



Protect Your Family From Lead in Your Home



United States
Environmental
Protection Agency



United States
Consumer Product
Safety Commission



United States
Department of Housing
and Urban Development

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

Did you know that many homes built before 1978 have **lead-based paint**? Lead from paint, chips and dust can pose serious health hazards.

Read this entire brochure to learn:

- How lead gets into the body
- How lead affects health
- What you can do to protect your family
- Where to go for more information

Before renting or buying a pre-1978 home or apartment, federal law requires sellers, landlords, agents and rental property managers to:

- Disclose known information about the presence of lead-based paint or lead-based paint hazards (or state there is none)
- Provide all available records and reports on lead-based paint and lead-based paint hazards (or state there are none)
- Include a specific warning statement about lead-based paint
- Give buyers up to 10 days to have a certified inspector or risk assessor check for lead.

If undertaking renovation, repair or painting (RRP) projects in your pre-1978 home or apartment:

- Read EPA's pamphlet, *The Lead-Safe Certified Guide to Renovate Right*, to learn about the lead-safe work practices that contractors are required to follow when working in your home ([see page 12](#)).



Steps to Protect Your Family from Lead Hazards

If you think your home has lead-based paint:

- Don't try to remove lead-based paint yourself.
- Always keep painted surfaces in good condition to minimize deterioration.
- Get your home checked for lead hazards. Find a certified risk assessor at cdxapps.epa.gov/leadpro.
- Talk to your landlord about fixing surfaces with peeling or chipping paint.
- Regularly clean floors, window sills and other surfaces using wet methods.
- Take precautions to avoid exposure to lead dust when remodeling.
- Hire only EPA-, Tribal- or state-approved Lead-Safe Certified renovation firms when renovating, repairing or painting. Find an EPA-certified firm using cdxapps.epa.gov/leadpro.
- Have your home checked for lead-based paint by a certified inspector or risk assessor before buying, renting or renovating your home.
- Consult your health care provider about testing your children for lead. Your pediatrician can check for lead with a simple blood test.
- Wash children's hands, bottles, pacifiers and toys often.
- Make sure children eat a well-balanced diet with foods high in iron, calcium and vitamin C as these nutrients may help prevent the absorption of lead.
- Remove shoes or wipe soil and other dirt off shoes before entering your house.

Lead Gets into the Body in Many Ways

Adults and children can get lead into their bodies if they:

- Breathe in lead dust (especially during activities such as renovations, repairs or painting that disturb painted surfaces)
- Swallow lead dust that has settled on food, food preparation surfaces and other places
- Eat paint chips or soil that contains lead

Lead is especially dangerous to children under the age of 6.

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



Lead is dangerous to a developing fetus.

- Lead can build up in the body over time, settling in the bones. This stored lead can be transferred during pregnancy to a fetus or after birth to an infant through breast milk.

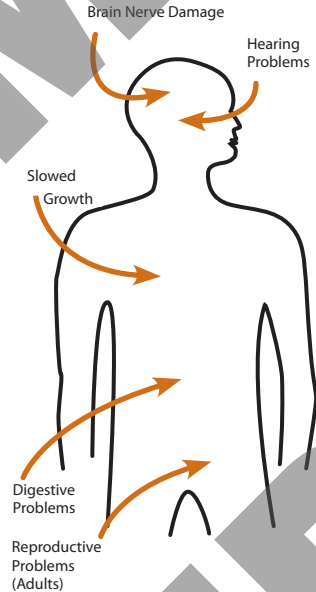
Please [see pages 13 and 14](#) for more information on sources of lead exposure.

Health Effects of Lead

Lead affects the body in many ways. It is important to know that no safe blood lead level has been identified and even exposure to low levels of lead can harm children.

In children, exposure to lead can cause:

- Nervous system and kidney damage
- Learning disabilities, attention-deficit disorder and decreased intelligence
- Speech, language and behavior problems
- Poor muscle coordination
- Decreased muscle and bone growth
- Hearing damage



While low-lead exposure is most common, exposure to high amounts of lead can have devastating effects on children, including seizures, unconsciousness and in some cases, death.

In adults, exposure to lead can cause an increased risk of:

- Miscarriage during pregnancy
- The baby being born too early or too small
- Harm to a developing fetus' brain, kidneys and nervous system
- Fertility problems (in men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain

Check Your Family for Lead

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

Children's blood lead levels (BLLs) tend to increase rapidly from 6 to 12 months of age, and BLLs tend to peak at 18 to 24 months of age.

A simple blood test is the best way to find out if a child has been exposed to lead. A child who has been exposed to lead may not have visible signs or symptoms and may look and act healthy. Consult your doctor for advice on getting your children tested.

Blood lead tests are required for the following groups:

- Children at 12 and 24 months enrolled in Medicaid
- Children between 24 and 72 months enrolled in Medicaid with no record of a previous blood lead test
- Children who should be tested under your Tribal, state or local health testing plan

Blood lead tests are recommended for the following groups:

- Children at 12 and 24 months living in areas that are at higher risk* or who belong to populations that are at higher risk*
- Children or other family members who have been exposed to lead

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

* Some children are more likely to be exposed to lead than others. These include children who live or spend time in a house or building built before 1978, are from low-income households, live or spend time with someone who works with lead or are immigrants, refugees or recently adopted from less developed countries.

Where Lead-Based Paint Is Found

In general, the older your home or childcare facility, the more likely it has lead-based paint.¹

Many homes and childcare facilities built before 1978 may have lead-based paint. In 1978, the federal government banned consumer uses of lead-containing paint.²

Learn how to determine if paint is lead-based paint on page 7.

Lead can be found:

- In homes and childcare facilities in the city, country or suburbs
- In private and public single-family homes and apartments
- On surfaces 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)

Learn more about where lead is found at [epa.gov/lead](https://www.epa.gov/lead).

¹ "Lead-based paint" is currently defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm²), or more than 0.5% by weight.

² "Lead-containing paint" is currently defined by the federal government as lead in new dried paint in excess of 90 parts per million (ppm) by weight.

Identifying Lead-Based Paint and Lead-Based Paint Hazards

Deteriorated lead-based paint (peeling, chipping, chalking, cracking or damaged 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, such as:

- On windows and window sills
- Doors and door frames
- Stairs, railings, banisters and porches

Lead-based paint is usually not a hazard if it is in good (intact) condition and if it is not on an impact or friction surface like a window.

Lead dust can form when lead-based paint is scraped, sanded or heated. Lead dust also forms when painted surfaces containing lead bump or rub together. Lead paint chips and dust can get on surfaces and objects that people touch. Settled lead dust can reenter the air when the home is vacuumed or swept, or when people walk through it. EPA currently defines any reportable level of lead dust measured by an EPA-recognized lead laboratory as hazardous.

If you suspect your home has lead-based paint, you should clean regularly to minimize dust using the information on [pages 9 and 11](#), especially when young children live in the home. EPA does not recommend lead abatements based on lead dust unless the lead dust is at or above the action levels listed on [page 11](#).

Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. EPA currently defines the following levels of lead in soil as hazardous:

- 400 parts per million (ppm) and higher in play areas of bare soil
- 1,200 ppm (average) and higher in bare soil in the remainder of the yard

Remember, lead from paint chips—which you can see—and lead in dust or soil—which you may not be able to see—can both be hazards.

The only way to find out if paint, dust or soil lead hazards exist is to test for them. The next page describes how to do this.

Checking Your Home for Lead

Hire a certified lead professional to get your home tested for lead in several different ways:

- A lead-based paint **inspection** tells you if your home has lead-based paint and where it is located. It won't tell you whether your home currently has lead hazards or how to deal with them. A trained and certified lead-based paint inspector will inspect the paint using:
 - A portable x-ray fluorescence (XRF) machine
 - Lab tests of paint samples collected by the inspector to be tested in an EPA-recognized lead laboratory
- A **risk assessment** tells you if your home currently has any lead hazards from paint, dust or soil, and what actions to take to address any hazards. A trained and certified lead-based paint risk assessor will:
 - Sample paint that is deteriorated on doors, windows, floors, stairs and walls
 - Sample dust near painted surfaces and sample bare soil in the yard
 - Get lab tests of paint, dust and soil samples
- A **combination inspection and risk assessment** tells you if your home has any lead-based paint, if it has any lead hazards and where both are located.



Be sure to read the report provided to you after your inspection or risk assessment is completed and ask questions about anything you do not understand. Closely monitor areas that are known to have lead-based paint.

Checking Your Home for Lead, continued

In preparing for renovation, repair or painting work in a pre-1978 home, Lead-Safe Certified renovators ([see page 12](#)) may do any of the following:

- Take paint chip samples to determine if lead-based paint is present in the area planned for renovation and send them to an EPA-recognized lead lab for analysis
- Use EPA-recognized tests kits to determine if lead-based paint is absent
- Presume that lead-based paint is present and use lead-safe work practices

There are state, Tribal and federal programs in place to ensure that testing is done safely, reliably and effectively. Contact your state, Tribal or local agency for more information, visit [epa.gov/lead](https://www.epa.gov/lead), or call toll-free **1-800-424-LEAD (5323)** for a list of contacts in your area.³

³ Hearing- or speech-challenged individuals may access this number through TTY by calling 711.

What You Can Do Now to Protect Your Family

If you suspect that your house has lead-based paint hazards, you can take some immediate steps to reduce your family's risk:

- If you rent, notify your landlord of peeling or chipping paint.
- Keep painted surfaces clean and free of dust. Clean floors, window frames, window sills and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner. (Remember: never mix ammonia and bleach products together because they can form a dangerous gas.)
- Carefully clean up paint chips immediately without creating dust.
- Thoroughly rinse sponges and mop heads often during cleaning of dirty or dusty areas, and again afterward.
- Wash your hands and your children's hands often, especially before they eat and before nap time and bedtime.
- Keep play areas clean. Wash bottles, pacifiers, toys and stuffed animals regularly.
- Keep children from chewing window sills or other painted surfaces, or eating soil.
- When renovating, repairing or painting, hire only EPA-, Tribal- or state-approved Lead-Safe Certified renovation firms ([see page 12](#)).
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Make sure children eat a well-balanced diet of fruits, vegetables, grains, dairy and protein-rich foods. Foods that are higher in iron, calcium and vitamin C may help reduce the body's absorption of lead. Children with empty stomachs absorb more lead than children with food in their stomachs.

Reducing Lead Hazards

Disturbing lead-based paint or removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.

- In addition to day-to-day cleaning and good nutrition, you can **temporarily** reduce lead-based paint hazards by taking actions, such as repairing damaged painted surfaces and planting grass to cover lead-contaminated soil. These actions are not permanent solutions and will need ongoing attention.



- You can minimize exposure to lead when renovating, repairing or painting by hiring an EPA-, Tribal- or state-certified renovator who is trained in the use of lead-safe work practices. If you are a do-it-yourselfer, learn how to use lead-safe work practices in your home.
- To remove lead hazards, you should hire a certified lead abatement contractor. Abatement methods (which are designed to permanently address lead-based paint hazards) include removing, sealing or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint will not permanently address the lead-based paint hazards.

Always use a certified contractor who is trained to address lead hazards safely.

- Hire a Lead-Safe Certified firm ([see page 12](#)) to perform renovation, repair or painting (RRP) projects that disturb painted surfaces.
- Hire a certified lead abatement contractor to permanently address lead hazards. This will ensure your contractor knows how to 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 Tribe or by the federal government.

Reducing Lead Hazards, continued

If your home has had a lead abatement, dust cleanup activities must be conducted once the work is completed. Dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following action levels:

- 5 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for floors, including carpeted floors
- 40 $\mu\text{g}/\text{ft}^2$ for interior window sills
- 100 $\mu\text{g}/\text{ft}^2$ for window troughs

Abatements are designed to permanently address lead-based paint hazards. However, when an abatement is complete, lead dust may still remain above reportable levels (see page 6) and can also be reintroduced into an abated area. Steps to keep lead dust low after an abatement include:

- Using a HEPA vacuum on all furniture and other items returned to the area
- Regularly cleaning floors, window sills, troughs and other hard surfaces with a damp cloth or sponge and a general all-purpose cleaner

Please see page 9 for more information on steps you can take to protect your home after the abatement. For help in locating certified lead abatement professionals in your area, call your state, Tribal or local agency (see pages 15 and 16), visit cdxapps.epa.gov/leadpro, or call toll-free 1-800-424-LEAD [5323].

Renovating, Repairing or Painting a Home with Lead-Based Paint

If you hire a contractor to conduct renovation, repair or painting (RRP) projects in your pre-1978 home or childcare facility (such as pre-school and kindergarten), your contractor must:

- Be a Lead-Safe Certified firm approved by EPA or an EPA-authorized state or Tribal program
- Use qualified trained individuals (Lead-Safe Certified renovators) who follow specific lead-safe work practices to prevent lead contamination
- Provide a copy of EPA's lead hazard information document, *The Lead-Safe Certified Guide to Renovate Right*



RRP contractors working in pre-1978 homes and childcare facilities must follow lead-safe work practices that:

- **Contain the work area.** The area must be contained so that dust and debris do not escape from the work area. Warning signs must be put up, and plastic or other impermeable material and tape must be used.
- **Avoid renovation methods that generate large amounts of lead-contaminated dust.** Some methods generate so much lead-contaminated dust that their use is prohibited. These prohibited methods are:
 - Open-flame burning or torching
 - Sanding, grinding, planing, needle gunning or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment
 - Using a heat gun at temperatures greater than 1100°F
- **Clean up thoroughly.** The work area should be cleaned up daily. When all the work is done, the area must be cleaned up using special cleaning methods and then checked to confirm adequate cleanup.
- **Dispose of waste properly.** Collect and seal waste in a heavy-duty bag or sheeting. When transported, ensure that waste is contained to prevent release of dust and debris.

To learn more about EPA's requirements for RRP projects, visit epa.gov/getleadsafe, or read *The Lead-Safe Certified Guide to Renovate Right*.

Other Sources of Lead

Lead in Drinking Water

The most common sources of lead in drinking water in homes are lead pipes, fixtures, brass or chrome-plated brass faucets and plumbing with lead solder.

Lead pipes are more likely to be found in older cities and homes built before 1986.

You can't smell or taste lead in drinking water.

To find out for certain if you have lead in drinking water, have your water tested (See below).

Remember that older homes with a private well can also have plumbing materials that contain lead.

Important Steps You Can Take to Reduce Lead in Drinking Water

- Use only cold water for drinking, cooking and making baby formula. Boiling water does not remove lead from water.
- Before drinking, flush your home's pipes by running the tap, taking a shower, doing laundry or doing a load of dishes.
- Regularly clean your faucet's screen (also known as an aerator).
- If you use a filter certified to remove lead, read the directions to learn when to change the cartridge. Using a filter after it has expired can make it less effective at removing lead.

Contact your water company to determine if the pipe that connects your home to the water main (called a service line) is made from lead. Your area's water company can also provide information about the lead levels in your system's drinking water.

For more information about lead in drinking water, please use EPA's Safe Drinking Water online form at [epa.gov/safewaterhotline](https://www.epa.gov/safewaterhotline).

Call your local health department or water company to find out about testing your water, or visit [epa.gov/safewater](https://www.epa.gov/safewater) for EPA's lead in drinking water information. Some states or utilities offer programs to pay for water testing for residents. Contact your state or local water company to learn more.

Other Sources of Lead, continued

- **Lead smelters** or other industries that release lead into the air.
- **Your job.** Working in certain jobs may increase adults' potential exposure to lead, such as: renovation or repair of older homes and buildings, painting, construction, refinishing furniture, smelting, mining, auto repair, handling firearms and working at hazardous waste sites. If you work with lead, lead dust or soil could get onto your skin, in your hair and clothes, which can be transferred to the inside of your car or home. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- **Hobbies** that use lead, such as making pottery or stained glass, fishing, shooting at a gun range or refinishing furniture that has lead-containing paint or varnish. Call your local health department for information about hobbies that may use lead.
- Old **toys** and **furniture** may have been painted with lead-containing paint or varnish. Older toys and other children's products may have parts that contain lead.⁴
- Food and liquids cooked or stored in **lead crystal** or **lead-glazed pottery or porcelain** may contain lead.
- Items made in other countries and imported into the United States may have lead including toys, painted furniture, metal or plastic jewelry, health remedies, foods, spices, candies, cosmetics, powders, make-up used in religious and cultural practices and folk remedies, such as "**greta**" and "**azarcon**," used to treat an upset stomach.
- **Older playground equipment** can contain old lead-based paint, and **artificial turf** and **playground surfaces** made from shredded rubber can contain lead. Take precautions to ensure young children do not eat shredded rubber or put their hands in their mouth before washing them.

⁴ In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint. In 2008, the federal government banned lead in most children's products. The federal government currently bans lead above 100 ppm by weight in most children's products.

For More Information

The National Lead Information Center

Learn how to protect children from lead poisoning and get other information about lead hazards on the Web at epa.gov/lead and hud.gov/lead, or call toll-free **1-800-424-LEAD (5323)**.

EPA's Safe Drinking Water Hotline

For information about lead in drinking water visit epa.gov/safewater or use EPA's Safe Drinking Water online form at epa.gov/safewaterhotline.

Consumer Product Safety Commission (CPSC) Hotline

For information on lead in toys and other consumer products, or to report an unsafe consumer product or a product-related injury, call toll-free **1-800-638-2772**, or visit CPSC's website at cpsc.gov or saferproducts.gov.

Food and Drug Administration

For information on lead in food and foodwares visit www.fda.gov/food/environmental-contaminants-food/lead-food-and-foodwares.

Centers for Disease Control and Prevention

For information on childhood lead poisoning prevention visit: www.cdc.gov/lead

State and Local Health and Environmental Agencies

Some states, Tribes, counties and cities have their own rules related to lead-based paint. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your state, Tribal or local contacts on the Web at epa.gov/lead, or contact the National Lead Information Center toll-free at **1-800-424-LEAD [5323]**.

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling **711**.

U. S. Environmental Protection Agency (EPA)

Regional Offices

The mission of EPA is to protect human health and the environment. Your Regional EPA Office can provide further information regarding regulations and lead protection programs: epa.gov/lead/contacts.

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont and 10 federally recognized Tribes)

Regional Lead Contact
U.S. EPA Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912
(888) 372-7341

Region 2 (New Jersey, New York, Puerto Rico, Virgin Islands and 8 Tribes)

Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 205, Mail Stop 225
Edison, NJ 08837-3679

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia and 7 Tribes)

Regional Lead Contact
U.S. EPA Region 3
Four Penn Center
1600 JFK Blvd
Philadelphia, PA 19103-2029

Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and 6 Tribes)

Regional Lead Contact
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin and 37 Tribes)

Regional Lead Contact
U.S. EPA Region 5 (LL-17J)
77 West Jackson Boulevard
Chicago, IL 60604
(312) 353-3808

Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribes)

Regional Lead Contact
U.S. EPA Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270
(214) 665-7577

Region 7 (Iowa, Kansas, Missouri, Nebraska and 9 Tribes)

Regional Lead Contact
U.S. EPA Region 7
11201 Renner Blvd.
LCRD/TTPB
Lenexa, KS 66219
(800) 223-0425

Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 28 Tribes)

Regional Lead Contact
U.S. EPA Region 8
1595 Wynkoop St.
Denver, CO 80202
(303) 312-6169

Region 9 (Arizona, California, Hawaii, Nevada, Guam, American Samoa, Northern Marianas, Palau, Micronesia, Marshall Islands and 148 Tribes)

Regional Lead Contact
U.S. EPA Region 9 (LNC-2-2)
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-8000

Region 10 (Alaska, Idaho, Oregon, Washington and 271 Tribes)

Regional Lead Contact
U.S. EPA Region 10 (20-C04)
1200 Sixth Avenue, Suite 155
Seattle, WA 98101
(206) 553-1200

Consumer Product Safety Commission (CPSC)

The CPSC protects the public against unreasonable risk of injury from consumer products through education, safety standards activities and enforcement. Contact CPSC for further information regarding consumer product safety and regulations.

CPSC

4330 East-West Highway
Bethesda, MD 20814-4421
1-800-638-2772

cpsc.gov or saferproducts.gov

U. S. Department of Housing and Urban Development (HUD)

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. Its Office of Lead Hazard Control and Healthy Homes' (OLHCHH's) lead hazard reduction grants, healthy homes grants, and guidance and enforcement of the Lead Disclosure Rule and Lead Safe Housing Rule, protect families from lead and other housing hazards.

HUD OLHCHH

lead.regulations@hud.gov
hud.gov/lead

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IMPORTANT!

Lead From Paint, Dust and Soil in and Around Your Home Can Be Dangerous if Not Managed Properly

- Children under 6 years old are most at risk for lead poisoning.
- Lead exposure can harm young children and babies even before they are born.
- Homes, schools and childcare facilities built before 1978 are likely to contain lead-based paint.
- Even children who seem healthy may have dangerous levels of lead in their bodies.
- Disturbing surfaces with lead-based paint or removing lead-based paint improperly can increase the danger to your family.
- People can get lead into their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- People have many options for reducing lead hazards. Generally, lead-based paint that is in good condition is not a hazard (see page 10).