up can reduce lead dust in your home

- Wear gloves when working with lead
- Use a spray bottle with all-purpose cleaner & wet wipes
- Use disposable paper towels— sponges will only spread dust

LEAD PAINT HAZARDS

Simple steps can help reduce the lead hazards in your home. Create a barrier between lead hazards and your family.

- **Lead painted windows are especially dangerous and accessible to children**
 - Cover deteriorated window paint with duct tape or contact paper
 - Keep the lower part of the window closed & only open the top part
- **Opening and closing doors can produce lead dust and paint chips**
 - Put felt bumpers on door edges to prevent banging
 - Cover edges of door with duct tape
 - Remove doors entirely where possible
- **Baseboards are constantly bumped into and easily reached by children**
 - Block access to chipped areas with large furniture
 - Cover chips and cracks with duct tape or contact paper
- **Walking causes paint to wear off floors and stairs and can produce lead dust**
 - Cover floors with area rugs
 - Install a runner on stairs to reduce lead dust
- **People can bring lead dust in from outside on their shoes**
 - Remove shoes when coming inside
 - Put a shoe mat outside to avoid tracking in lead dirt

Adapted from NH Department of Health & Human Services, Division of Public Health Services

Marion County Lead Poisoning Prevention Program

(317) 221-2155 / Emergency # (317) 221-2000

LEAD POISONING



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NUTRITION & LEAD POISONING

The only way to totally prevent lead poisoning and to lower blood lead levels is to remove all sources of lead. However, certain eating habits and cleanliness can influence the amount of lead absorbed by a child.

Regular meals

Feeding your child regular meals and snacks will help his/her body to absorb less lead. An empty stomach absorbs more lead. Children should be fed three meals and two or three snacks each day.

Foods high in iron

If a child has a low body store of iron, the body may absorb more lead. Iron-rich foods should be served at least twice a day. The following foods are rich in iron:

- red meats and poultry • nuts and sunflower seeds • raisins, dates and prunes
- oysters, clams and mussels • fish, tuna and salmon • green leafy vegetables
- dried beans and peas • iron-fortified cereals



Talk to your doctor/nurse/nutritionist for age-appropriate foods for your child.

Foods high in calcium

Foods high in calcium also help the body to absorb less lead. Serve foods high in calcium at least three times each day. Foods rich in calcium include the following:

- milk and milk products • calcium-enriched orange juice • yogurt
- calcium-fortified tofu • cheese and cottage cheese • salmon with bones



Foods high in vitamin C

Vitamin C helps the body to absorb iron and calcium. Foods that contain vitamin C should be served at least once each day. Some foods that are high in vitamin C include the following:

- oranges • tomatoes • strawberries • potatoes • tangerines • sweet potatoes
- grapefruit • lemons • broccoli • limes • kiwi fruit • cantaloupe



Good hygiene

Staying clean is also important in protecting children against lead poisoning.

- Wash a child's hands, face and mouth often, especially before meals.
- Wash bottle nipples, pacifiers and toys that are placed in children's mouths often.
- Keep children's fingernails short so lead dust cannot be easily trapped.
- No 30-second rule! Food that has been dropped should be discarded. Eat from a clean surface.



Red: Areas most frequently missed during hand washing
Blue: Less frequently missed
Orange: Not missed

Marion County Lead Poisoning Prevention Program

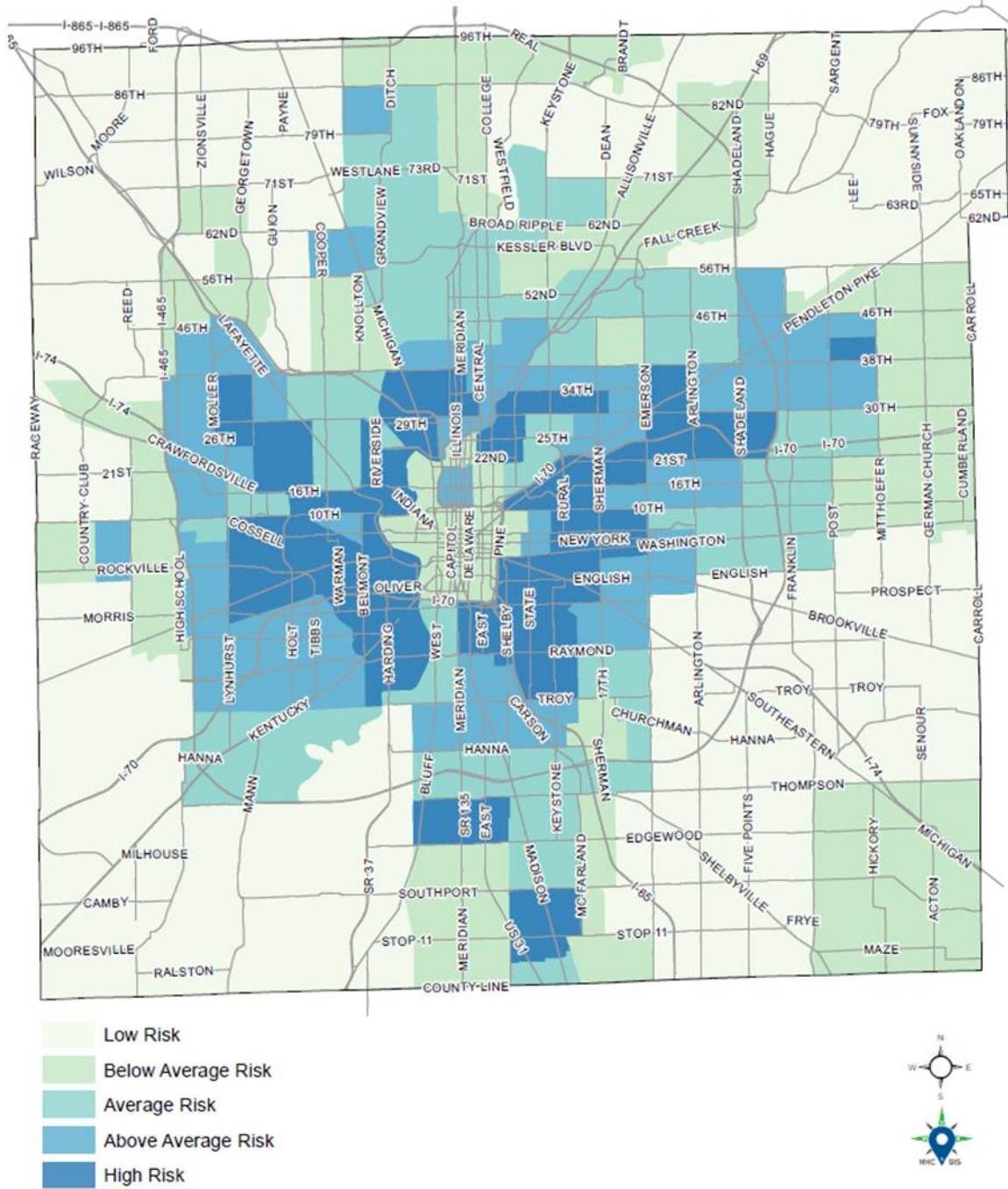
(317) 221-2155 / Emergency # (317) 221-2000

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Appendix A

Marion County Lead Risk Index by Census Tracts



Appendix B
Elevated Lead Result Reporting Form



Healthy Homes Environmental
Consumer Management & Senior Care
3901 Meadows Dr / Indianapolis IN 46205
PH 317-221-2155 / FAX 317-221-2296
www.mchd.com

Elevated Blood Lead Test Result Notification

For use to notify Marion County Public Health Department of all verified and non-verified lead levels ≥ 5 ug/dL for coordination of care and environmental and clinical case management follow-up. Please, fax completed form to 317.221.2296. If result is ≥ 45 ug/dL, please call immediately at 317-221-2155.

Provider Information

Notification Sent by: _____ Date of Report: _____

Provider Name: _____ Phone Number: _____

Provider Address: _____

Patient Information

Patient Name: _____
First Last

Patient Date of Birth: _____ Sex: M or F Race: _____

Medicaid #: _____

Parent/Guardian: _____
Name Relationship to Patient

Address: _____
Street City Zip Code

Phone Numbers: _____
Home Cell Work

Emergency Contact Name: _____ Phone Number: _____

Test Information

Date of test /blood draw: _____ Test result: _____

Sample Type (circle one): Venous or Capillary

Reason for Test (circle one): Routine or Confirmatory

If routine, has a confirmatory test been performed or scheduled? (circle one): Yes or No Date: _____

If confirmatory, please provide the initial elevated lead test's Date: _____ Test result: _____

Appendix C
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

Seasonal variation of BLLs exists and may be more apparent in colder climate areas. Greater exposure in the summer months may necessitate more frequent follow ups.

*Some case managers or primary care providers (PCPs) may choose to repeat blood lead tests on all new patients within a month to ensure that their BLL level is not rising more quickly than anticipate