



Don't Be Mis-Lead!

Protecting Our Children,
Family and Community

Pathways to Lead
October 30, 2025



Get Informed.
Be Empowered.
Stay Safe.

Mission: Join the progress
against childhood lead
poisoning.

Welcome



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WEBINAR PATHWAYS TO LEAD EXPOSURE DON'T BE MIS-LEAD PROTECT YOUR CHILD & FAMILY



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Lead & Children's Health



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Dedicated to ending childhood lead poisoning through action, research, advocacy, and education.

ABOUT LARC Foundation

**Get Informed,
Be Empowered,
Stay Safe.**

**Join the progress against
childhood lead poisoning.**



ABOUT LARC Foundation



- The Lead Abatement Resource Center Foundation (LARC Foundation) is an independent nonprofit organization (501c3) dedicated to eliminating positive blood levels in children. We do this through education, advocacy, and research on the child, the family, and the community.
- In children especially, a positive blood lead level can result in cognitive impairment and a lifetime of mental and physical health challenges. There is no acceptable level of lead exposure.
- Today, we are engaged in a broad lead awareness campaign focused on communities where there is a known propensity of measured blood lead levels in children. Our program framework describes the primary sources of lead contamination; offers practical prevention methods, and identifies resources for testing, evaluation, care, and if necessary, remediation.
- The LARC “framework” addresses public health, healthcare, and environmental issues.
- We are evaluating, implementing, advocating, educating, and researching effective solutions to all types of lead hazards in the environment through cooperative partnerships with community groups, government agencies, businesses, and individuals.



Sources

Learn about the sources of lead in the environment.



Exposure

Learn about how humans acquire lead in their systems.



Health

Learn about the health issues caused by lead poisoning.



Social Costs

Private and external social costs associated with lead poisoning.



Technology

Available remedies and vendors available to execute these services.



Science

Discover potential remedies and pending research.

Our Goal – Don't Be Mis-Lead!

- **Awareness:** helping individuals, families and communities understand the physical and mental consequences of lead exposure, especially in children.
- **Identification:** Communicating evidence on the sources of lead exposure, including: water, soil, dust, air, food and manufactured products. Sharing best practices on the benefits of periodic testing.
- **Prevention:** Sharing evidence-based information on ways to prevent lead exposure in a broad variety of areas including the environment, the home, the workplace, gardens and common areas.



Point of Authority



- Lead has long been recognized as hazardous to humans.
- Exposure (to lead) is associated with numerous health effects; including both physical and neurological function.
- Particularly harmful to fetal development and young children.
- All major health organizations (CDC, WHO, EPA) have now determined that there is NO safe level for lead exposure.



Don't Be Mis-Lead - Pathways to Lead -
Protecting Our Children, Family &
Community

So, Why the Concern About Lead?

“If you want to save lives and improve outcomes, this turns out to be one of the best places to do it.”

Atul Gawande, MD, MPH

Administrator for Global Health, US Agency for Int Development



Lead & Children's Health

Anita Stewart
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Pediatrician
Public Health Specialist
Clinical Advisor



Lead Exposure and Lead Poisoning

Susan Buchanan, MD, MPH

University of Illinois at Chicago School of Public Health

October 2025

Disclaimer & Acknowledgement

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- The findings and conclusions in this presentation have not been formally disseminated by CDC/ATSDR or EPA and should not be construed to represent any agency determination or policy. Use of trade names that may be mentioned is for identification only and does not imply endorsement by the CDC/ATSDR or EPA.

Lead

- Latin: *plumbus*
- Lead poisoning: plumbism



Lead in Paint and Gasoline



- More than 80% of U.S. housing built before 1978 contains lead paint



- Lead was added to gasoline from 1923 – 1996



- Lead used in plumbing until 1986



**59% of Chicago homes were
built before 1950**

Children – our canaries in the coal mine

- Increased breathing: **400** vs **150** mL/min per kg
- Increased food intake: **45** vs **10-15** gm/kg/day
- Water: **28** vs **5-10** gm/kg/day



<http://www.alamy.com/stock-photo/national-coal-mining-museum.html>

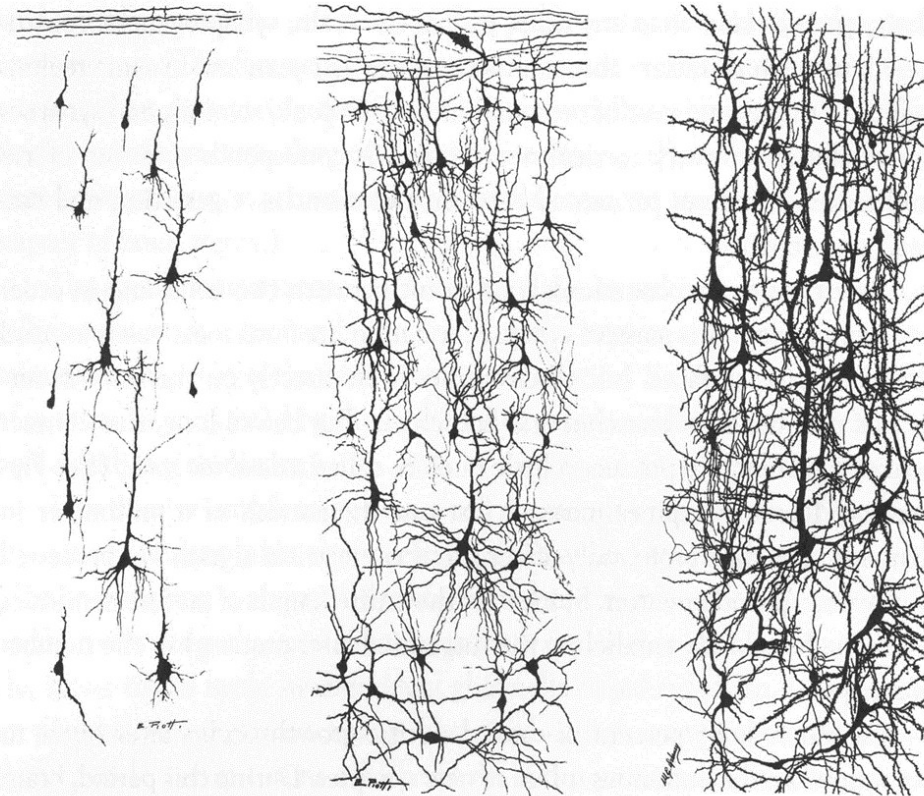


<http://performancejourneys.com/what-are-your-canaries-in-the-coal-mine/>



Museum of Cannock Chase

The developing brain



Newborn

3-month-old

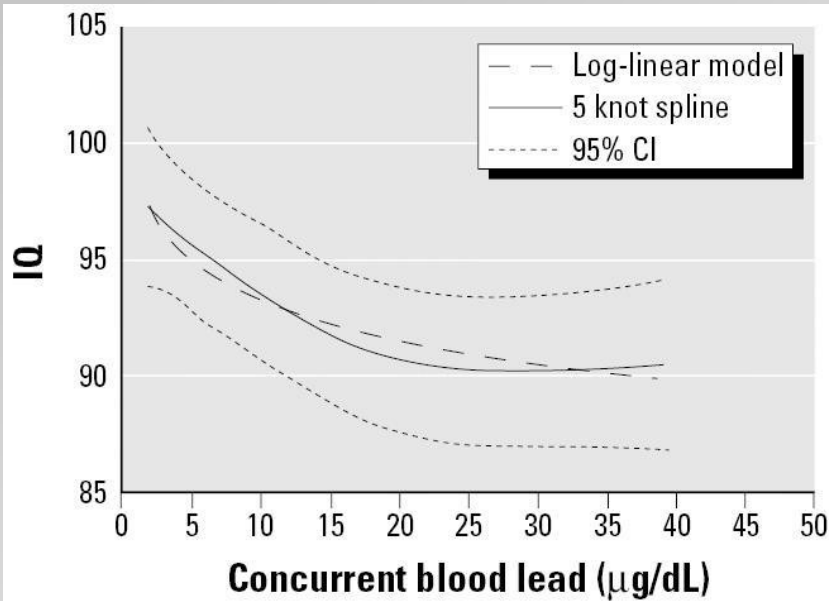
2-year-old

“What’s Going on in There? : How the Brain and Mind Develop in the First Five Years of Life” L Eliot 2000, pg 28

Other Sources



Effects of BLLs 2.5 to 30 $\mu\text{g}/\text{dL}$



- Pooled analysis, 7 studies

- N= 1,333

- Increase in lead:

- from 2.4 to 10 $\mu\text{g}/\text{dL}$ → ↓ 3.9 IQ pts (95% CI, 2.4-5.3)
- from 10 to 20 $\mu\text{g}/\text{dL}$ → ↓ 1.9 (95% CI, 1.2-2.6)
- from 20 to 30 $\mu\text{g}/\text{dL}$ →
 - ↓ 1.1 (95% CI, 0.7-1.5)

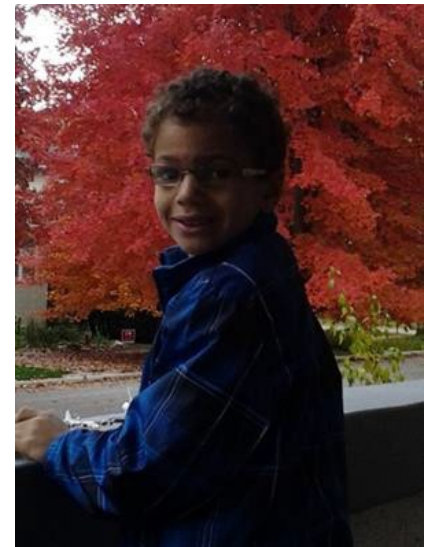
Lanphear et al, *Environ Health Perspect.* 2005 July; 113(7): 894–899.

National Toxicology Program

At mean blood lead levels < 5ug/dl

Sufficient evidence for:

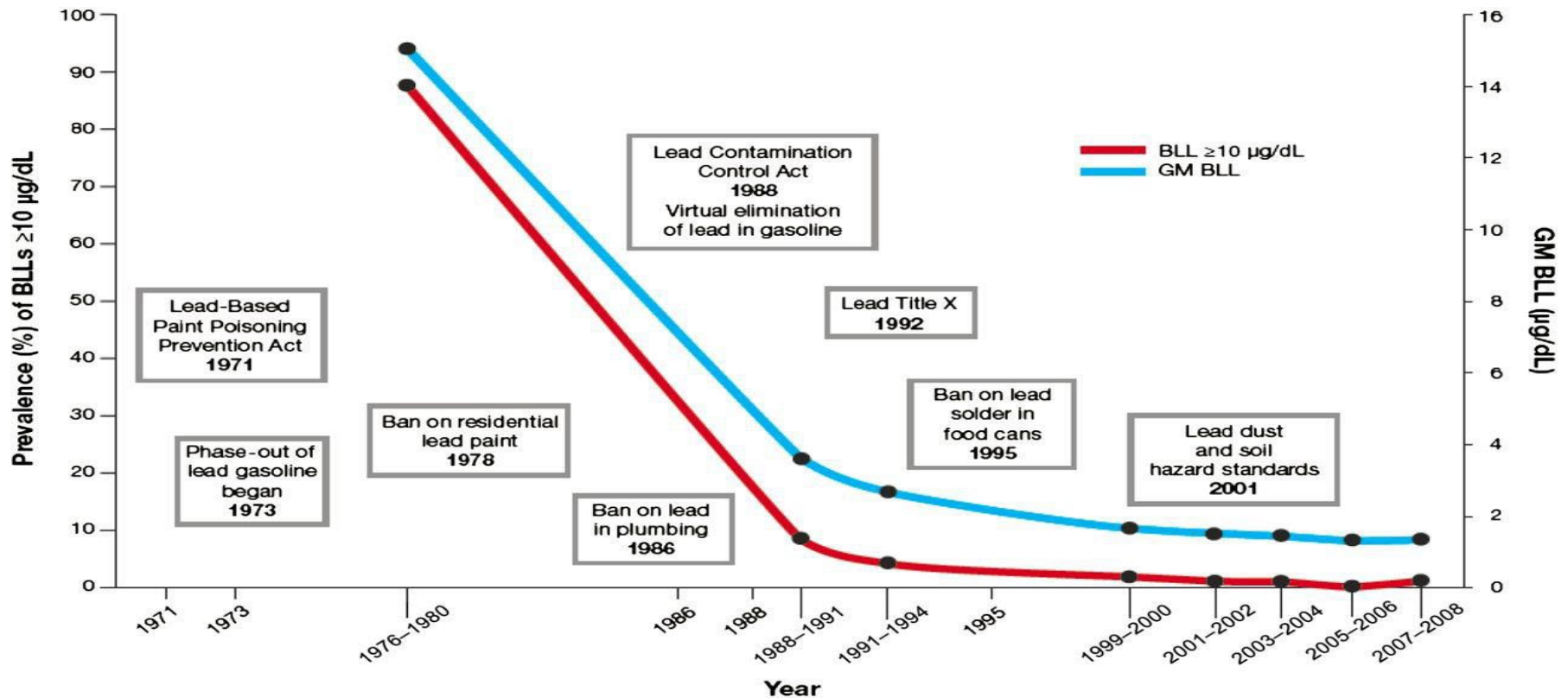
- *Attention-related problems*
- *Greater incidence of problem behaviors*
- *Decreased cognitive performance*



National Toxicology Program Monograph on Health Effects of Low-Level Lead 2012

Timeline of Lead Poisoning Prevention Policies and Blood Lead Levels in Children

Aged 1–5 years, By Year—NHANES, United States, 1971–2008



COUNCIL ON ENVIRONMENTAL HEALTH Pediatrics
2016;138:e20161493

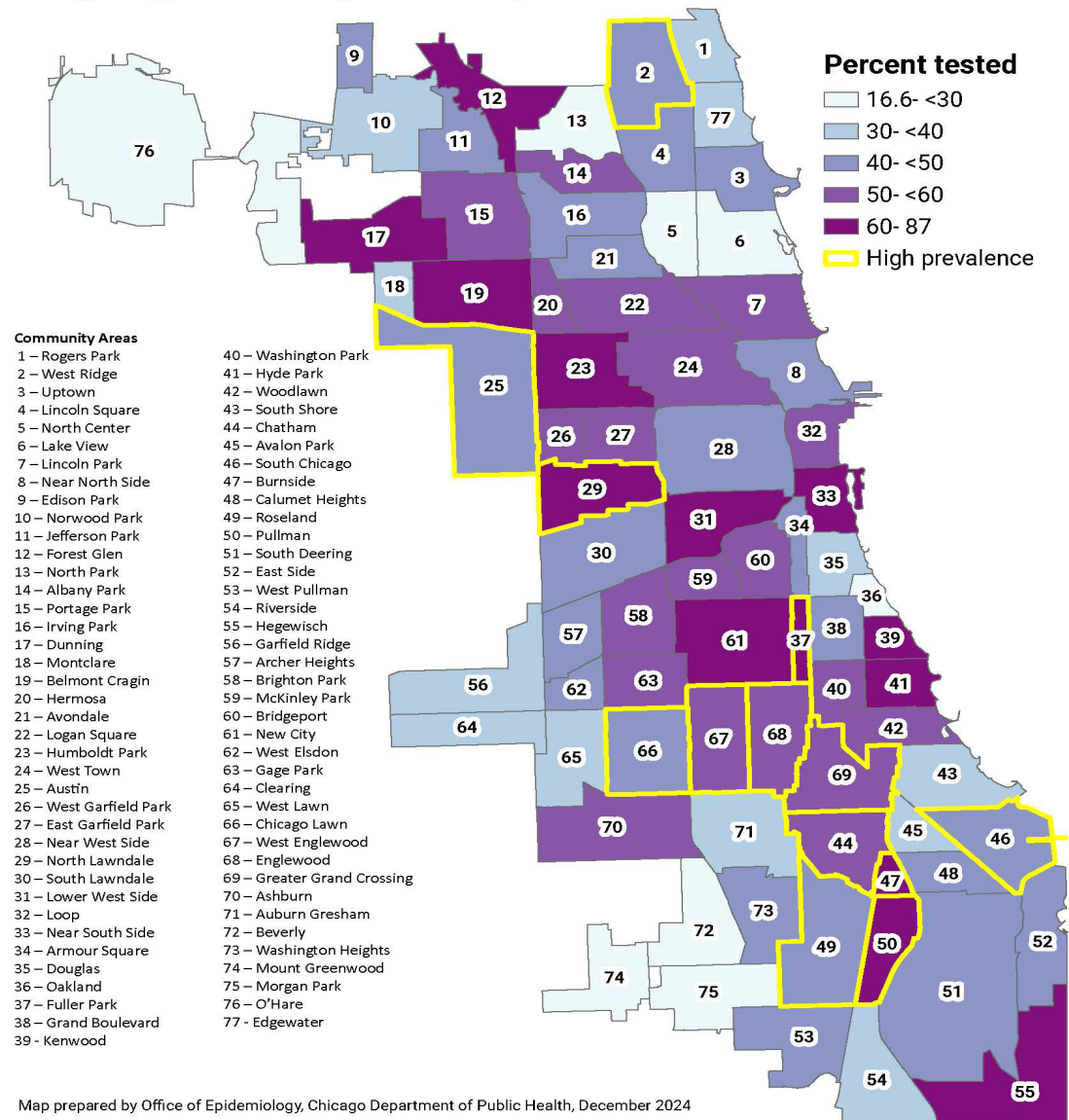
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PEDIATRICS®

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Blood lead testing coverage in neighborhoods with high prevalence ($\geq 3\%$) of elevated blood lead levels ($5+ \text{ mcg/dl}$), 1 and 2 year olds, 2023

Lead Poisoning is an Equity Issue



Map prepared by Office of Epidemiology, Chicago Department of Public Health, December 2024

When to get a blood lead test



State of Illinois
Illinois Department of Public Health

Childhood Lead Risk Questionnaire



STATE LAW REQUIRES:

All children 6 years of age or younger must be evaluated for lead exposure.

All children must be assessed for risk of lead exposure and tested if necessary for enrollment into daycare, preschool, and kindergarten.

Complete the Childhood Lead Risk Questionnaire during a well-child or health care visit for children ages 12 and 24 months of age (at minimum) and once a year at annual well-child-visits at ages 3, 4, 5, and 6 years.

- If responses to all the questions are “NO,” re-evaluate at next age referenced above or more often if deemed necessary.
- If any response is “YES” or “DON’T KNOW,” a blood lead test must be obtained.
- If there are any “YES” or “DON’T KNOW” answers **and**
 - ✓ previous blood lead testing was done at 12 and 24 months of age with a result of 4.9 µg/dL or less OR if not performed at 12 and 24 months, a blood lead test was performed at 3, 4, 5, or 6 years of age with a result of 4.9 µg/dL or less, and
 - ✓ there has been no change in address of the child’s home/residential building, child care facility, school, or other frequently visited facilities and
 - ✓ risks of exposure to lead have not changed, further blood lead tests are not necessary.

<https://dph.illinois.gov/content/dam/soi/en/web/idph/files/forms/childhoodleadriskquestionnaire.pdf>



Childhood Lead Risk Questionnaire

STATE LAW REQUIRES:

All children 6 years of age or younger must be evaluated for lead exposure.

All children must be assessed for risk of lead exposure and tested if necessary for enrollment into daycare, preschool, and kindergarten.

Respond to the following questions by circling the appropriate answer.

RESPONSE

1. Does this child reside or regularly visit a home/residential building, child-care setting, school or other facility built before 1978 or in a high risk ZIP code area?
(see reverse side of page for high risk ZIP code area list) ☐ Yes ☐ No ☐ Don't Know
2. Is this child eligible for or enrolled in Medicaid, All Kids, Head Start, WIC, or any HFS medical program?
***All Medicaid-eligible children and children enrolled in HFS medical programs shall have a blood lead test at 12 and at 24 months of age. If a Medicaid-eligible child or HFS medical program enrolled child between 36 months and 72 months of age has not been previously tested, a blood lead test shall be performed. ☐ Yes ☐ No ☐ Don't Know
3. Does this child have a sibling with a confirmed blood lead level of 5 µg/dL or higher? ☐ Yes ☐ No ☐ Don't Know
4. In the past year, has this child been exposed to repairs, repainting, or renovation of a building/home built before 1978? ☐ Yes ☐ No ☐ Don't Know
5. Is this child a refugee, adoptee, or recent visitor of any foreign country? ☐ Yes ☐ No ☐ Don't Know
6. Is this child frequently exposed to imported items (such as, ayurvedic medicine, folk medicines, cosmetics, toys, glazed pottery, spices or other food items, sindoor, or kumkum)? ☐ Yes ☐ No ☐ Don't Know
7. Does this child live with someone who has a job or a hobby that may involve lead (for example; jewelry making, building renovation, bridge construction, plumbing, furniture refinishing, work with automobile batteries or radiators, lead solder, leaded glass, bullets, lead fishing sinkers, or recycling facility work)? ☐ Yes ☐ No ☐ Don't Know
8. If the child is younger than 12 months of age, did the child's mother have a past confirmed blood lead level of 5 µg/dL or higher? ☐ Yes ☐ No ☐ Don't Know



State of Illinois
Illinois Department of Public Health

Pediatric Lead Poisoning High-Risk ZIP Code Areas

The ** indicates that any ZIP code within a county with the preceding numbers is considered high risk

Adams	61877	60415	61930	62934	62030	Lake	62014	60156	61064	Rock Island	62438	62878
62301	61878	60419	61941	62954	62031	60002	62023	60180	61068	61201	62444	62886
62305	61880	60422	61942	62979	62037	60010	62033	McLean	61084	61232	62462	62895
62320	Christian	60425	61953	62984	62052	60015	62069	61701	61091	61236	62463	White
62324	62083	60426	61956	Greene	62063	60020	62079	61720	Peoria	61237	62465	62820
62325	625**	60428	DuPage	620**	Jo Daviess	60030	62085	61722	61451	61239	62534	62821
62338		60429	60101	Grundy	61001	60035	62088	61724	61517	61240	62553	62827
62339	Clark	60430	60106	60407	61025	60040	62093	61725	61523	61242	62565	62835
62346	62420	60438	60126	60416	61028	60041	62626	61726	61526	61244	62571	62844
62347	62441	60443	60137	60424	61036	60042	62630	61728	61529	61256	Stark	62861
62348	62442	60445	60139	60437	61041	60044	62640	61730	61533	61257	614**	62862
62349	62474	60452	60143	60444	61059	60045	62649	61731	61536	61259	Stephenson	62869
62351	62477	60453	60148	60447	61075	60046	62667	61732	61539	61264	610**	62887
62359	62478	60455	60157	60447	61085	60048	62672	61736	61547	61265	Tazewell	Whiteside
62360	62434	60456	60172	60450	61087	60060	62674	61737	61552	61266	61534	610**
62365	628**	60457	60181	60474	Johnson	60061	62685	61744	61559	61278	61535	61230
62376		60458	60184	60479	61087	60064	62686	61745	61562	61279	61550	61243
Alexander	Clinton	60459	60185	Hamilton	62908	60073	62690	61748	61569	61282	61554	61250
62914		62215	60461	62817	62912	60084	Madison	61752	6160*	61284	61555	61251
62957		62216	60464	62828	62923	60085	62001	61753	61614	St. Clair	61564	61252
62969		62218	60465	62829	62939	60087	62002	61754	61615	62059	61568	61261
62988		62219	60466	62859	62943	60088	62010	61761	61616	62201	61571	61270
62990		62230	60469	62860	62967	60096	62018	61770	Perry	62202	61610	61277
Bond		62245	60471	Hancock	62972	60099	62021	61772	622**	62203	61611	61283
62086		62250	60472	61450	62985	LaSalle	62024	61774	62832	62204	61721	Will
62246		62253	60473	60517	62995	60470	62025	61776	62888	62205	61733	60401
62262		62265	60475	60519	Kane	60518	62034	Menard	62997	62206	61734	60403
62273		62266	60476	60521	62919	60531	62035	62613	Platt	62207	61747	60408
62275		62293	60477	60523	62931	60549	62040	62642	61813	62208	61755	60410
62284		Coles	60478	60527	62982	60551	62046	62673	61818	62220	61759	60417
Boone		61912	60480	60532	Henderson	60121	60557	62048	62675	62221	Union	60421
61008		61920	60482	60555	614**	60123	62058	62688	61830	62223	62905	60432
61011		61931	60487	60559	Henry	60144	62060	62061	61854	62225	62906	60433
61012		61938	60501	Edgar	61234	60151	61321	62061	61855	62226	62920	60434
61038		61943	60513	619**	61233	60174	61325	62067	61856	62232	62926	60435
61065		62440	60525	Edwards	61235	60177	61332	62074	61929	62239	62952	60436
Brown		62469	60526	62476	61238	60505	61334	62084	61936	62240	62961	60440
623**		Cook	60534	62806	61241	60506	61341	62087		62243	62998	60446
Bureau		60004	60546	62815	61254	60507	61342	62090	Pike	62254	Vermillion	60449
613**		60005	60558	62818	61258	60510	61348	62095	623**	62255	609**	60468
Carthage		60007	606**	62833	61262	60511	61350	62097	Pope	62257	609**	60481
		60701	60701	62833	61262	60511	61354	62295	62295	62295	61810	

Full list: <https://dph.illinois.gov/topics-services/environmental-health-protection/lead-poisoning-prevention/families-of-lead-exposed-children/pediatric-highrisk-zip-codes.html>

In Chicago

Universal Testing: 12 & 24 months, 36 months if child lives in Chicago

All children in Chicago should be tested for lead at:



How to Reduce Risk of Lead Exposure

- Cover areas with peeling paint
- Dust control: use wet cleaning methods frequently for floors, windowsills, toys, pacifiers, bottles, and children's hands
- Take off shoes when entering the home
- Shower or change clothing and shoes before returning home after work that involves lead

Remember these are all temporary reductions, so identification of sources and repair/removal of sources is crucial for definitively lowering exposures



Screening Guidelines – CDC 2010

- If the pregnant woman is at risk for lead exposure, check lead at first prenatal visit
- Additional evaluations & counseling for women with BLL of 5 µg/dL or higher
- Recommendations for breast feeding based on mother's blood lead level

www.cdc.gov/nceh/lead/publications/LeadandPregnancy2010.pdf



Illinois Department of Public Health

Respond to the following questions by circling the appropriate answer.

1. Do you live in a house built before 1978 with recent or ongoing renovations that generate dust from sanding and scraping, or have chipping, peeling, or deteriorating paint?
2. Have you ever had a blood lead level $\geq 3.5\mu\text{g/dL}$?
3. Do you live with someone who has an elevated blood lead level?
4. Do you crave or have you eaten non-food items during this pregnancy (Pica)? (Such as clay, soil, pottery, plaster or paint chips.)
5. Do you have or have you had any oral piercings? (Oral piercing jewelry may contain lead)
6. Do you use any products made outside of the United States such as cosmetics, herbal remedies, ceremonial powders, or food products? (Sindoor, kumkum, Ayurvedic products, tumeric)
7. Do you use glazed or painted pottery, china, or leaded crystal made outside of the United States to store food or drink?
8. Do you or others in your household have an occupation, hobby or activity which may result in lead exposure? Such as, jewelry making, building renovation or repair, bridge construction, plumbing, furniture refinishing, or work with automobile batteries or radiators, lead solder, leaded glass, lead shot, bullets, or lead fishing sinkers.
9. Were you born in a country outside of the United States or have you spent any time outside of the United States during the past 12 months?
10. Has the water in your home/residential building been tested and had a confirmed level of lead (5ppb or higher)?



State of Illinois
Illinois Department of Public Health

Prenatal Lead Risk Questionnaire

Are you eligible for or enrolled in Medicaid? ☐ Yes ☐ No ☐ Don't Know Medicaid Number _____ (if applicable)

Are you eligible for or enrolled in the Women's, Infants and Children (WIC) Nutrition Program? ☐ Yes ☐ No ☐ Don't Know

Name (Last, First) _____ Date of Birth _____

Address _____ Phone Number _____

City _____ County of Residence _____

Testing is only recommended for those considered at risk. If the answer is "yes" to any of these questions, the person is at risk for lead exposure and should have a blood lead test. If the answer is "don't know" the person has a possible lead risk and should be advised of this and given the opportunity to have a lead test. If a lead test is declined and the person has given answers of "yes" or "don't know", the person should be given education regarding effects of lead exposure.

Respond to the following questions by circling the appropriate answer.

RESPONSE

1. Do you live in a house built before 1978 with recent or ongoing renovations that generate dust from sanding and scraping, or have chipping, peeling, or deteriorating paint? ☐ Yes ☐ No ☐ Don't Know
2. Have you ever had a blood lead level $\geq 3.5\mu\text{g/dL}$? ☐ Yes ☐ No ☐ Don't Know
3. Do you live with someone who has an elevated blood lead level? ☐ Yes ☐ No ☐ Don't Know
4. Do you crave or have you eaten non-food items during this pregnancy (Pica)? (Such as clay, soil, pottery, plaster or paint chips.) ☐ Yes ☐ No
5. Do you have or have you had any oral piercings? (Oral piercing jewelry may contain lead) ☐ Yes ☐ No
6. Do you use any products made outside of the United States such as cosmetics, herbal remedies, ceremonial powders, or food products? (Sindoor, kumkum, Ayurvedic products, tumeric) ☐ Yes ☐ No ☐ Don't Know
7. Do you use glazed or painted pottery, china, or leaded crystal made outside of the United States to store food or drink? ☐ Yes ☐ No ☐ Don't Know
8. Do you or others in your household have an occupation, hobby or activity which may result in lead exposure? Such as, jewelry making, building renovation or repair, bridge construction, plumbing, furniture refinishing, or work with automobile batteries or radiators, lead solder, leaded glass, lead shot, bullets, or lead fishing sinkers. ☐ Yes ☐ No ☐ Don't Know
9. Were you born in a country outside of the United States or have you spent any time outside of the United States during the past 12 months? ☐ Yes ☐ No
10. Has the water in your home/residential building been tested and had a confirmed level of lead (5ppb or higher)? ☐ Yes ☐ No ☐ Don't Know

Signature of Doctor/Nurse _____

Date of Evaluation _____

Provider's full address _____ Provider # _____

City _____ State _____ Phone Number _____

Blood Lead Test Results _____ ☐ Capillary ☐ Venous

Date of Test _____ Date Reported _____

ALL blood lead test results, regardless of level, are required to be reported to the IDPH Lead Program. Please fax or email completed form with blood lead test results to:

Illinois Lead Program
525 W. Jefferson Street, Third Floor
Springfield, Illinois 62761-0001
Phone: 217-782-3517 • Fax: 217-557-1188
TTY (hearing impaired use only) 800-547-0466
dph.HLPPSS@illinois.gov

Submit

<https://dph.illinois.gov/content/dam/soi/en/web/idph/forms/topics-services/environmental-health-protection/lead-poisoning-prevention/pregnancy-and-lead/prenatal-lead-risk-questionnaire.pdf>



Thank you!



Website: childrensenviro.uic.edu

Email: ChildrensEnviro@uic.edu

Why Lead Matters

School Nurse Perspective

Gloria E. Barrera

**MSN, RN, PEL-CSN,
PLNC**



How Children May Be Exposed



Older homes with
peeling paint and
dust



Drinking water from
lead service lines



Soil near schools,
playgrounds, and
construction



Imported toys,
spices, pottery,
cosmetics

Illinois Screening Requirements

- Evaluation required for children **6 months-6 years**
- **Blood lead tests required at ages 1 & 2 in high risk ZIP Codes**
- Universal **testing expected statewide**
- **Ask your pediatrician if your community is considered high risk**

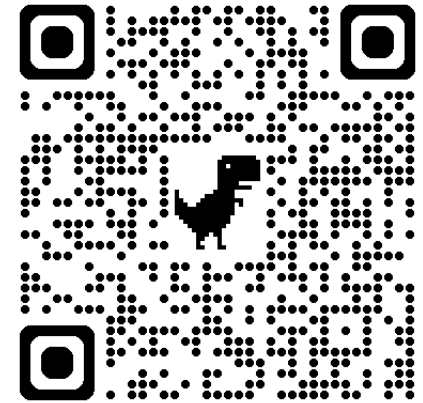


What Families Can Do Right Now

Request	Request a blood lead test from your pediatrician
Keep	Keep paint intact; avoid sanding chipped surfaces
Clean	Wet-clean windowsills and floors weekly
Use	Use cold tap water for drinking/cooking
Follow up	Follow up on elevated results quickly

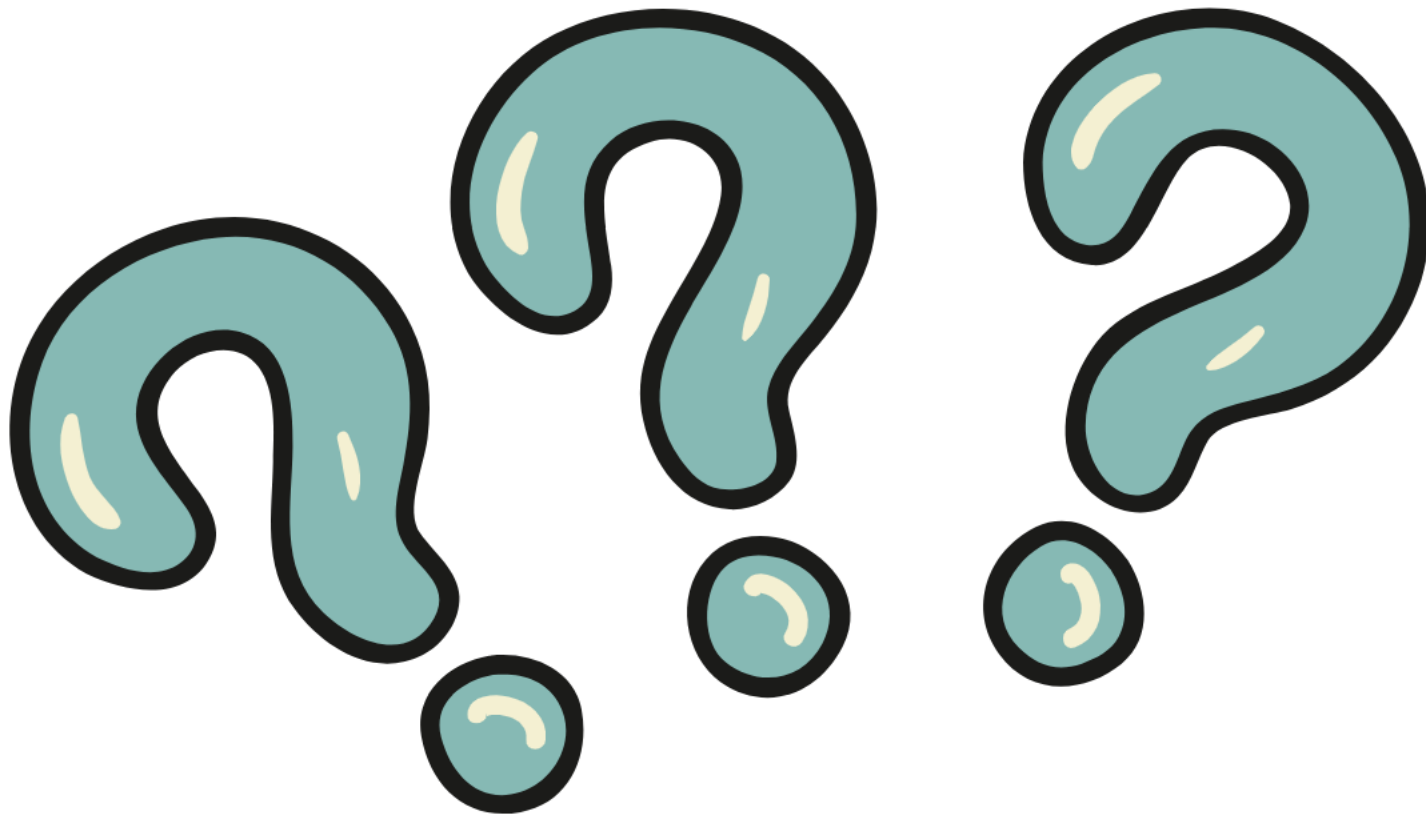


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Join the progress against
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Look for future programs.



Place your questions in the Q & A Box



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Clinical Advisory



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Contact@larcusa.org

