

Lead Poisoning Prevention

Lead is a highly toxic metal that was used for many years in products found in and around our homes. Lead may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children 6 years old and under are most at risk, because their bodies are growing quickly.

Research suggests that the primary sources of lead exposure for most children are:

- deteriorating lead-based paint,
- lead contaminated dust, and
- lead contaminated residential soil.

The EPA is playing a major role in addressing these residential lead hazards. In 1978, there were nearly three to four million children with elevated blood lead levels in the United States. In the 1990s, that number had dropped to 434,000 kids, and it continues to decline. While we still have a significant challenge, EPA is very proud of how federal, state, tribal, and private sector partners have coordinated efforts with the public to better protect our children.

Since the 1980's, the EPA and its federal partners have phased out lead in gasoline, reduced lead in drinking water, reduced lead in industrial air pollution, and banned or limited lead used in consumer products, including residential paint. States and municipalities have set up programs to identify and treat lead poisoned children and to rehabilitate deteriorated housing. Parents, too, have greatly helped to reduce lead exposures to their children by cleaning and maintaining homes, having their children's blood lead levels checked, and promoting proper nutrition.

Basic Information

Did you know the following facts about lead?

- **FACT:** Lead exposure can harm young children and babies even before they are born.
- **FACT:** Even children who seem healthy can have high levels of lead in their bodies.
- **FACT:** You can get lead in your body by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- **FACT:** You have many options for reducing lead hazards. In most cases, lead-based paint that is in good condition is not a hazard.
- **FACT:** Removing lead-based paint improperly can increase the danger to your family.

If you think your home might have lead hazards, read on to learn about lead and some simple steps to protect your family.

Health Effects of Lead

Childhood lead poisoning remains a major environmental health problem in the U.S..

Even children who appear healthy can have dangerous levels of lead in their bodies.

People can get lead in their body if they:

- Put their hands or other objects covered with lead dust in their mouths.
- Eat paint chips or soil that contains lead.
- Breathe in lead dust (especially during renovations that disturb painted surfaces).

Lead is even more dangerous to children than adults because:

- Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.
- Children's growing bodies absorb more lead.
- Children's brains and nervous systems are more sensitive to the damaging effects of lead.

If not detected early, children with high levels of lead in their bodies can suffer from:

- Damage to the brain and nervous system
- Behavior and learning problems (such as hyperactivity)
- Slowed growth
- Hearing problems
- Headaches

Lead is also harmful to adults. Adults can suffer from:

- Difficulties during pregnancy
- Other reproductive problems (in both men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

Where Lead is Found

*In general, the older your home, the more likely it has lead-based paint. *

Lead can be found:

- In paint. Many homes built before 1978 have lead-based paint. The federal government banned lead-based paint from housing in 1978. Some states stopped its use even earlier.
- In homes in the city, country, or suburbs
- In apartments, single-family homes, and both private and public housing.
- Inside and outside of the house.
- In soil around a home. (Soil can pick up lead from exterior paint, or other sources such as past use of leaded gas in cars.)
- Household dust. (Dust can pick up lead from deteriorating lead-based paint or from soil tracked into a home.)
- Drinking water. Your home might have plumbing with lead or lead solder. Call your local health department or water supplier to find out about testing your water. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might have lead in it:
 - Use only cold water for drinking and cooking.
 - Run water for 15 to 30 seconds before drinking it, especially if you have not used your water for a few hours.
- The job. If you work with lead, you could bring it home on your hands or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- Old painted toys and furniture.
- Food and liquids stored in lead crystal or lead-glazed pottery or porcelain.
- Lead smelters or other industries that release lead into the air.
- Hobbies that use lead, such as making pottery or stained glass, or refinishing furniture.

- Folk remedies that contain lead, such as "greta" and "azarcon" used to treat an upset stomach.

Where Lead is Likely to be a Hazard

Lead from paint chips, which you can see, and lead dust, which you can't always see, can be serious hazards.

- Peeling, chipping, chalking, or cracking lead-based paint is a hazard and needs immediate attention.
- Lead-based paint may also be a hazard when found on surfaces that children can chew or that get a lot of wear-and-tear. These areas include:
 - Windows and window sills.
 - Doors and door frames.
 - Stairs, railings, and banisters.
 - Porches and fences.
- Lead dust can form when lead-based paint is dry scraped, dry sanded, or heated. Dust also forms when painted surfaces bump or rub together. Lead chips and dust can get on surfaces and objects that people touch. Settled lead dust can re-enter the air when people vacuum, sweep, or walk through it.
- Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. Contact the National Lead Information Center (NLIC) to find out about testing soil for lead.

Note: Lead-based paint that is in good condition is usually not a hazard.

Checking Your Family and Home for Lead

Get your children and home tested if you think your home has high levels of lead.

Just knowing that a home has lead-based paint may not tell you if there is a hazard.

To reduce your child's exposure to lead, get your child checked, have your home tested (especially if your home has paint in poor condition and was built before 1978), and fix any hazards you may have.

Your Family

- Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.
- Consult your doctor for advice on testing your children. A simple blood test can detect high levels of lead. Blood tests are important for:
 - Children at ages 1 and 2.
 - Children and other family members who have been exposed to high levels of lead.
 - Children who should be tested under your state or local health screening plan.

Your doctor can explain what the test results mean and if more testing will be needed.

Your Home

You can get your home checked in one of two ways, or both:

- A paint inspection tells you the lead content of every different type of painted surface in your home. It won't tell you whether the paint is a hazard or how you should deal with it.

- A risk assessment tells you if there are any sources of serious lead exposure (such as peeling paint and lead dust). It also tells you what actions to take to address these hazards.
 - Have qualified professionals do the work. There are standards in place for certifying lead-based paint professionals to ensure the work is done safely, reliably, and effectively. Contact the National Lead Information Center (NLIC) for a list of contacts in your area.
 - Trained professionals use a range of methods when checking your home, including:
 - Visual inspection of paint condition and location.
 - A portable x-ray fluorescence (XRF) machine.
 - Lab tests of paint samples.
 - Surface dust tests.

Note: Home test kits for lead are available, but studies suggest that they are not always accurate. Consumers should not rely on these tests before doing renovations or to assure safety.

What You Can do to Protect Your Family

- If you suspect that your house has lead hazards, you can take some immediate steps to reduce your family's risk:
 - If you rent, notify your landlord of peeling or chipping paint.
 - Clean up paint chips immediately.
 - Clean floors, window frames, window sills, and other surfaces weekly. Use a mop, sponge, or paper towel with warm water and a general all-purpose cleaner or a cleaner made specifically for lead. REMEMBER: NEVER MIX AMMONIA AND BLEACH PRODUCTS TOGETHER SINCE THEY CAN FORM A DANGEROUS GAS.
 - Thoroughly rinse sponges and mop heads after cleaning dirty or dusty areas.
 - Wash children's hands often, especially before they eat and before nap time and bed time.
 - Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
 - Keep children from chewing window sills or other painted surfaces.
 - Clean or remove shoes before entering your home to avoid tracking in lead from soil.
 - Make sure children eat nutritious, low-fat meals high in iron and calcium, such as spinach and dairy products. Children with good diets absorb less lead.
- In addition to day-to-day cleaning and good nutrition:
 - You can temporarily reduce lead hazards by taking actions such as repairing damaged painted surfaces and planting grass to cover soil with high lead levels. These actions (called "interim controls") are not permanent solutions and will need ongoing attention.
 - To permanently remove lead hazards, you must hire a certified lead "abatement" contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not enough.
 - Always hire a person with special training for correcting lead problems--someone who knows how to do this work safely and has the proper equipment to clean up thoroughly. Certified contractors will employ qualified workers and follow strict safety rules set by their state or the federal government.
 - Contact the National Lead Information Center(NLIC) for help with locating certified contractors in your area and to see if financial assistance is available.

Are You Planning to Buy or Rent a Home Built Before 1978?

Many houses and apartments built before 1978 have paint that contains lead (called lead-based paint). Lead from paint, chips, and dust can pose serious health hazards if not taken care of properly.

Federal law requires that individuals receive certain information before renting or buying a pre-1978 housing:

- Residential Lead-Based Paint Disclosure Program
 - LANDLORDS have to disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a disclosure form about lead-based paint.
 - SELLERS have to disclose known information on lead-based paint and lead-based paint hazards before selling a house. Sales contracts must include a disclosure form about lead-based paint. Buyers have up to 10 days to check for lead hazards.
 - More information on the disclosure program.

Remodeling or Renovating a Home with Lead-Based Paint

If not conducted properly, certain types of renovations can release lead from paint and dust into the air.

Many houses and apartments built before 1978 have paint that contains lead (called lead-based paint). Lead from paint, chips, and dust can pose serious health hazards if not taken care of properly.

- Federal law requires that contractors provide lead information to residents before renovating a pre-1978 housing:
 - Pre-Renovation Education Program (PRE)
 - RENOVATORS have to give you a pamphlet titled "Protect Your Family from Lead in Your Home", before starting work.
 - More information on the Pre-Renovation Education Program.
- Take precautions before your contractor or you begin remodeling or renovations that disturb painted surfaces (such as scraping off paint or tearing out walls):
 - Have the area tested for lead-based paint.
 - Do not use a belt-sander, propane torch, heat gun, dry scraper, or dry sandpaper to remove lead-based paint. These actions create large amounts of lead dust and fumes.
 - Lead dust can remain in your home long after the work is done.
 - Temporarily move your family (especially children and pregnant women) out of the apartment or house until the work is done and the area is properly cleaned. If you can't move your family, at least completely seal off the work area.
 - Follow other safety measures to reduce lead hazards. You can find out about other safety measures in the EPA brochure titled "Reducing Lead Hazards When Remodeling Your Home". This brochure explains what to do before, during, and after renovations.

If you have already completed renovations or remodeling that could have released lead-based paint or dust, get your young children tested and follow the steps outlined to protect your family.