

Blood Lead Screening Guidelines for Pregnant Women in Minnesota

Prenatal lead exposure is of concern because it may have an effect on cognitive development and may increase delinquent and antisocial behaviors when the child gets older. Prenatal lead exposure may also reduce neonatal weight gain. In addition to fetal risk, lead may be a risk to the mother by causing an increase in blood pressure.

Lead is transferred from the mother to the fetus because the placenta is a weak barrier to the passage of lead. Therefore, it may be assumed that fetal blood contains the same concentration of lead as maternal blood. The Centers for Disease Control and Prevention (CDC) and the Minnesota Department of Health (MDH) consider 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) and above to be an elevated blood lead level for children.

In many cases, high levels of lead in pregnant women arise from maternal occupational exposure. However, other lead exposures may occur, such as: remodeling a home containing lead paint that allows lead dust to become airborne and inhaled; a family member's occupation or hobby resulting in "take-home" lead; using non-commercial home remedies or cosmetics that contain lead; using non-commercial glazed pottery for cooking; and pica behavior of the mother, such as eating soil or pieces of clay pots. There may also be exposure of the fetus to lead coming out of the mother's bones. This may arise from long-term previous exposures of the mother even though lead exposure is not happening during the pregnancy. Lead may come out of maternal bones faster during pregnancy and lactation because of the mother's and fetus's need for calcium. A diet rich in iron and calcium may help reduce absorption of lead during pregnancy.

Not every woman is at risk for lead exposure, so a risk screening questionnaire should be used to decide when to test a pregnant, or potentially pregnant, woman for lead.

Blood Lead Screening Risk Questionnaire for Pregnant Women in Minnesota

Health-care providers should **use a blood lead test** to screen pregnant women if they answer, "yes" or "don't know" to any of the following questions, or if they have moved to Minnesota from a major metropolitan area or another country within the last twelve months:

1. Do you or others in your household have an occupation that involves lead exposure?
2. Sometimes pregnant women have the urge to eat things that are not food, such as clay, soil, plaster, or paint chips. Do you ever eat any of these things—even accidentally?
3. Do you live in a house built before 1978 with ongoing renovations that generate a lot of dust (for example, sanding and scraping)?
4. To your knowledge, has your home been tested for lead in the water, and if so, were you told that the level was high?
5. Do you use any traditional folk remedies or cosmetics that are not sold in a regular drug store or are homemade? (See list on back.)
6. Do you or others in your household have any hobbies or activities likely to cause lead exposure? (See list on back.)
7. Do you use non-commercially prepared pottery or leaded crystal?



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These guidelines have been reviewed and approved by the Minnesota Chapter of the American College of Obstetricians and Gynecologists (ACOG)

The guidelines were based on the New York State Department of Health,
Lead Poisoning Prevention Guidelines for Prenatal Care Providers.

Sources of Lead

The most common sources of lead are paint, dust, soil, and water. Other sources include:

Traditional Remedies/Cosmetics

IN ASIAN, AFRICAN, & MIDDLE EASTERN COMMUNITIES:

As a cosmetic or a treatment for skin infections or umbilical stump.

- alkohl, kajal, kohl, or surma (black powder)

IN ASIAN COMMUNITIES:

For intestinal disorders.

- bali goli (round flat black bean)
- ghasard/ghazard (brown powder)
- kandu (red powder)

IN HMONG COMMUNITIES:

For fever or rash.

- pay-loo-ah (orange/red powder)

IN LATINO COMMUNITIES:

- Some salt-based candies made in Mexico

For abdominal pain/empacho.

- azarcon (yellow/orange powder), also known as: alarcon, cora, coral, liga, maria luisa, and rueda
- greta (yellow/orange powder)

IN SOUTH ASIAN (EAST INDIAN) COMMUNITIES:

For bindi dots.

- sindoor (red powder)

As a dietary supplement.

- Ayurvedic herbal medicine products

Hobbies

May also include some of the occupations listed in the right column.

- Bronze Casting
- Collecting, Painting or Playing Games with Lead Figurines
- Copper Enameling
- Electronics with Lead Solder
- Hunting and Target Shooting
- Jewelry Making with Lead Solder
- Liquor Distillation
- Making Pottery and Ceramic Ware with Lead Glazes and Paints
- Making Stained Glass and Painting on Stained Glass
- Melting Lead for Fishing Sinkers or Bullets or Lead Figurines
- Painting/Stripping Cars, Boats, and Bicycles

- Print Making and Other Fine Arts (When Lead White, Flake White and Chrome Yellow Pigments are Involved)
- Remodeling, Repairing, and Renovating Homes

Occupations/Industries

- Ammunition/Explosives Maker
- Auto Repair/Auto Body Work
- Battery Manufacturing and Repair
- Bridge, Tunnel and Elevated Highway Construction
- Building or Repairing Ships
- Cable/Wire Stripping, Splicing or Production
- Ceramics Worker (Pottery, Tiles)
- Construction
- Firing Range Work
- Glass Recycling, Stained Glass and Glass Work
- Jewelry Maker or Repair
- Lead Abatement
- Lead Miner
- Leaded Glass Factory Worker
- Manufacturing and Installation of Plumbing Components
- Manufacturing of Industrial Machinery and Equipment
- Melting Metal (Smelting)
- Metal Scrap Yards and Other Recycling Operations
- Motor Vehicle Parts and Accessories
- Occupations Using Firearms
- Paint/Pigment Manufacturing
- Pottery Making
- Production and Use of Chemical Preparations
- Radiator Repair
- Remodeling/Repainting/Renovating Houses or Buildings
- Removing Paint (Sandblasting, Scraping, Sanding, Heat Gun or Torch)
- Steel Metalwork
- Tearing Down Buildings/Metal Structures
- Welding, Burning, Cutting or Torching

Miscellaneous

- Antique/Imported Toys
- Chalk (Particularly for Snooker/Billiards)
- Imported Candy
- Imported Pottery
- Non-Commercially Prepared Pottery
- Non-Commercially Prepared Leaded Crystal
- Some Children's Jewelry

www.health.state.mn.us/divs/eh/lead

For more information about lead, contact the **Lead Program at (651) 201-4620**

If you require this document in another format, such as large print, Braille, or cassette tape, call:

(651) 201-5000 ♦ 1-800-657-3908 ♦ MDH TTY (651) 201-5797

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