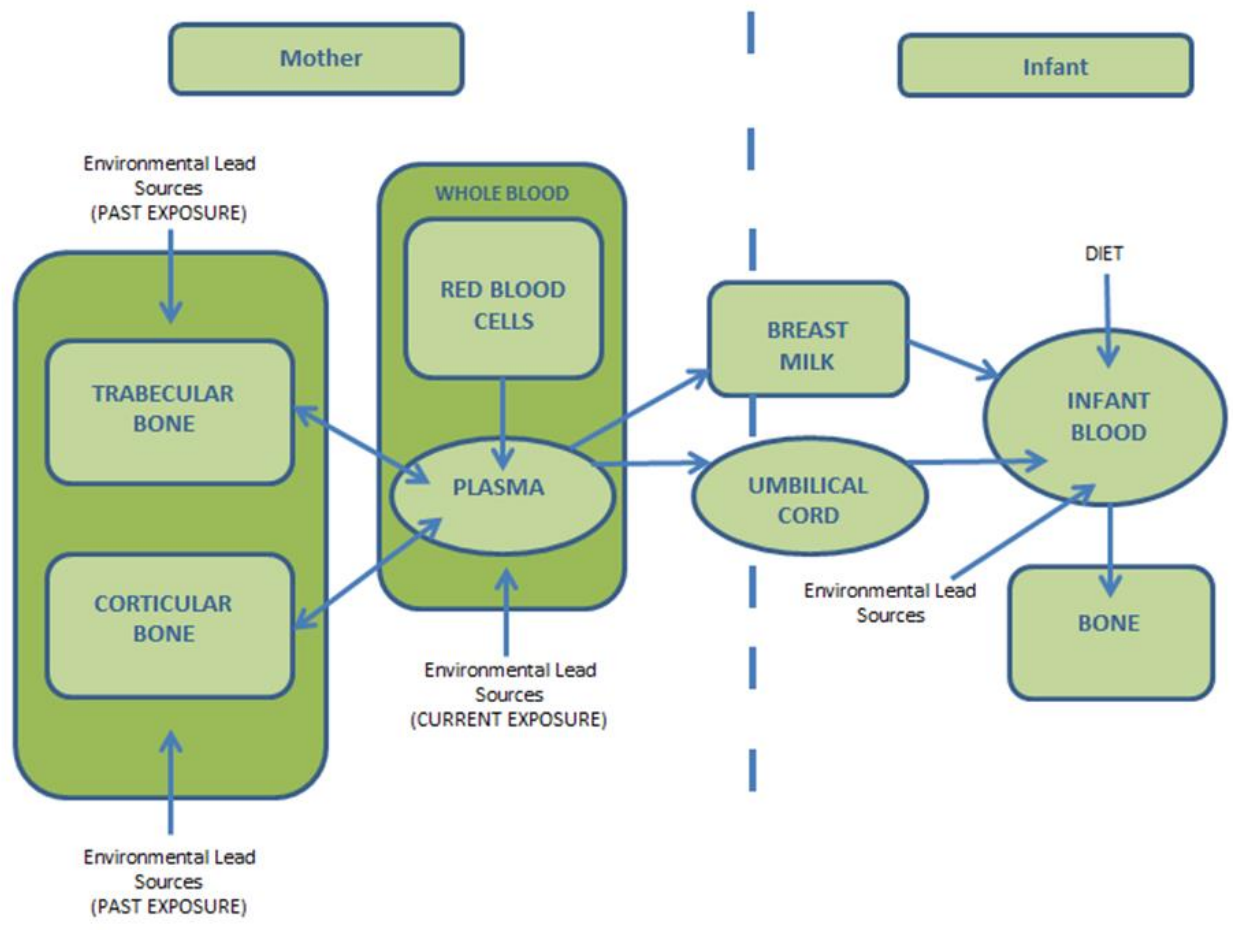




KEY POINTS

- ❖ Lead exposure remains a public health problem for certain groups of women of childbearing age and for the developing fetus and nursing infant. Prenatal lead exposure is known to influence maternal health and infant birth and neurodevelopmental outcomes.
- ❖ Among women who have had prior lead exposure, lead can be released from the bones and into maternal blood and breast milk and adversely affect the fetus or newborn.
- ❖ Certain groups of women who are at particularly high risk for lead exposure include: workers in certain occupations; foreign-born recent immigrants; and those practicing certain behaviors associated with lead exposure, such as pica or renovation of older homes.
- ❖ It is important to identify pregnant women with a history of lead poisoning or who are currently exposed to lead above background levels. Preventing additional lead exposure can help reduce the risk of adverse health outcomes in these children.
- ❖ Recent epidemiologic cohort studies suggest that prenatal lead exposure, even with maternal blood lead levels below 10 µg/dL, is inversely related to fetal growth and neurodevelopment independent of the effects of postnatal exposure



Lead Screening Criteria

Consider conducting (or referring for) a blood lead screening/test if the pregnant woman answers yes to any of the following high risk criteria.

Are you or do you have a recent history of:

- ❖ A recent immigrant
- ❖ Living near a point source of lead, such as lead mines, smelters, or battery recycling plants
- ❖ Living in a high-risk zip code
- ❖ Working with lead or living with someone who does
- ❖ Using lead-glazed ceramic pottery
- ❖ Eating nonfood substances (pica)
- ❖ Anemic or having calcium deficiency
- ❖ Using alternative or complementary medicines, herbs, or therapies
- ❖ Using imported cosmetics or certain food products
- ❖ Engaging in certain high-risk hobbies or recreational activities
- ❖ Renovating or remodeling older homes
- ❖ Consuming lead-contaminated drinking water
- ❖ Living with someone identified with an elevated blood lead level

Do you have a history of prior lead exposure or evidence of elevated body burden of lead?

Fetal exposure to lead through maternal bone lead mobilization is possible for women with significant prior lead exposure.

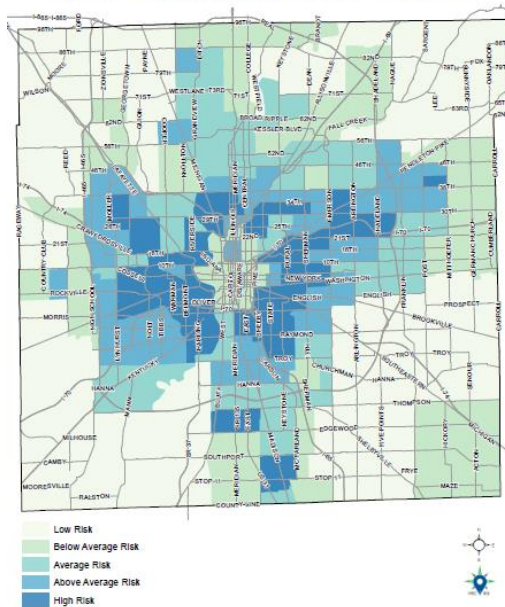
Folk, ethnic and/or cultural lead-materials

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

Marion County Lead Risk Index by Census Tracts



Marion County High Risk Zip Codes

- | | |
|-------|-------|
| 46201 | 46218 |
| 46203 | 46222 |
| 46205 | 46227 |
| 46208 | |

Occupations and hobbies

- Antiquing
- Home maintenance/repairs
- Renovation/remodeling
- Blowing Glass
- Gardening
- Painting and ceramics
- Metal casting/smelting
- Metal work/welding
- Bridge Repair
- Scrapping
- Jewelry making
- 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



Recommendations to Reduce Lead Exposure

- ❖ Never eat or mouth nonfood items, such as clay, soil, pottery or paint chips.
- ❖ Avoid jobs or hobbies that may involve lead exposure and take precautions to avoid take-home lead dust if a household member works with lead.
- ❖ Avoid using imported lead-glazed ceramic pottery and pewter or brass containers or utensils to cook, serve, or store food.
- ❖ Avoid using leaded crystal to serve or store beverages.
- ❖ Do not use dishes that are chipped or cracked.
- ❖ Stay away from repair, repainting, renovation and remodeling work being done in homes built before 1978.
- ❖ Avoid exposure to deteriorated lead-based paint in older homes.
- ❖ Avoid alternative cosmetics, food additives and medicines imported from overseas that may contain lead, such as azarcon, kohl, kajal, surma, and many others (See Examples of Lead Exposure Sources list)
- ❖ Use caution when consuming candies, spices and other foods that have been brought into the country by travelers from abroad.
- ❖ Eat a balanced diet with adequate intake of iron, vitamin C and calcium

Management of Pregnant and Lactating Women With Elevated Lead Levels

For women with prenatal blood lead levels $\geq 5 \mu\text{g/dL}$:

- ❖ Attempt to determine source(s) of lead exposure and counsel patients on avoiding further exposure (see above), including identification and assessment of pica behavior.
- ❖ Refer to Marion County Public Health Department (MCPHD) for a home risk assessment to determine source of exposure.
- ❖ Assess nutritional adequacy and counsel on eating a balanced diet with adequate intake of iron and calcium.
- ❖ Perform confirmatory and follow-up blood lead testing according to the recommended schedules
- ❖ For occupationally exposed women, review the proper use of personal protective equipment and consider contacting the employer to encourage reducing exposure.

For women with prenatal blood lead levels of $10\text{--}44 \mu\text{g/dL}$, ALL OF THE ABOVE, PLUS:

- ❖ Notify Lead Poisoning Prevention Program of MCPHD if BLLs are $\geq 10 \mu\text{g/dL}$.
- ❖ Refer occupationally exposed women to occupational medicine specialists and remove from workplace lead exposure.

For women with prenatal blood lead levels $\geq 45 \mu\text{g/dL}$, ALL OF THE ABOVE, PLUS:

- ❖ Treat as high-risk pregnancy and consult with an expert in lead poisoning on chelation and other treatment decisions.

Follow-Up Testing Schedules for Elevated Blood Lead Levels (EBLLs)

During Pregnancy

Blood Lead Level	Perform Venous Follow-Up Tests
<Reference value ug/dL	Retest at beginning of 3 rd trimester
Reference value – 14 ug/dL	Within 1 month
15-24 ug/dL	Within 1 month and then every 2-3 months
25-44 ug/dL	Within 1-4 weeks and then every month
≥45 ug/dL	Within 24 hours then at frequent intervals

Neonate (<1 Month of Age)

Blood Lead Level	Perform Follow-Up Tests
<Reference value ug/dL	According to local lead screening guidelines
Reference value – 24 ug/dL	Within 1 month (at first newborn visit)
25-44 ug/dL	Within 2 weeks
≥45 ug/dL	Within 24 hours

Infants (<6 Months of Age)

Blood Lead Level	Perform Follow-Up Tests	After BLL Begins to Decline
<Reference value ug/dL	According to local lead screening guidelines for children	
Reference value – 14 ug/dL	3 months	Within 6-9 months
15-19 ug/dL	1-3 months	Within 3-6 months
20-24 ug/dL	1-3 months	Within 1-3 months
25-44 ug/dL	2 weeks – 1 month	Within 1 month
≥45 ug/dL	Within 24 hours	As directed by clinician managing chelation treatment

According to the Centers for Disease Control and Prevention, a toxicological threshold for adverse health effects has not been identified. Follow-up blood lead testing is recommended for pregnant women with blood lead levels equal to or greater than the reference value (currently 5 ug/dL) and their newborn infants to inform environmental and clinical decision-making.

Blood lead testing available at:

3901 Meadows Dr., 1st floor
 Indianapolis, IN 46205
 Walk-ins Welcome
 Thursdays - 12 p.m. to 4:30 p.m.

2535 Stop 11 Road Lead Clinic
 Indianapolis, IN 46217
 By Appointment Only
 Call 317-221-2155 to make an appointment

**For lead risk assessments, consumer product testing or other questions, contact:
 MCPHD Lead Poisoning Prevention Program at Ph. 317-221-2155**