

Protect your child against lead poisoning

Parents are careful about objects that their children can put into their mouths that could be potentially harmful. But they also should know about dust particles and specks of paint containing lead that children can breathe in or eat. Exposure to this heavy metal can cause **lead poisoning** (health problems caused by elevated levels of lead in the blood).

Millions of children in the United States have elevated levels of lead in their blood. The primary source of lead exposure is through lead-based paint that is peeling, chipping, chalking, or cracking. Another common source of lead is dust containing lead, which occurs when lead-based paint is dry scraped, dry sanded, or heated, and when windows with paint containing lead are raised or lowered.

Two studies in the June 23/30, 1999, issue of *JAMA* examined the effects of lead on the health of children and adults. One study suggests that children who have high levels of lead in their blood have higher rates of tooth

WHAT IS LEAD POISONING?

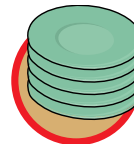
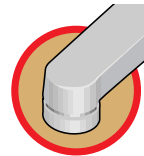
Lead poisoning refers to the presence of elevated levels of lead in the blood. People can get lead in their bodies by breathing in or swallowing lead dust or by inadvertently eating soil or paint chips that contain lead. As lead builds up in the body, it can cause damage to the brain, kidneys, nerves, and blood cells. In children, low-level exposure to lead can lead to problems with thinking and behavior. Although rare, high levels of lead can cause long-term health problems, such as **anemia** (low red blood cell count), hearing loss, developmental delays, growth problems, and even seizures and coma. A simple blood test can determine the amount of lead in the blood.

decay, especially among children who are poor and disadvantaged. The second study shows that higher levels of vitamin C in the blood were associated with lower lead levels in the blood, and lower levels of vitamin C were associated with higher levels of lead in both adults and children. The study is preliminary and researchers state that further research is needed on the possible important public health implications of vitamin C for the prevention of lead toxicity.

Parents should identify any potential sources of lead, eliminate them, and try to take preventive steps to protect children against possible exposure.

SOURCES OF LEAD:

- Paint dust and paint chips from old paint
- Old paint in toys and furniture
- Homes built before 1978, particularly those that are in poor condition, or being remodeled or renovated
- Tap water in homes that have lead pipes
- Soil with lead in it
- Hobby materials, such as stained glass, paints, solders, fishing weights
- Workplace dust brought home on the clothing of people who have jobs that use lead
- Food or drink stored in lead crystal or ceramic dishes with glazes or paints that contain lead or are poorly glazed (lead in ceramics manufactured in the United States is regulated)
- Some folk medicines that contain lead
- Mini-blinds manufactured outside the United States before 1996



SIGNS OF LEAD POISONING:

- Tiredness
- Irritability
- Muscle and joint pain
- Headaches
- Stomach aches and cramps
- Changes in behavior, such as attention and activity
- Changes in school performance

TO PROTECT YOUR FAMILY:

- Have your home tested for lead paint if it was built before 1978, which is the year that the U.S. government banned lead-based paint from housing.
- Ask your child's doctor or health department if your child should be tested for lead.
- Your drinking water could be contaminated by some pipes that have lead lining. Call your local health department to find out about testing your water for lead.
- All family members should wash hands often, especially before eating.
- Feed your child nutritious meals high in calcium and iron, such as spinach and low-fat dairy products. Children who eat a good diet absorb less lead.

FOR MORE INFORMATION:

- U.S. Department of Housing and Urban Development
Office of Lead Hazard Control
www.hud.gov/lea
- National Lead Information Center and Clearinghouse
800/424-LEAD
800/526-5456 (TTY)
- For certified lead inspectors, contact:
The Lead Listing
888/LEAD-LIST or www.leadlisting.org

INFORM YOURSELF:

To find this and previous *JAMA* Patient Pages, check out the AMA's Web site at www.ama-assn.org/consumer.htm. A previous *JAMA* Patient Page on vitamin C was published on April 21, 1999.

Additional Sources: American Academy of Pediatrics, U.S. Department of Housing and Urban Development's Office of Lead Hazard Control, American Academy of Family Physicians, U.S. Environmental Protection Agency

Mi Young Hwang, Writer

Richard M. Glass, MD, Editor

Jeff Molter, Director of Science News

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