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Lead Poisoning in Children

Lead is a substance found in the environment that can cause serious health concerns in young children. This is because lead affects developing nerves and brains. The Centers for Disease Control and Prevention (CDC) estimates that 1 in 38 U.S. children aged 1 to 5 years has high levels of lead in his/her blood.¹ That's about 535,000 children.¹

Lead can build up in the body over time. So repeated exposure to even small amounts can cause harm. And the harm caused by lead cannot be reversed. This is why we must take steps now to prevent lead poisoning.

Symptoms

Your child can be exposed to lead but not show any symptoms. It takes time and repeated contact with lead for symptoms to appear. After a while, children exposed to even low levels of lead may show these symptoms:

- Behavior problems: inattentive, hyperactive, disorganized, less able to follow directions, agitated, aggressive, irritable
- Lower IQ and learning problems
- Hearing problems
- Slow growth

Higher levels (uncommon) may cause:

- Stomach pain/cramping
- Constipation
- Difficulty sleeping
- Headaches
- Loss of previous development skills
- Low appetite and energy
- Reduced sensations
- Anemia
- Clumsiness, problems with balance

Very high levels of lead can cause vomiting, muscle weakness, staggering, seizure, coma, and death.



Sources of lead

Lead exposure used to come mostly from lead paint and gasoline. Once the lead was removed from paint and gasoline, fewer children were exposed. But the problem has not gone away. This is because contamination from lead paint and gasoline is still around. It's also because lead can be found in many things that children come in contact with.

Younger children are at greater risk of coming in contact with lead. This is because they chew and suck on painted toys, furniture, and windowsills. They touch contaminated soil and then put their fingers in their mouths. They breathe in contaminated dust while crawling on the floor.

Who should be tested

Many states have their own testing recommendations. Some states recommend testing all young children. Others recommend testing just those at increased risk. Some states recommend testing as early as 6 months. Others recommend testing at ages 1 and 2 years. It's important to test more than once, because a child's exposure may change as he/she grows. For example, things out of reach for a 1-year-old might not be out of reach for a 2-year-old.

The CDC provides recommendations for states that don't have their own. The CDC recommends a screening blood lead test for all children at ages 1 and 2 years.² The CDC also recommends screening children between 3 and 6 years of age if not previously screened.²

Testing can tell you if your child is at risk of developing symptoms. If he/she is at risk, you can take steps to help prevent symptoms. So talk with your doctor about testing your children for lead.

What to do when the test result is high

- Find out how the child is coming in contact with lead
- Take steps to stop that contact
- Counteract the negative effects of lead poisoning by
 - Providing a nurturing and mentally enriched environment
 - Providing a healthy diet, especially one rich in iron, vitamin C, and calcium

How to prevent lead poisoning

- Ask your healthcare provider to test your children for lead poisoning
- Keep your home clean and well-maintained
 - Keep your home dust-free; damp mop floors weekly and wipe windowsills using a damp paper towel
 - Have everyone in your family wipe their shoes and remove them when coming indoors
 - Clean faucet aerators regularly
 - Avoid using abrasive cleaners or excessive rubbing on painted walls
 - Repair peeling or chipping paint
 - Address water damage
- Test water coming from your home's faucets; if positive:
 - Let tap water run a minute and use cold water when cooking or making drinks *or*
 - Use bottled water or a water filter *or*
 - Install lead-free plumbing

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Additional information

- For a person with severe symptoms, call 911; for a patient with all other symptoms, call the poison control center at 800-222-1222, your doctor, or local department of public health.
- Testing recommendations in your state: www.cdc.gov/HealthyHomes/programs.html
- Advice on safe removal of lead paint:
 - Housing and Urban Development (HUD) at 800-RID-LEAD
 - National Information Center at 800-LEAD-FYI
 - National Lead Information Center at 800-424-5323
- Products (toys, jewelry, furniture, crafts, office supplies, foodware, clothing) recalled due to lead contamination: www.cdc.gov/nceh/lead/Recalls/default.htm
- Other information about lead poisoning: United States Environmental Protection Agency: www2.epa.gov/lead

- Be sure family members wash their hands before eating
- Have children wash hands often, especially before eating and after playing outside
- Wash bottles, pacifiers, and toys often
- Be sure your family eats a healthy diet to reduce lead absorption
- Avoid canned goods coming from foreign countries; they might use lead soldering in the can
- Wipe rim and neck of imported wine containers that have a lead foil wrapping before drinking the wine; use lemon juice, vinegar, or wine
- Don't store liquids in lead crystal decanters for a long period of time
- Throw out old painted toys unless you know they're lead-free
- Use only lead-safe certified contractors for home repair or remodeling
- Check your child's school and/or day care center for sources of lead

References

1. Centers for Disease Control and Prevention. Blood lead levels in children aged 1-5 years—United States, 1999-2010. *MMWR Morb Mortal Wkly Rep.* 2013;62:245-248. www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm. Accessed April 11, 2013.
2. Centers for Disease Control and Prevention Advisory Committee on Childhood Lead Poisoning Prevention. Interpreting and managing blood lead levels <10 µ/dL in children and reducing childhood exposures to lead: recommendations of CDC's Advisory Committee on Childhood Lead Poisoning Prevention. *MMWR Recomm Rep.* 2007;56(RR-8):1-16. www.cdc.gov/mmwr/preview/mmwrhtml/rr5608a1.htm. Accessed April 11, 2013.