

Lead Poisoning and Pregnancy: Understanding Risks and Preventing Harm

Diamond Ross, MPA, MPH, CHES



Cook County DEPT.
of
Public Health

Promoting health. Preventing disease. *Protecting you.*



Objectives

- Demonstrate the harm of lead exposure during pregnancy
- Explore the health outcomes of lead exposure
- Appreciate the role local health department plays in improving outcomes for pregnant women who have been lead exposed
- Discuss current lead poisoning prevention efforts and resources



Review of Contents

Enclosures

- Provider Letter
- IDPH Documents and Forms
- Lead and Pregnancy Education Resources (English/Spanish)
- Toxic Treats Handout (English/Spanish)
- Consumer Products Handout
- Lead Hazard Reduction Grant Program flyer (English/Spanish)

IDPH Documents

- Prenatal Lead Risk Questionnaire Form
- Prenatal Lead Risk Evaluation Questionnaire (PLRQ) Algorithm
- IDPH Breastfeeding and Lead Algorithm
- Infant and Neonate Evaluation & Testing Algorithm
- Childhood Lead Risk Questionnaire (CLRQ) Algorithm
- IDPH Evaluation and Testing Recommendations for Pre-conceptual counseling, Pregnancy, and Breastfeeding Factsheet
- Report of Blood Lead Test Result Form



Key Documents

Prenatal Lead Risk Questionnaire

State of Illinois
Illinois Department of Public Health

Prenatal Lead Risk Questionnaire

Please Print

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.

QUESTION	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 $\geq 5 \mu\text{g}/\text{dL}$?	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, henna, etc.)	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 (ppb or higher)?	Yes No Don't Know

Signature of Doctor/Nurse _____ Date of Evaluation _____

Provider's full address _____ State _____ City _____ Phone Number _____

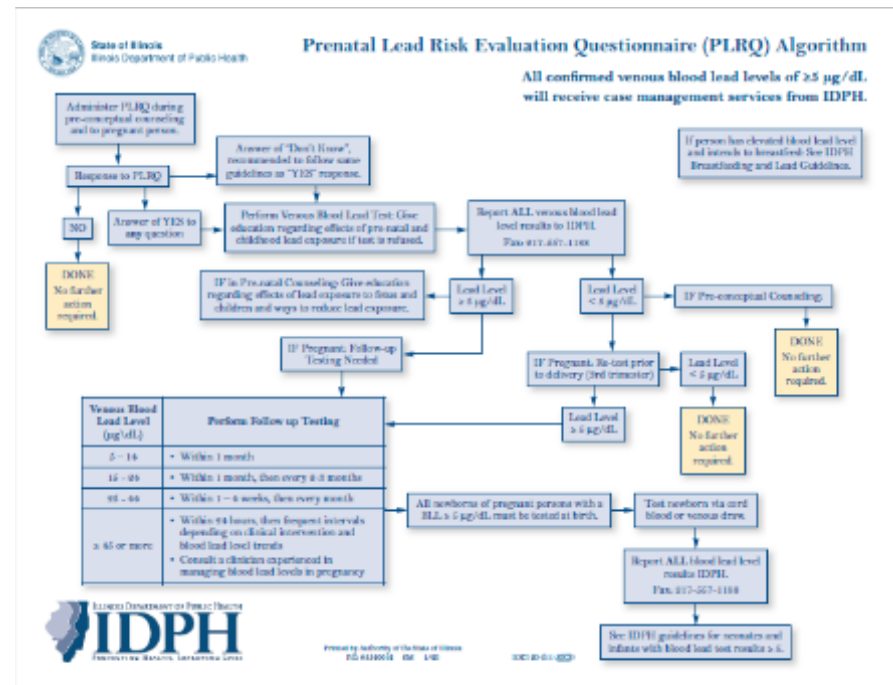
Blood Lead Test Results _____ ☐ Capillary ☐ Venous

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
625 W. Jefferson Street, Third Floor
Springfield, Illinois 62761-0001
Phone: 217-782-2617 Fax: 217-550-1188
TTY (hearing impaired use only): 800-547-0466
idph.LHP@idph.state.il.us

Prenatal Lead Risk Evaluation Questionnaire (PLRQ) Algorithm



Lead and Pregnancy Dos and Don'ts

LEAD AND PREGNANCY
KEEP YOUR BABY SAFE

Exposure to lead is a serious health concern, especially for an unborn baby. Lead is stored in bone, so even if your lead exposure occurred in the past, you can still have it in your body and pass it to your baby during pregnancy. Take steps to minimize your exposure to lead by following these tips.

DO	DON'T
<p>See your medical provider Your provider will use a risk assessment questionnaire to determine if you should be tested for lead.</p> <p>Have children tested If you are at risk for lead exposure or tested positive for lead, your other children and new born baby should be evaluated and tested by their provider.</p> <p>Eat a healthy diet Eat a variety of foods rich in calcium, iron and vitamin C. Eating nutritious foods helps the body block lead absorption.</p> <p>Home cleaning Clean windowsills, floors, and other surfaces using soap and water to minimize house dust. Wash hands well and often.</p> <p>Get your water tested Lead can be present in your plumbing system, especially if your home was built before 1987. Until your water has been tested and any identified sources of lead have been removed, use bottled water or water treated with a filter certified to remove lead for cooking and drinking to reduce possible exposure to lead.</p>	<p>Don't use imported items Avoid using health remedies, foods, candy, spices, cosmetics, pottery, toys, and other items made outside the U.S. as they may contain lead.</p> <p>Don't eat non-food items Never eat or chew on clay, dirt, pottery, or other non-food items. These may contain lead.</p> <p>Don't take lead home If someone uses or works with lead (e.g. auto repair, plumbing, construction, firing range), lead dust can be carried home on the body and clothes. Have them shower and change before entering the home or interacting with small children.</p> <p>Don't remove lead or renovate yourself Homes built prior to 1978 may contain lead paint. If lead is found in your home, do not try to remove it or do home renovations yourself. Hire an expert who is certified in lead removal to be sure lead safe practices are used.</p>

Lead can cause your baby to be born too early or too small. It can even cause miscarriage.

Lead can damage your baby's developing brain, kidneys, and nervous system. It can also cause learning and behavior problems.

dph.illinois.gov/illinoislead
Lead Program Hotline: 866-909-3572

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH

Adapted with permission from the New Mexico Department of Health.

State of Illinois
Illinois Department of Public Health

EL PLOMO Y EL EMBARAZO
MANTENGA A SU BEBÉ SEGURO

La exposición al plomo es un problema de salud grave, especialmente para un bebé en gestación. El plomo se almacena en los huesos, por lo que incluso si su exposición al plomo ocurrió en el pasado, aún puede estar en su cuerpo y transmitirlo a su bebé durante el embarazo. Tome medidas para minimizar su exposición al plomo siguiendo estos consejos.

QUÉ HACER	QUÉ NO HACER
<p>Consulte con su proveedor médico Su proveedor utilizará un cuestionario de evaluación de riesgos para determinar si debe hacerse una prueba de detección de plomo.</p> <p>Haga que los niños pasen por una prueba Si usted está en riesgo de exposición al plomo, o si su prueba del plomo es positiva, sus hijos y el bebé recién nacido deben ser evaluados y pasar por una prueba con su proveedor de servicios médicos.</p> <p>Tenga una dieta saludable Coma una variedad de alimentos ricos en calcio, hierro y vitamina C. Comer alimentos nutritivos ayuda al cuerpo a bloquear la absorción de plomo.</p> <p>Limpie su hogar Limpie los marcos de las ventanas, los pisos y otras superficies con agua y jabón para minimizar el polvo de la casa. Lávese las manos bien y con frecuencia.</p> <p>Haga que analicen la calidad del agua El plomo puede estar presente en su sistema de plomería, especialmente si su casa fue construida antes de 1987. Hasta que se analice la calidad de su agua y se elimine cualquier fuente de plomo que se haya identificado, use agua embotellada o agua tratada con un filtro certificado, de esta manera analizará su exposición al plomo cuando cocina o bebe y reducirá su posible exposición a este metal.</p>	<p>No use artículos importados Evite usar remedios para la salud, alimentos, dulces, especias, cosméticos, alfarería, juguetes y otros artículos hechos fuera de los Estados Unidos, ya que pueden contener plomo.</p> <p>No coma artículos no alimenticios Nunca coma o mastique arcilla, tierra, cerámica u otros artículos que no sean alimentos. Estos pueden contener plomo.</p> <p>No lleve el plomo a casa Si alguien usa o trabaja con plomo (por ejemplo, reparación de automóviles, plomería, construcción, campo de tiro), el polvo del plomo se puede llevar a casa en el cuerpo y la ropa. Haga que la persona se bañe y se cambie antes de entrar a la casa o de interactuar con niños pequeños.</p> <p>No elimine el plomo o renueve su casa usted sola Las casas construidas antes de 1978 pueden contener pintura con plomo. Si existe presencia de plomo en su casa, no intente retirarlo o hacer renovaciones en su hogar usted misma. Contrate a un experto que esté certificado en la remoción de plomo para asegurarse de que se lleven a cabo prácticas seguras para este fin.</p>

El plomo puede hacer que su bebé nazca mucho antes de tiempo o demasiado pequeño. Incluso puede causar un aborto involuntario.

El plomo puede dañar el desarrollo del cerebro, los riñones y el sistema nervioso de su bebé. También puede causar problemas de aprendizaje y comportamiento.

dph.illinois.gov/illinoislead
Lead Program Hotline: 866-909-3572

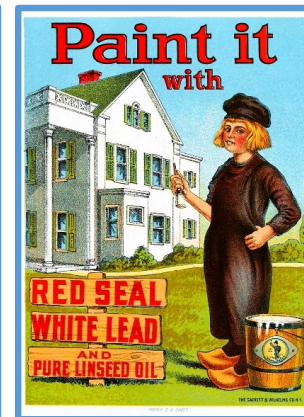
ILLINOIS DEPARTMENT OF PUBLIC HEALTH
IDPH

Adaptado con permiso del Departamento de Salud de Nuevo México.



Lead-based Paint Exposure

- **Lead-based paint** is one of the most common causes of lead poisoning
- Lead-based paint is present in **35% of homes nationally**
- **65% of Illinois homes** were built before 1978 including **81% of Chicago homes**.
- Lead-based paint remains present in **59% of homes** built before 1978 in Cook County.



U.S. Department of Housing and Urban Development Office of Healthy Homes and Lead Hazard Control. *American Healthy Homes Survey: Lead and Arsenic Findings*. April 2011.

Illinois Department of Public Health. Lead Poisoning Prevention. Fokum, F., Simpson, E., McAfee, K., & the Illinois Department of Public Health. *Illinois Lead Program 2015 Annual Surveillance Report*. Dec 2016.



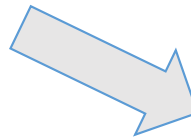
Lead Exposure During Pregnancy



Lead can also be transferred to an unborn baby during pregnancy.

A newborn exposed to lead before birth may:

- Be born prematurely
- Have a **low** birth weight
- Have **slowed/delayed** growth



"Preventing and Testing for Childhood Lead Poisoning: A Reference Guide for Physicians and Health Care Providers."
Illinois Department of Public Health.



Imported Products



- Candies, especially from China and Mexico
- Pottery, especially from Mexico
- Makeup- Kohl, kajal, surma
- Spices - turmeric
- Folk or alternative medicines



publibra.com



<http://www.gamulmakingspecialties.com>



Recent changes in State law

- All pregnant women with EBLs $\geq 5 \mu\text{g/dL}$ receive nurse case management and lead risk assessments
- Old law = services did not begin until EBLs were $\geq 10 \mu\text{g/dL}$
- All blood lead tests $\geq 5 \mu\text{g/dL}$ must be reported within 24 hours
- Reducing the intervention level in IL is the first step to finding lead exposed pregnant women and intervening sooner than in the past.
- While this is great, it is a first step. No lead level is safe, and we must continue to work to PREVENT lead exposure, not just react after it has occurred.



CCDPH multi-disciplinary lead team

Environmental Health Unit	<ul style="list-style-type: none">• Lead risk assessments to identify home lead hazards• Mitigation notice creation and follow up, including monitoring completion of work by home owners not in grant program• Clear all properties once hazards remediated• Coordination of grant-funded remediation in homes
Lead Poisoning Prevention Unit	<ul style="list-style-type: none">• Case referral and capillary test follow up• Manage remediation grants – locally and federally funded programs• Outreach and education (providers, partners, parents)• Quality Improvement initiatives• Policy research & development activities• Advocacy
Integrated Health – Nursing Services	<ul style="list-style-type: none">• Nursing case management, including:<ul style="list-style-type: none">○ home visit○ nutritional assessment○ developmental assessment and referral○ health and social service referral• Blood lead level and health monitoring• Service coordination with primary physician



Working with Clients

- We ask that you screen your patients for possible exposure to lead, and test if necessary.
 - Perform a venous blood lead test and report results
- When talking about home safety, include lead hazards, and encourage clients to look for peeling paint at windows, doors, porches
- CCDPH is here to provide services to your patients and to work with you to coordinate services.

Lead Grant Programs

- Provide grant program information to ALL families with pregnant women
- Free home lead paint inspection and repairs
- Low income families
- Local Grant Program- **ALL** Cook County communities
- HUD Grant Program- PREVENTION in:
 - **Bellwood, Berwyn, Broadview, Brookfield, Cicero, Elmwood Park, Forest Park, Lyons, Maywood, Melrose Park, River Grove, and Stone Park.**
 - Call North West Housing Partnership 847-969-0561
 - Clients that call for information will be guided through the application process

For more information contact:

Cook County Department of Public Health
Lead Poisoning Prevention and Healthy Homes
dsross@cookcountyhhs.org