



Lead Poisoning

About Lead Poisoning

If you have young kids, it's important to find out whether there's any risk that they might be exposed to lead, especially if you live in an older home. Many toys and other products from outside the United States have also been found to contain lead.

Long-term exposure to lead, a naturally occurring metal used in everything from construction materials to batteries, can cause serious health problems, particularly in young kids. Lead is toxic to everyone, but unborn babies and young children are at greatest risk for health problems from lead poisoning — their smaller, growing bodies make them more susceptible to absorbing and retaining lead.

Each year in the United States, 310,000 1- to 5-year-old kids are found to have unsafe levels of lead in their blood, which can lead to a wide range of symptoms, from headaches and stomach pain to behavioral problems and anemia (not enough healthy red blood cells). Lead also can affect a child's developing brain.

The good news is that you can protect your family from lead poisoning. Talk to your doctor about potential lead sources in your house or anywhere your kids spend long periods of time, especially if they're younger than 3 years old.

And it's important for kids at risk of exposure to undergo blood tests for lead — many people with lead poisoning show only mild symptoms or even no symptoms at all.

Why Is Lead Harmful?

Whether it's inhaled, swallowed, or, more rarely, absorbed through the skin (just by touching a product that contains lead), lead can act as a poison. Exposure to high lead levels in a short period of time is called acute toxicity. Exposure to small amounts of lead over a long period of time is called chronic toxicity.

Lead is particularly dangerous because once it gets into a person's system, it is distributed throughout the body just like helpful minerals such as iron, calcium, and zinc. And lead can cause harm wherever it lands in the body. In the bloodstream, for example, it can damage red blood cells and limit their ability to carry oxygen to the organs and tissues that need it, thus causing anemia.

Most lead ends up in the bone, where it causes even more problems. Lead can interfere with the production of blood cells and the absorption of calcium that bones need to grow healthy and strong. Calcium is essential for strong bones and teeth, muscle contraction, and nerve and blood vessel function.

Effects of Long-Term Lead Poisoning

Lead poisoning can lead to a variety of health problems in kids, including:

- decreased bone and muscle growth
- poor muscle coordination
- damage to the nervous system, kidneys, and/or hearing
- speech and language problems
- developmental delay
- seizures and unconsciousness (in cases of extremely high lead levels)

How Lead Poisoning Happens

Most commonly, kids get lead poisoning from lead-based paint, which was used in many U.S. homes until the late 1970s, when the government banned the manufacture of paint containing lead.

That's why kids who live in older homes are at a greater risk for lead poisoning. Also at risk are those who immigrate to the United States or are adopted from a foreign country that doesn't regulate the use of lead. Children with a history of the disorder pica (persistent and compulsive cravings to eat non-food items, like dirt, paint chips, or clay) also are at risk for lead poisoning.

Lead is also found in other environmental areas, including:

- contaminated soil, which is found near busy streets, in part because lead was an ingredient in gasoline until the late 1970s. The soil that surrounds homes that were painted with lead-based paint also might be contaminated. Contaminated soil is a particular concern because it can introduce lead dust into the home.
- water that flows through old lead pipes or faucets, if the pipes begin to break down
- food stored in bowls glazed or painted with lead, or imported from countries that use lead to seal canned food
- some toys, jewelry, hobby, and sports objects (like stained glass, ink, paint, and plaster)
- some folk or home remedies, such as greta and azarcon (used to treat an upset stomach)

Signs of Lead Poisoning

Many kids with lead poisoning don't show any signs of being sick, so it's important to eliminate lead risks at home and to have young kids tested for lead exposure.

When kids do develop symptoms of lead poisoning, they usually appear as:

- irritability or behavioral problems
- difficulty concentrating
- headaches
- loss of appetite
- weight loss
- sluggishness or fatigue
- abdominal pain
- vomiting or nausea
- constipation
- pallor (pale skin) from anemia
- metallic taste in mouth
- muscle and joint weakness or pain
- seizures

These symptoms also can indicate a wide variety of other illnesses, so if your child has any of them, talk to your doctor. A blood test may be necessary to look for lead poisoning or other health problems.

Treatment

Treatment for lead poisoning varies depending on how much lead is in the blood. Small amounts often can be treated rather easily; the most important part of therapy is reduction of lead exposure. Gradually, as the body naturally eliminates the lead, the level of lead in the blood will fall.

Kids with severe cases and extremely high lead levels in their blood will be hospitalized to receive a medication called a chelating agent, which chemically binds with lead, making it weaker so the body can get rid of it naturally.

Calcium, iron, and vitamin C are important parts of a healthy diet and also help to decrease the way the body absorbs lead. Your doctor may recommend your child take supplements if there's not enough intake in his or her diet.

All siblings of a child found to have lead poisoning also should be tested. Doctors will report cases of lead poisoning to the public health department.

Protecting Your Family

You can protect your kids from lead poisoning by ensuring that your home is lead-free — ask your local health department about having your home evaluated for lead sources. And have your kids tested for lead exposure, particularly if when they're between 6 months and 3 years old. Kids this age spend a lot of time on the floor and try to put things in their mouths.

These tips can help you reduce the risk of lead exposure:

- **Be wary of old plumbing.** Old plumbing might be lined with lead. If you have an old plumbing system (in homes built before 1970), which used copper pipes and lead solder, you may want to get your water tested. You can call your local health department or water department to find a laboratory that will test your water for lead content. You also can take precautions to limit your exposure. If the water from the cold faucet has not been run for several hours, let cold water run for 30 seconds before drinking it. And because hot water absorbs more lead than cold water, don't use hot tap water for meals.
- **Keep your home and your family clean.** Wash your kids' hands and toys often, and keep dusty surfaces clean with a wet cloth.
- **Ensure that iron and calcium are in your diets.** If kids are exposed to lead, good nutrition can reduce the amount that's absorbed by their bodies. Eating regular meals is helpful because lead is absorbed more during periods of fasting.
- **Know where your kids play.** Keep them away from busy roads and the underside of bridges.

If you suspect that you might have lead-based paint on your walls, use a wet cloth to wipe windowsills and walls. Watch out for water damage that can make paint peel. Don't sand or heat lead-based paint because doing so increases the risk that lead will be inhaled. If the paint doesn't have many chips, a new layer of paint, paneling, or drywall will probably reduce the risk. It's best to consult a professional, especially because other precautions might be needed to contain the lead in the paint.

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