



CDC's Third National Report on Human Exposure to Environmental Chemicals

Spotlight on Lead

Lead is a soft, heavy, blue-gray metal. Lead occurs naturally in the Earth's crust but has been spread throughout the environment by various human activities. In the past, lead also was used in house paint and gasoline. In the United States, we no longer use lead in paint or gasoline, but lead remains from our past activities. Lead is still present in other items, such as batteries, solder, ammunition, pipes, unglazed pottery, folk medicine, and roofing materials.

How People Are Exposed to Lead

People can be exposed to lead by

- Breathing air, drinking water, eating food, or swallowing or touching dust or dirt that contains lead.
- Living or working in buildings that contain deteriorated lead-based paint or using lead in their jobs or hobbies.
- Eating food from cans that have been improperly soldered.
- Eating paint chips that contain lead or by playing in lead-contaminated dirt. The most common source of children's exposure to lead is contaminated dust from older homes that contain lead-based paint. Children get this dust on their hands and toys through normal hand-to-mouth activity.

How Lead Affects People's Health

- No safe blood lead level has been identified. For infants and young children, lead levels of 10 micrograms or more in a deciliter of blood can damage ability to learn. (A microgram is one millionth of a gram. A deciliter is about half a cup of liquid.)
- Of all people, young children face the most danger from exposure to lead because their growing bodies absorb lead more easily than do adults' bodies. Pregnant women and women of childbearing age should avoid exposure to lead because lead ingested by a mother can affect the unborn child.
- At higher blood lead levels (that is levels equal to or greater than 25 micrograms per deciliter), lead can damage people's kidneys, blood, and nervous system. At very high levels, lead poisoning can cause mental retardation, coma, convulsions, or death.

Levels of Lead in the U.S. Population

- Since 1976, CDC has measured levels of lead in children's blood as part of a large national survey known as the National Health and Nutrition Examination Survey (NHANES). For the *Third Report*, scientists tested the blood of a random sample of the U.S. population for lead. This *Third Report* shows that 1.6% of children aged 1-5 years had blood lead levels greater than or equal to 10 micrograms per deciliter. This number is down from the 4.4% of children who had elevated blood lead levels in the early 1990s.
- These decreases show that public health efforts to reduce children's exposure to lead are successful. However, children's exposure to lead in homes containing lead-based paint and lead-contaminated dust remains a serious public health concern.

For More Information

- **Agency for Toxic Substances and Disease Registry**
Toxicological Profile for Lead:
www.atsdr.cdc.gov/toxprofiles/phs13.html
ToxFAQs for Lead:
www.atsdr.cdc.gov/tfacts13.html
- **U.S. Environmental Protection Agency**
Lead in Paint, Dust, and Soil:
www.epa.gov/opptintr/lead
- **U.S. Department of Housing and Urban Development**
Office of Healthy Homes and Lead-Hazard Control:
www.hud.gov/offices/lead
- **Centers for Disease Control and Prevention**
CDC Childhood Lead Poisoning Prevention Program:
www.cdc.gov/nceh/lead/lead.htm

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