

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 in your home.
- Lead exposure can harm young children and babies even before they are born.
- Homes, schools, and child care 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).

BED BUG ADDENDUM

NOTE: This form is used by a property manager or landlord as an addendum when entering into a residential rental or lease agreement or updating an existing rental or lease agreement, to notify the tenant of their obligation to cooperate in bed bug prevention by reporting a suspected bed bug infestation to the landlord.

DATE: _____, 20____, at _____, California.

Items left blank or unchecked are not applicable.

FACTS:

1. This is an addendum to the following:
 - Residential lease agreement |
 - Residential rental agreement
 - _____
- 1.1 dated _____, 20____,
- 1.2 entered into by _____, as the Landlord,
and _____, as the Tenant,
- 1.3 regarding real estate referred to as _____.
2. Tenant agrees to promptly provide written notice to Landlord of suspected bed bug infestations and cooperate in any prevention or treatment strategies.
3. Written notification to be provided to Landlord at: _____.
4. Landlord agrees to promptly contact a pest control operator to correct the reported infestation.

INFORMATION ABOUT BED BUGS:

Bed bug Appearance: Bed bugs have six legs. Adult bed bugs have flat bodies about 1/4 of an inch in length. Their color can vary from red and brown to copper colored. Young bed bugs are very small. Their bodies are about 1/16 of an inch in length. They have almost no color. When a bed bug feeds, its body swells, may lengthen, and becomes bright red, sometimes making it appear to be a different insect. Bed bugs do not fly. They can either crawl or be carried from place to place on objects, people, or animals. Bed bugs can be hard to find and identify because they are tiny and try to stay hidden.

Life Cycle and Reproduction: An average bed bug lives for about 10 months. Female bed bugs lay one to five eggs per day. Bed bugs grow to full adulthood in about 21 days. Bed bugs can survive for months without feeding.

Bed bug Bites: Because bed bugs usually feed at night, most people are bitten in their sleep and do not realize they were bitten. A person's reaction to insect bites is an immune response and so varies from person to person. Sometimes the red welts caused by the bites will not be noticed until many days after a person was bitten, if at all.

Common signs and symptoms of a possible bed bug infestation:

- Small red to reddish brown fecal spots on mattresses, box springs, bed frames, mattresses, linens, upholstery, or walls.
- Molted bed bug skins, white, sticky eggs, or empty eggshells.
- Very heavily infested areas may have a characteristically sweet odor.
- Red, itchy bite marks, especially on the legs, arms, and other body parts exposed while sleeping. However, some people do not show bed bug lesions on their bodies even though bed bugs may have fed on them.

For more information, see the Internet Web sites of the United States Environmental Protection Agency and the National Pest Management Association.

I agree to the terms stated above.

Date: _____, 20____

Landlord/Agent: _____

Signature: _____

I agree to the terms stated above.

Date: _____, 20____

Tenant: _____

Signature: _____

Tenant: _____

Signature: _____



California Department of Health Services

Indoor Air Quality Info Sheet

Mold in My Home: What Do I Do?

Updated June 2006

This is an update of our info sheet providing basic information to people who have experienced water damage to their home. It describes health concerns related to mold exposure, and it also provides general guidelines on prevention, mold detection, as well as cleanup of mold-contaminated materials. Additional resources and documents are referenced.

ABOUT MOLD

What are Molds?

Molds are simple, microscopic organisms, present virtually everywhere, indoors and outdoors. Molds, along with mushrooms and yeasts, are *fungi* and are needed to break down dead material and recycle nutrients in the environment. For molds to grow and reproduce, they need only a food source – any organic material, such as leaves, wood, paper, or dirt— and moisture. Because molds grow by digesting the organic material, they gradually destroy whatever they grow on. Sometimes, new molds grow on old mold colonies. Mold growth on surfaces can often be seen in the form of discoloration, frequently green, gray, brown, or black but also white and other colors. Molds release countless tiny, lightweight spores, which travel through the air.

How am I exposed to indoor molds?

Everyone is exposed to some mold on a daily basis without evident harm. It is common to find mold spores in the air inside homes, and most of the airborne spores found indoors come from outdoor sources. Mold spores primarily cause health problems when they are present in large numbers and people *inhale* many of them. This occurs primarily when there is *active* mold growth within home, office or school where people live or work. People can also be exposed to mold by touching contaminated materials and by eating contaminated foods.

Can mold become a problem in my home?

Molds will grow and multiply whenever conditions are right—sufficient moisture is available and organic material is present. Be on the lookout in your home for common sources of indoor moisture that may lead to mold problems:

- Flooding
- Leaky roofs
- Sprinkler spray hitting the house
- Plumbing leaks
- Overflow from sinks or sewers
- Damp basement or crawl space
- Steam from shower or cooking
- Humidifiers
- Wet clothes drying indoors or clothes dryers exhausting indoors

Warping floors and discoloration of walls and ceilings can be indications of moisture problems. *Condensation on windows or walls* is also an important indication, but it can sometimes be caused by an indoor combustion problem! *Have fuel-burning appliances routinely inspected by your local utility or a professional heating contractor.*

Should I be concerned about mold in my home?

Yes, if indoor mold contamination is extensive, it can cause very high and persistent airborne spore exposures. Persons exposed to high spore levels can become sensitized and develop allergies to the mold or other health problems. Mold growth can damage your furnishings, such as carpets, sofas and cabinets. Clothes and shoes in damp closets can become soiled. In time, unchecked mold growth can cause serious damage to the structural elements in your home.

HEALTH EFFECTS

What symptoms are commonly seen with mold exposure?

Molds produce health effects through inflammation, allergy, or infection. Allergic reactions (often referred to as hay fever) are most common following mold exposure. Typical symptoms that mold-exposed persons report (alone or in combination) include:

- Respiratory problems, such as wheezing, difficulty breathing, and shortness of breath
- Nasal and sinus congestion
- Eye irritation (burning, watery, or reddened eyes)
- Dry, hacking cough
- Nose or throat irritation
- Skin rashes or irritation

Headaches, memory problems, mood swings, nosebleeds, body aches and pains, and fevers are occasionally reported in mold cases, but their cause is not understood.

How much mold can make me sick?

It depends. For some people, a relatively small number of mold spores can trigger an asthma attack or lead to other health problems. For other persons, symptoms may occur only when exposure levels are much higher. Nonetheless, indoor mold growth is unsanitary and undesirable. Basically, *if you can see or smell mold* inside your home, take steps to identify and eliminate the excess moisture and to clean up and remove the mold.

Are some molds more hazardous than others?

Allergic persons vary in their sensitivities to mold, both as to the amount and the types to which they react. In addition to their allergic properties, certain types of molds, such as *Stachybotrys chartarum*, may produce compounds that have toxic properties, which are called *mycotoxins*. Mycotoxins are not always produced, and whether a mold produces mycotoxins while growing in a building depends on what the mold is growing on, conditions such as temperature, pH, humidity or other unknown factors. When mycotoxins are present, they occur in both living and dead mold spores and may be present in materials that have become contaminated with molds. While *Stachybotrys* is growing, a wet slime layer covers its spores, preventing them from becoming airborne. However, when the mold dies and dries up, air currents or physical handling can cause spores to become airborne.

At present there is no environmental test to determine whether *Stachybotrys* growth found in buildings is producing toxins. There is also no blood or urine test that can establish if an individual has been exposed to *Stachybotrys chartarum* spores or its toxins.

Who is at greater risk when exposed to mold?

Exposure to mold is not healthy for anyone inside buildings. Therefore, it is always best to identify and correct high moisture conditions quickly before mold grows and health problems develop.

Some people may have more severe symptoms or become ill more rapidly than others:

- Individuals with existing respiratory conditions, such as allergies, chemical sensitivities, or asthma.
- Persons with weakened immune systems (such as people with HIV infection, cancer chemotherapy patients, and so forth)
- Infants and young children
- The elderly

Anyone with health problems they believe due to molds should consult a medical professional.

Additional fact sheets on Mold and Health Effects are available from CDHS:

- *Health Effects of Toxin-Producing Molds in California*
- *Stachybotrys chartarum (atra) — a mold that may be found in water-damaged homes*
- *Fungi and Indoor Air Quality*
- *Misinterpretation of Stachybotrys Serology*

These documents are available from the Environmental Health Investigation Branch, (510) 620-3620, or on the web at www.dhs.ca.gov/ehib/.

DETECTION OF MOLD

How can I tell if I have mold in my house?

You may suspect that you have mold if you *see* discolored patches or cottony or speckled growth on walls or furniture or if you *smell* an earthy or musty odor. You also may suspect mold contamination if mold-allergic individuals *experience* some of the symptoms listed above when in the house. *Evidence of past or ongoing water damage should also trigger more thorough inspection.* You may find mold growth underneath water-damaged surfaces or behind walls, floors or ceilings.

Should I test my home for mold?

The California Department of Health Services does not recommend testing as a first step to determine if you have a mold problem. Reliable air sampling for mold can be expensive and requires expertise and equipment that is not available to the general public. Owners of individual private homes and apartment generally will need to pay a contractor to carry out such sampling, because insurance companies and public health agencies seldom provide this service. Mold inspection and cleanup is

usually considered a housekeeping task that is the responsibility of homeowner or landlord, as are roof and plumbing repairs, house cleaning, and yard maintenance.

Another reason the health department does not recommend testing for mold contamination is that there are few available standards for judging what is an acceptable quantity of mold. In all locations, there is some level of airborne mold outdoors. If sampling is carried out in a home, an outdoor air sample also must be collected at the same time as the indoor samples, to provide a baseline measurement. Because individual susceptibility varies so greatly, sampling is at best a general guide.

The simplest way to deal with a suspicion of mold contamination is: **If you can see or smell mold, you likely have a problem and should take the steps outlined below.** Mold growth is likely to recur unless the source of moisture that is allowing mold to grow is removed and the contaminated area is cleaned.

GENERAL CLEAN-UP PROCEDURES

The following is intended as an overview for homeowners or apartment dwellers. We recommend that you consult one of several more thorough documents currently available as guidance, listed in the USEFUL PUBLICATIONS section below.

Elements of the Clean-up Procedures

- Identify and eliminate sources of moisture
- Identify and assess the magnitude and area of mold contamination
- Clean and dry moldy areas – use containment of affected areas
- Bag and dispose of all material that may have moldy residues, such as rags, paper, leaves, and debris.

Assessing the Size of a Mold Contamination Problem

There will be a significant difference in the approach used for a small mold problem – total area affected is less than 10 ft² – and a large contamination problem – more than 100 ft². In the case of a relatively small area, the clean-up can be handled by the homeowner or maintenance staff, using personal protective equipment (see below). However, for cases of much larger areas, it is advisable that an experienced, professional contractor be used. For in-between sized cases, the type of containment and personal protection equipment to be used will be a matter of judgment.

Can cleaning up mold be hazardous to my health?

Yes. During the cleaning process, you may be exposed to mold, strong detergents, and disinfectants. Spore counts may be 10 to 1000 times higher than background levels when mold-contaminated materials are disturbed. Take steps to protect you and your family's health during cleanup:

- When handling or cleaning moldy materials, it is important to use a respirator to protect yourself from inhaling airborne spores.

Respirators can be purchased from hardware stores; select one that is effective for particle removal (sometimes referred to as an N-95 particulate respirator). However, respirators that remove particles will not protect you from fumes (such as bleach). Minimize exposure when using bleach or other disinfectants by ensuring good ventilation of the area.

- Wear protective clothing that is easily cleaned or discarded.
- Use rubber gloves.
- Try cleaning a test area first. If you feel that this activity adversely affected your health, you should consider paying a licensed contractor or other experienced professional to carry out the work.
- Ask family members or bystanders to leave areas that are being cleaned.

- Work for short time periods and rest in a location with fresh air.
- Air out your house well during and after the work.

Never use a gasoline engine indoors (e.g., water pump, pressure washer or generator), as you could expose your family to toxic carbon monoxide.

Removal of Moldy Materials

Clean up should begin *after* the moisture source is fixed and excess water has been removed. Wear gloves when handling moldy materials.

- Discard porous materials (for example, ceiling tiles, sheetrock, carpeting, and wood products).
- Bag and discard moldy items; if properly enclosed, items can be disposed with household trash.
- Dry affected areas for 2 or 3 days.

Spores are more easily released when moldy materials dry out, hence it is advisable to remove moldy items as soon as possible.

If there was flooding, sheetrock should be removed to a level above the high-water mark. Visually inspect the wall interior and remove any mold-contaminated materials.

What can I save? What should I toss?

You should discard moldy items that are porous and from which it will be difficult to remove mold completely: paper, rags, wallboard, rotten wood, carpet, drapes, and upholstered furniture. Contaminated carpet is often difficult to thoroughly clean, especially when the backing and/or padding can become moldy. Solid materials – glass, plastic, and metal – can generally be kept after they are thoroughly cleaned.

Clean-up

When attempting to clean less porous items (i.e., solid items such as floors, cabinets, solid furniture), the first step is to remove as much mold as possible. A cleaning detergent is effective for this purpose. Wear gloves, mask and eye protection when doing this cleanup.

- Use non-ammonia soap or detergent, or a commercial cleaner, in hot water, and scrub the entire area that is affected by the mold.
- Use a stiff brush or cleaning pad on cement-block walls or other uneven surfaces.
- Rinse cleaned items with water and dry thoroughly. A wet/dry vacuum cleaner is helpful for removing water and cleaning items.

Disinfection of Contaminated Materials

Disinfecting agents can be toxic for humans, not just molds. They should be used only when necessary and should be handled with caution.

Disinfectants are intended to be applied to thoroughly cleaned materials and are used to ensure that most microorganisms have been killed. *Therefore, do not use disinfectants instead of, or before, cleaning materials with soap or detergent.* Removal of mold growth from nonporous materials usually is sufficient. Wear gloves, mask and eye protection when using disinfectants

- After thoroughly cleaning and rinsing contaminated materials, a solution of 10% household bleach (for example, 1½ cup household bleach per gallon of water) can be used as a disinfectant.
- **Using bleach straight from the bottle is actually LESS effective than diluted bleach.**
- Keep the disinfectant on the treated material for the prescribed time before rinsing or drying; typically 10 minutes is recommended for a bleach solution
- **Bleach fumes can irritate the eyes, nose, and throat, and damage clothing and shoes. Make sure working areas are well ventilated.**
- When disinfecting a large structure, make sure that the entire surface is wetted (for example, the floors, joists, and posts).
- Properly collect and dispose extra disinfectant and runoff.
- **Never mix bleach with ammonia; toxic fumes may be produced.**

Can air ducts become contaminated with mold?

Yes. Air duct systems can become contaminated with mold. Duct systems may be constructed of bare sheet metal, sheet metal with fibrous glass insulation on the exterior, or sheet metal with an internal fibrous glass liner, or they may be made entirely of fibrous glass. Bare sheet metal systems and sheet metal with exterior fibrous glass insulation can be cleaned and disinfected. If water damaged, ductwork made of sheet metal with an **internal** fibrous glass liner or made entirely of fibrous glass will often need to be removed and discarded. Ductwork in difficult-to-reach locations may have to be abandoned. If you have other questions, contact an air duct cleaning professional or licensed contractor.

Can ozone air cleaners help remove indoor mold or reduce odors?

Sometimes air cleaners are promoted to remove indoor mold or associated odors, and some of these are designed to produce ozone. Ozone is a strong oxidizing agent that is used as a disinfectant in water and sometimes to eliminate odors. However, ozone is a known lung irritant. Ozone generators have been shown to sometimes produce indoor levels above the safe limit. Furthermore, it has been shown that **ozone is not effective in controlling molds and other microbial contamination**, even at concentrations far above safe health levels. Also, ozone may damage materials in the home, for example, cause rubber items to become brittle. For these reasons, the **California Department of Health Services strongly recommends that you NOT use an ozone air cleaner in any occupied space.** Refer to the CDHS IAQ Info Sheet: *Health Hazards of Ozone-generating Air Cleaning Devices* (January 1998), available on the CDHS-IAQS web site.

How can I prevent indoor mold problems in my home?

Inspect your home regularly for the indications and sources of indoor moisture and mold listed on Page 1. Take steps to eliminate sources of water as quickly as possible. If a leak or flooding occurs, it is essential to act *quickly*:

- Stop the source of leak or flooding.
- Remove excess water with mops or wet vacuum.
- Whenever possible, move wet items to a dry and well ventilated area or outside to expedite drying. Move rugs and pull up areas of wet carpet as soon as possible.
- Open closet and cabinet doors and move furniture away from walls to increase circulation.
- Run portable fans to increase air circulation. Do NOT use the home's central blower if flooding has occurred in it or in any of the ducts. Do NOT use fans if mold may have already started to grow -- more than 48 h since flooding.
- Run dehumidifiers and window air conditioners to lower humidity.
- Do NOT turn up the heat or use heaters in confined areas, as higher temperatures *increase* the rate of mold growth.
- If water has soaked inside the walls, it may be necessary to open wall cavities, remove baseboards, and/or pry open wall paneling.

FOR LOCAL ASSISTANCE:

Contact your County or City Department of Health, Housing, or Environmental Health

**California Department of Health Services
(CDHS) IAQ Info Sheet**

Arnold Schwarzenegger, Governor
State of California
Kimberly Belshé, Secretary
Health and Human Services Agency
Sandra Shewry, Director
Department of Health Services

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USEFUL PUBLICATIONS

Links to the following documents can be found at <http://www.ca-iaq.org>.

General Information

Molds, Toxic Molds, and Indoor Air Quality. Detailed overview for the legislature by the California Research Bureau.

Mold in Workplace – CDHS-HESIS Info Sheet. Useful overview with specific resources for workers.

Biological Pollutants in Your Home. Concise booklet by U.S. EPA and ALA aimed at affected homeowner.

Mold and Moisture. Appendix H in the U.S. EPA IAQ Tools for Schools

Clean-up Guidance

Repairing Your Flooded Home. Excellent resource by the American Red Cross and FEMA, with details on technical & logistical issues.

Guidelines on Assessment and Remediation of Fungi in Indoor Environments. Widely referenced guidelines developed by the New York City Department of Health.

Mold Remediation in Schools and Commercial Buildings. Valuable guidance by U.S. EPA, also applicable to residences.

Consultants, Laboratories & Clinics
CDHS Listing of Consultants Offering IAQ Services in California. Self-reported database of contractors.

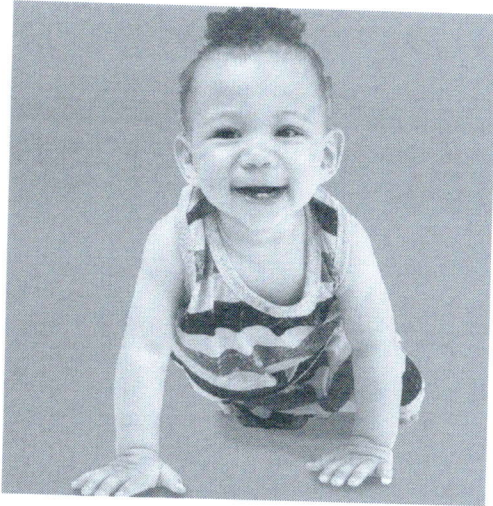
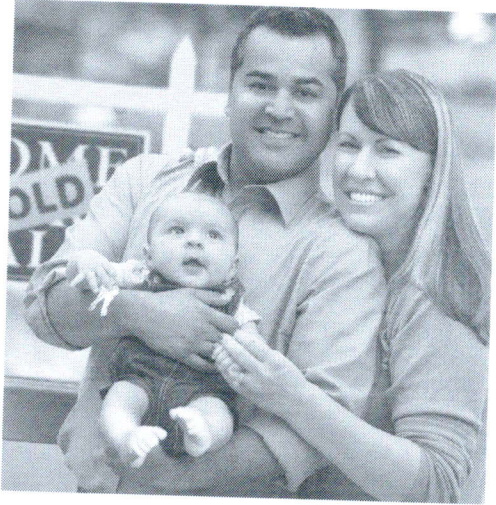
CDHS List of Laboratories for Bioaerosol (Mold) Testing. Identifies labs providing bioaerosol testing.

Association of Occupational & Environmental Clinics. www.aeec.org.

Additional Information:

U.S. EPA IAQ INFO, 800-438-4318,
9 am to 5 pm, Eastern Time,
www.epa.gov/iaq/

CDHS Indoor Air Quality Section,
850 Marina Bay Parkway (EHLB),
Richmond, CA 94804
Phone: 510-620-2874



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
- About health effects of lead
- 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 must disclose known information on lead-based paint or lead-based paint hazards before selling a house.
- Real estate sales contracts must include a specific warning statement about lead-based paint. Buyers have up to 10 days to check for lead.
- Landlords must disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a specific warning statement about lead-based paint.

If undertaking renovations, repairs, 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).



Simple 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 inspector or risk assessor at epa.gov/lead.
- Talk to your landlord about fixing surfaces with peeling or chipping paint.
- Regularly clean floors, window sills, and other surfaces.
- Take precautions to avoid exposure to lead dust when remodeling.
- When renovating, repairing, or painting, hire only EPA- or state-approved Lead-Safe certified renovation firms.
- Before buying, renting, or renovating your home, have it checked for lead-based paint.
- 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 avoid fatty (or high fat) foods and eat nutritious meals high in iron and calcium.
- Remove shoes or wipe soil 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 lead dust on them.



Women of childbearing age should know that lead is dangerous to a developing fetus.

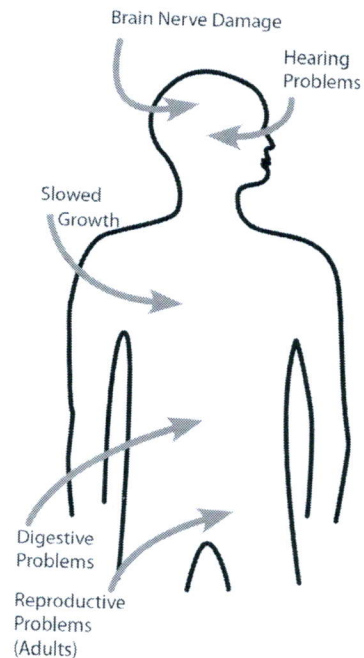
- Women with a high lead level in their system before or during pregnancy risk exposing the fetus to lead through the placenta during fetal development.

Health Effects of Lead

Lead affects the body in many ways. It is important to know that even exposure to low levels of lead can severely 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.

Although children are especially susceptible to lead exposure, lead can be dangerous for adults, too.

In adults, exposure to lead can cause:

- Harm to a developing fetus
- Increased chance of high blood pressure during pregnancy
- 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 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 lead. Blood lead tests are usually recommended for:

- Children at ages 1 and 2
- Children or 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.

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, including private, federally-assisted, federally-owned housing, and childcare facilities built before 1978 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, and
- 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.

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/cm), 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

Deteriorating 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 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 the following levels of lead in dust as hazardous:

- 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) and higher for floors, including carpeted floors
- 250 $\mu\text{g}/\text{ft}^2$ and higher for interior window sills

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 dust—which you may not be able to see—both can 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

You can 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. A trained and certified testing professional, called a lead-based paint inspector, will conduct a paint inspection using methods, such as:
 - Portable x-ray fluorescence (XRF) machine
 - Lab tests of paint samples
- A **risk assessment** tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards. A trained and certified testing professional, called a 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 and if your home 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.

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:

- 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. In housing receiving federal assistance, the person collecting these samples must be a certified lead-based paint inspector or risk assessor
- Use EPA-recognized tests kits to determine if lead-based paint is absent (but not in housing receiving federal assistance)
- Presume that lead-based paint is present and use lead-safe work practices

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency for more information, visit epa.gov/lead, or call **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 the Federal Relay Service at 1-800-877-8399.

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 bed time.
- 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- 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 avoid fatty (or high fat) foods and eat nutritious meals high in iron and calcium. Children with good diets absorb less lead.

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- 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 permanently, you should 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 permanent control.

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.
- To correct lead hazards permanently, hire a certified lead abatement professional. 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 as set by their state or by the federal government.

Reducing Lead Hazards, continued

If your home has had lead abatement work done or if the housing is receiving federal assistance, once the work is completed, dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following levels:

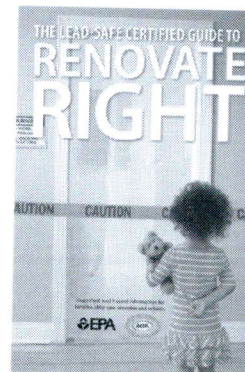
- 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for floors, including carpeted floors
- 250 $\mu\text{g}/\text{ft}^2$ for interior windows sills
- 400 $\mu\text{g}/\text{ft}^2$ for window troughs

For help in locating certified lead abatement professionals in your area, call your state or local agency (see pages 14 and 15), or visit epa.gov/lead, or call 1-800-424-LEAD.

Renovating, Remodeling, or Repairing (RRP) 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 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. They 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 and
 - 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.
- **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

While paint, dust, and soil are the most common sources of lead, other lead sources also exist:

- **Drinking water.** Your home might have plumbing with lead or lead solder. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might contain lead:

- 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.

Call your local health department or water supplier to find out about testing your water, or visit epa.gov/lead for EPA's lead in drinking water information.

- **Lead smelters** or other industries that release lead into the air.
- **Your job.** If you work with lead, you could bring it home on your body or clothes. 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, or refinishing furniture. 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. 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.
- Folk remedies, such as "**greta**" and "**azarcon**," used to treat an upset stomach.

⁴ In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint (16 CFR 1303). In 2008, the federal government banned lead in most children's products. The federal government currently bans lead in excess of 100 ppm by weight in most children's products (76 FR 44463).

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 **1-800-424-LEAD (5323)**.

EPA's Safe Drinking Water Hotline

For information about lead in drinking water, call **1-800-426-4791**, or visit epa.gov/lead for information about lead in drinking water.

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 **1-800-638-2772**, or visit CPSC's website at cpsc.gov or saferproducts.gov.

State and Local Health and Environmental Agencies

Some states, tribes, 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 or local contacts on the Web at epa.gov/lead, or contact the National Lead Information Center at **1-800-424-LEAD**.

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling the toll-free Federal Relay Service at **1-800-877-8339**.

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.

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact
U.S. EPA Region 1
5 Post Office Square, Suite 100, OES 05-4
Boston, MA 02109-3912
(888) 372-7341

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

Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 205, Mail Stop 225
Edison, NJ 08837-3679
(732) 321-6671

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia)

Regional Lead Contact
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA 19103
(215) 814-2088

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

Regional Lead Contact
U.S. EPA Region 4
AFC Tower, 12th Floor, Air, Pesticides & Toxics
61 Forsyth Street, SW
Atlanta, GA 30303
(404) 562-8998

Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact
U.S. EPA Region 5 (DT-8J)
77 West Jackson Boulevard
Chicago, IL 60604-3666
(312) 886-7836

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

Regional Lead Contact
U.S. EPA Region 6
1445 Ross Avenue, 12th Floor
Dallas, TX 75202-2733
(214) 665-2704

Region 7 (Iowa, Kansas, Missouri, Nebraska)

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

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

Regional Lead Contact
U.S. EPA Region 8
1595 Wynkoop St.
Denver, CO 80202
(303) 312-6966

Region 9 (Arizona, California, Hawaii, Nevada)

Regional Lead Contact
U.S. EPA Region 9 (CMD-4-2)
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-4280

Region 10 (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact
U.S. EPA Region 10
Solid Waste & Toxics Unit (WCM-128)
1200 Sixth Avenue, Suite 900
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. Contact HUD's Office of Healthy Homes and Lead Hazard Control for further information regarding the Lead Safe Housing Rule, which protects families in pre-1978 assisted housing, and for the lead hazard control and research grant programs.

HUD

451 Seventh Street, SW, Room 8236
Washington, DC 20410-3000
(202) 402-7698
hud.gov/offices/lead/

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