

Lead Poisoning

Lead poisoning can cause brain damage. It is still an important problem in preschoolers, especially those living in older buildings. Peeling paint is the most common source of lead poisoning. Children with high levels of lead in their blood may need treatment. In addition, investigation may be needed to find out where the lead is coming from.

What is lead poisoning?

Lead is a toxic metal that is widely used in many products. Lead poisoning from paint was once a widespread problem. In the United States, paint made since 1978 does not contain lead, but many children are still exposed to lead-containing paint in older buildings. Lead poisoning most often results from “hand-to-mouth” activity by infants and toddlers or from eating paint chips.

Lead poisoning can cause permanent brain damage in children (and adults). This problem is now less common because of the elimination of lead from paint, gasoline, and other sources and because doctors perform screening tests for lead in young children. If your child has high blood lead levels, action is needed to:

- Treat your child, if the lead level is high enough.
- Find the source of the lead.
- Remove the child from the source.
- Correct the lead contamination problem.

What does it look like?

- Lead poisoning can affect the brain, resulting in reduced intelligence and behavior changes. Although this still occurs, effective prevention and screening efforts have made it a lot less common in the United States.
- Today, most children with lead poisoning have their condition detected by screening tests. In general, most children should undergo blood testing for lead at least once between ages 1 and 2. Blood testing for lead will also be performed if your doctor has any reason to suspect your child might be exposed to old paint or other sources of lead.
- If blood tests show higher than accepted levels of lead, the health department or other agency will need to check the home or other possible sources of lead. The child may have to be removed from the home until the lead contamination is corrected. The goal is to detect elevated lead levels before any permanent damage occurs.
- High levels of lead poisoning causing acute symptoms are now uncommon. However, the following symptoms are possible:

- Abdominal pain.
- Constipation.
- Decreased appetite.
- Anemia (low levels of red blood cells or hemoglobin).
- Headaches, seizures, and coma.

Where does the lead come from?

- Most lead poisoning results from exposure to old lead paint. The most common cause is hand-to-mouth activity; lead dust gets on your child’s hands, and from there into his or her mouth. Children may also eat chips of peeled lead paint.
- Much less often, lead exposure comes from old water pipes in the home or ceramic bowls with a lead glaze from which food is eaten. Poisoning can also result from industrial sources.

What are some possible complications of lead poisoning?

- When it is severe, lead poisoning can interfere with brain growth and development.
- Children with less severe exposure to lead may be at increased risk of other problems, including:
 - Reduced intelligence and school performance.
 - Behavior problems, such as hyperactivity.

What puts your child at risk of lead poisoning?

- Preschool age.
- Living in older buildings, particularly in houses built before the 1950s, but in any building in which cracked or peeling paint is present. Children living in recently renovated buildings may also be at risk.
- If one child in your family has had lead poisoning, other children may be affected as well.

Can lead poisoning be prevented?

Screening and early detection are the best ways to prevent lead poisoning. Follow your doctor’s recommendations for blood testing.

How is lead poisoning treated?

- *Early detection.* In the United States, 99% of children with lead poisoning are identified by screening tests. At

age 1 or 2, the doctor may order a test to measure the level of lead in your child's blood. This is most likely to be done if there is some reason to suspect your child may be exposed to lead—for example, if you live in an older home with peeling paint or if your child is a recent immigrant from a country without environmental lead controls.

- *Blood lead level.* If the screening test shows a higher than normal blood lead level, further tests may be done to confirm the result. About 10% of American children have elevated blood lead levels. However, unless your child has had a very high exposure to lead, his or her blood lead level will be far below the level causing serious or immediate health problems.
- *Identifying and removing lead.* If your child has elevated blood lead levels, the first step is to find out where the lead is coming from. Old, peeling paint is the most common source. Your child has not necessarily been eating paint chips; instead, the lead may be coming from dust in your home. Sometimes the lead comes from an occupational source—for example, the clothes of a parent exposed to lead at work or from a factory in the neighborhood.
- Removing lead from old buildings can be a difficult job. If not done correctly, such attempts may make the problem worse. The local health department may play a role in identifying and eliminating lead exposure.
- If a source of lead is found in your home, a contractor with special knowledge and experience will be needed to do lead clean-up (abatement).
- *Changing your child's behavior.* Efforts are needed to reduce the “hand-to-mouth” activity that causes lead poisoning in infants and toddlers. Washing your child's hands frequently may help to reduce the amount of lead getting into his or her system.
- *Diet changes.* Adequate amounts of vitamin C, calcium, and iron may help to prevent higher levels of lead in the body.
- *Removing lead from your child's body* is difficult, because the lead is absorbed into bone and other tissues. If your child's blood lead level reaches a certain point, drugs are used to help remove the lead. This is called *chelation therapy*. If your child has milder lead exposure, his or her blood lead levels will eventually return to normal without chelation therapy as long as the source is removed.
- *Follow-up.* Your child should receive regular medical follow-up checks to be sure his or her blood lead levels are going down. Close attention will be paid to your child's developmental skills and behavior, depending on how high his or her blood levels were.



When should I call your office?

Call your doctor's office if you have any questions about blood lead testing or concerns about possible exposure to lead by your child.