

Lead Poisoning

How to Protect Iowa Families



Iowa Department of Public Health
Lead Poisoning Prevention Program



Table of Contents

| | |
|--|--------------|
| Lead-Based Paint | 2 |
| Iowa Laws Regarding Landlords and Renovators: | 2 |
| Remember 1-6-20 | 3 |
| Federal Laws Regarding Landlords, Home Sellers and Renovators: | 3 |
| Lead Poisoning | 4 |
| How Do Children Become Lead-Poisoned? | 4 |
| What Are the Signs of Lead Poisoning in Children? | 6 |
| What Are the Effects of Lead Poisoning? | 7 |
| How Do Adults Become Lead-Poisoned? | 8 |
| What Are the Signs of Lead Poisoning in Adults? | 9 |
| Why Should Iowans Be Concerned About Lead Poisoning? | 10 |
| How Can You Find Out if You or Your Children Are Lead-Poisoned? | 11 |
| Lead-based Paint and Lead-Based Paint Hazards | 12 |
| When is Lead-Based Paint a Hazard? | 14 |
| Checking Your Home for Lead-Based Paint Hazards ... | 15 |
| Finding the Lead-Based Paint Hazards in and Around Your Home | 16 |
| Hazards Checklists | 17-23 |
| How Can You Safely Reduce Lead Hazards in Your Pre-1978 Home? | 24 |
| Protecting Your Family from Lead-Based Paint Hazards . | 24 |
| Nutrition | 26-27 |
| Keeping Your Family Safe During Renovation | 28 |
| Your Responsibility as a Property Owner | 29 |
| Preparing for a Renovation | 31 |
| During the Renovation Work | 32-33 |
| After the Renovation Work | 34 |
| Other Sources of Lead | 35 |
| Is Lead in Water a Problem for Your Family? | 36-37 |
| Is Working with Lead a Problem for Your Family? | 38 |
| More Information | 39 |
| Forms | 41-46 |

Lead-Based Paint

Lead based paint, lead chips and lead dust can pose serious health hazards and are still a serious concern in Iowa.

Many homes and child-occupied facilities built before 1978 contain lead-based paint hazards on both interior and exterior surfaces.

All of the rules regarding lead-based paint apply to pre-1978 homes and child-occupied facilities. Buildings built before 1960 pose the most significant health risks.

Iowa Laws Regarding Landlords and Renovators

Iowa law as enforced by the Iowa Department of Public Health requires lead professionals that disturb painted surfaces in homes and child-occupied facilities built before 1978 to be certified and follow specific work practices to prevent lead contamination. Always ask to see your lead professional's certification. (Read more about safe work practices beginning on page 28.)

Renovators must give homeowners and occupants this booklet and a form before they start work. Landlords and property managers who perform renovations must also give this booklet and a form to tenants before they start work. (Blank forms are included in the back of this booklet.)



“Remember 1-6-20”

Iowa law requires that individuals receive this booklet before renovating more than one square foot of painted surfaces.

Iowa law also requires certification and specific work practices when paint is disturbed in:

- 1 square foot of painted woodwork per renovation, or
- 6 square feet of finished dry wall or plaster per interior room per renovation, or
- 20 square feet of exterior painted surfaces per renovation.

Federal Laws Regarding Landlords, Home Sellers and Renovators

Are you planning to buy or rent a home built before 1978?

Landlords must tell tenants about known lead-based paint and lead-based paint hazards before leases are signed. In the case of verbal leases, landlords must do this before tenants agree to a verbal lease.

Leases must include a disclosure form about lead-based paint unless an Iowa certified inspector has checked the property and said in writing that it is lead-based paint free. (Blank forms are included in the back of this booklet.)

Sellers must offer buyers 10 days to check for lead hazards. Sellers must tell buyers in writing about lead-based paint and lead-based paint hazards before entering into a sales contract.

Sales contracts must include a disclosure form about lead-based paint in the building. (Blank forms are included in the back of this booklet.)

Lead Poisoning

Lead poisoning occurs when a person has too much lead in his or her body. A blood lead test tells the amount of lead in a person's body. Children under the age of 6 are much more sensitive to lead than adults. Experts currently reference a level of 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$) to identify children with higher blood lead levels than most other children.

Pregnant women exposed to lead can transfer lead to their fetuses. Lead gets into the body when it is inhaled or swallowed. Adults should keep their blood lead levels less than 5 $\mu\text{g}/\text{dL}$.

Adults should try to keep their blood lead levels and their children's blood lead levels as low as possible.

How Do Children Become Lead-Poisoned?

Paint in poor condition is usually the source of childhood lead poisoning in Iowa. Household dust in older homes often contains lead from old paint. This dust gets on children's hands, toys, bottles and pacifiers. Children can be lead poisoned if they:

- Put dusty or dirty hands, toys, bottles or pacifiers in their mouths.
- Breathe in dust from lead-based paint that is being disturbed.

The soil around older homes may also be contaminated with lead-based paint chips or dust. Children may be come lead poisoned if they:

- Play in dirt or a sandbox near an old building or where an old building was torn down.



- Put the dirt or sand in their mouths.
- Put their hands or toys that have been in the dirt or sandbox in their mouths.

In Iowa, lead-based paint chips and dust found between the inside window sash and the screen/storm window cause many cases of childhood lead poisoning. This can occur when:

- Children who are teething chew on windowsills.
- Paint chips and dust sticks to a child's hands and toys, which are then put into the child's mouth.

If renovation work is being performed on a home built before 1960, children and pregnant women should leave the area before repair work begins and should be prohibited from returning to the area until the work area has been completely cleaned.

Many original windows in homes built before 1960 have peeling or chipping lead based paint in this area.



What Are the Signs of Lead Poisoning in Children?

Most lead poisoned children do not show any signs of the disease.

Some, however, may have the following symptoms:

- Poor muscle coordination
- Not able to pay attention
- More tired than usual
- Decreased muscle and bone growth
- Easily excited
- Stomach aches
- Speech, language and behavior problems
- Hearing damage

Lead-poisoned children may have learning and behavior problems as they grow older. Children with very high lead levels may develop seizures, become unconscious or even die.

Lead poisoning is especially dangerous to children because:

- Young children's bodies absorb more lead than older children and adults.
- Young children can easily be damaged by even small amounts of lead.



What Are the Effects of Lead Poisoning?

No amount of lead in your blood is a healthy amount. In children, lead poisoning can cause:

- Damage to the brain and nervous system
- Behavioral problems
- Anemia
- Liver and kidney damage
- Hearing loss
- Seizures
- Hyperactivity
- Developmental delays
- In extreme cases, death

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



How Do Adults Become Lead-Poisoned?

Adults are lead-poisoned by breathing lead fumes and lead dust. They can also get lead dust on their hands, face and clothes, and swallow it if they eat, smoke, or apply cosmetics without washing their hands and face.

Most Iowa adults with elevated blood lead levels are exposed by working with lead. Lead is found in many types of work, including metals refining, battery manufacturing, construction and demolition, commercial or residential renovation, repair and painting, scrap metal and electronics recycling, radiator repair, road and bridge work, and manufacturing equipment containing metals.

Some adults have been lead-poisoned doing renovation, painting or repair work because they did not use lead-safe work practices (See pages 28-34).

Some adults are lead-poisoned by hobbies like target shooting, casting or reloading ammunition, stripping furniture, and art projects. Adults may also be exposed to lead if they use supplements or herbal products that are not regulated by the FDA.

Anything that produces lead dust or fumes can cause lead poisoning.



What Are the Signs of Lead Poisoning in Adults?

Many lead-poisoned adults do not have symptoms but lead may still harm their health

Some types of health problems adults with lead exposures may have:

- Trouble remembering and concentrating
- Depression
- Tire easily, muscular weakness and abdominal pain
- Headaches or irritability
- Mood disorders
- Unable to sleep
- High blood pressure
- Pain, numbness or tingling of extremities
- Kidney (renal) problems
- Fertility problems (men and women)
- Digestive problems

Adults are more likely to have symptoms if their blood lead levels are very high or go up quickly. However, even low level or chronic lead exposure can cause health problems or make existing problems worse. Be sure to talk to your medical provider if you are exposed to lead at work or at home. You may need regular blood lead testing to monitor your exposure. Visit: idph.iowa.gov and search for adult lead.



Why Should Iowans Be Concerned About Lead Poisoning?

- Iowa's rate of lead poisoning is still a significant problem.
- Homes with lead hazards exist in both rural and urban areas.
- Roughly 70% of the homes in Iowa were built before 1978.
- Roughly 45% of homes in Iowa were built before 1960.

Older homes, especially those built before 1960, are more likely to contain lead-based paint and lead-based hazards.



How Can You Find Out If You Or Your Children Are Lead-Poisoned?

The only way to tell if a person is lead-poisoned is to get a blood lead test.

All Iowa children under the age of 6 years should be tested regularly for lead poisoning.

Children enrolled in Medicaid are required to be tested for lead at ages 1 and 2 (minimum). Iowa Code requires that all children have at least one lead test before starting kindergarten. Ask your health care provider to do a blood lead test whenever your child has a check-up.

Many children have normal blood lead levels at 6-12 months of age. However, these same children may become lead-poisoned when they are older and more active. It's important to get their blood lead tested at least once a year until they are 6 years old.

If you work with lead on the job, your employer may be required to provide blood lead testing or you may ask your family doctor to order a blood lead test. Consider getting tested if you have recently remodeled or removed paint in an older home. See the IDPH Adult Lead website for more information at idph.iowa.gov/lpp/surveillance.



Lead-Based Paint and Lead-Based Paint Hazards

The federal government banned the use of lead-based paint in housing in 1978.

Any home or child-occupied facility built before 1978 can have lead-based paint in it.

This includes homes in the city and the country. It also includes multi-family homes, apartments, private housing and publicly-owned housing.

In Iowa, most children who are lead poisoned have lived in or visited homes built before 1960.

Pre-1960 homes usually have more layers of lead-based paint than newer homes. Also, paint that was used before 1960 usually contained more lead than paint used after 1960.

Homes built before 1960 are more likely to have peeling and chipping lead-based paint.



In Iowa homes, many interior and exterior wood surfaces that were painted before 1960 have lead based paint on them.

This includes windows, baseboards, doors, exterior siding and porches.

Some, although not all, interior walls in pre-1960 homes were painted with lead-based paint.

Kitchen and bathroom walls are the most likely to have lead-based paint on them.

Old garages, farm buildings and fences may also be painted with lead-based paint.

Soil around older homes often has high levels of lead. Avoid vegetable gardens near the drip line of old houses. This is because lead-based paint from the exterior gets in the soil when it peels and chips, or when it is scraped.

In very large urban areas of the United States, soil sometimes contains high levels of lead from past use of leaded gas in cars.

In Iowa, most lead in the soil around older homes comes from lead-based paint.



When is Lead-Based Paint a Hazard?

Lead based paint that is peeling, chipping, chalking, cracking or otherwise deteriorating is a hazard to small children.

Lead-based paint in good condition may be a hazard on:

- Surfaces children can chew on (window sills, stair railings, porch railings)
- Surfaces where paint is often damaged by hard impacts (doors, door frames, corners)
- Surfaces where paint is worn by being walked on, such as floors and stairs can be a lead hazard



Lead dust may be on the floors and other surfaces if there has been any remodeling or repainting in your home.

Lead in soil is a hazard when children play in areas of bare soil next to old buildings.

Areas of bare soil where buildings have been torn down may also be a hazard to children.



Checking Your Home For Lead-Based Paint Hazards

- In Iowa, if your child has a blood lead level of 20 µg/dL or higher, your local health or housing agency may come to your home and help you find lead hazards.
- Some jurisdictions may perform inspections at lower levels. Check with your local health or housing agency for more details.
- You can hire a certified inspector/risk assessor. In Iowa, certified inspector/risk assessors must check surfaces for lead, tell homeowners if surfaces with lead-based paint are a hazard, and recommend how to address these hazards. Search the IDPH Regulatory Programs website to find certified inspectors/risk assessors.

Search online at <https://idph.iowa.gov/Environmental-Health-Services/Lead-Professional-Certification>.

- Use the self-help checklist on pages 16 to 23 in this booklet to decide if your home might have lead hazards.

If you are planning to purchase, lease or renovate a home built before 1978, consider having the home checked for lead-based paint and lead-based paint hazards.



Finding the Lead-Based Paint Hazards in and Around Your Home

You should assume that all of the paint, stain or other coatings in your home contain lead unless you live in a home built after 1978.

Look for paint, stain or other coatings that are:

- Loose
- Cracked or chipping
- Peeling or flaking
- Rubbing off
- Deteriorating in any way

These are **HAZARDS** that can cause lead poisoning.

When paint chips off these surfaces, all layers of paint usually come off together.

This is a **HAZARD** that can cause lead poisoning because the bottom layers of paint may contain lead, even if the surface has been repainted with lead-free paint.



Paint that has an “alligator” cracking pattern or rubs off on your hands (chalks) is usually lead-based paint. Cracked or chalking paint is a **HAZARD** that can cause lead poisoning.

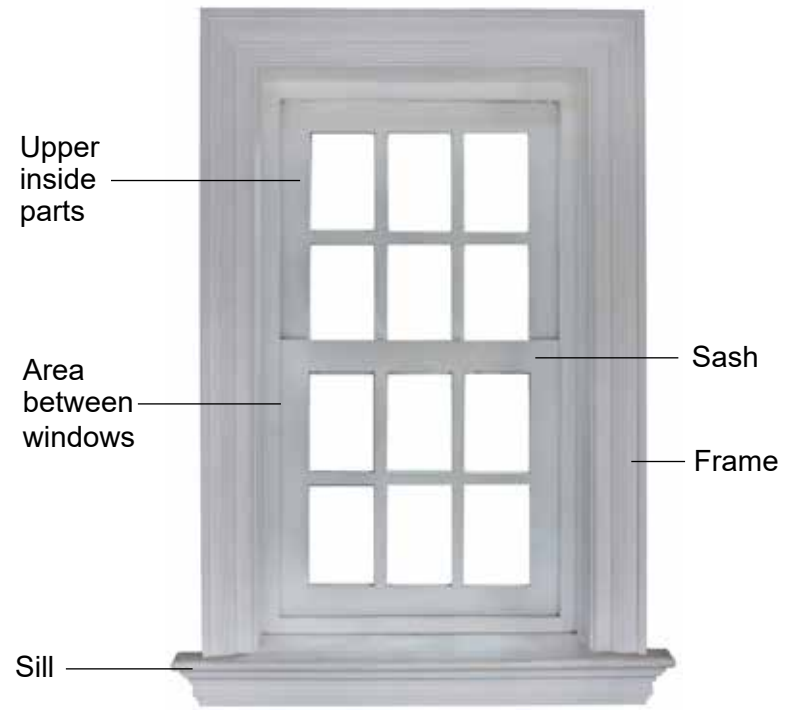


Old varnish that looks cloudy may contain lead. Lead-based paint was often mixed with varnish to give it a deeper, richer color. If the finish is cracked or peeling, old varnish is a **HAZARD** that can cause lead poisoning.

Use pages 16 to 23 to look for lead hazards in your home. Mark the HAZARD box when you find a problem.

Window Hazards

Many Iowa children are lead-poisoned by windows.



These are **HAZARDS** that can cause lead poisoning.

Window Check List:

- | | | |
|-----------------------|-------------------------------|---------------------------------|
| Frame | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Sash (front and back) | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Sill | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Area between windows: | | |
| Bottom | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Sides | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Top | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Upper inside parts | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Signs of chewing | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |

Woodwork, Wall and Door Hazards



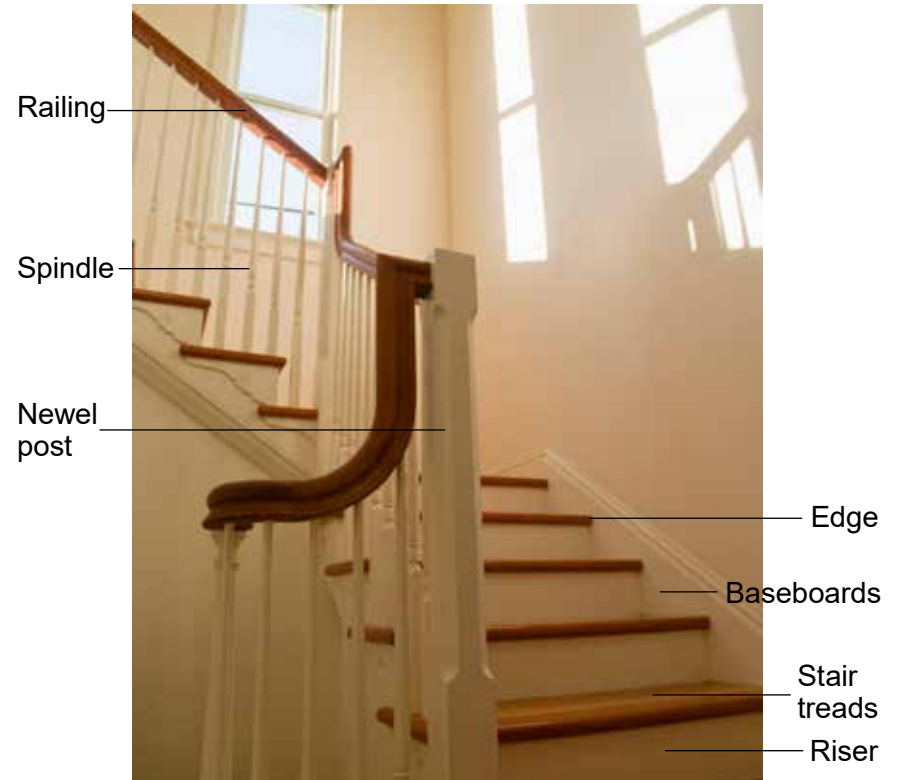
Check all surfaces for chipping and peeling paint. Look for paint chips on the floor and in the carpet. Look for impact chipping at corners of door frame, baseboard and walls. Look for rub or scrape marks on door edges.

These are **HAZARDS** that can cause lead poisoning.

Woodwork, Wall & Door Check List:

| | | | | |
|--------------------|--------------------------|------|--------------------------|--------|
| Doors | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Door frames | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Baseboards | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Wall corners | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Doorway thresholds | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |

Stair Hazards



Children love to play or just sit on stairs.

Check all areas for chipping, peeling, etc., paint. Look for chewing on spindles, railing, stair treads and edges. Check risers, baseboards and stair treads for impact chipping. Look for worn areas on treads.

These are **HAZARDS** that can cause lead poisoning.

Stairs Check List:

| | | | | |
|------------------------|--------------------------|------|--------------------------|--------|
| Railing and spindles | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Newel post | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Stair treads and edges | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Risers and baseboards | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |

Basement Hazards



Check all surfaces for peeling and chipping paint. Look for impact chipping and worn areas.

Check old furniture and toys in storage.

These are **HAZARDS** that can cause lead poisoning.

Basement Check List:

| | | | | |
|----------------------------------|--------------------------|------|--------------------------|--------|
| Basement stairwell | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Upper floor joists and ceiling | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Doors and door frames | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Painted walls & floors | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Discarded wood trim | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Built-in cabinets, shelves, trim | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Painted beams and support posts | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Discarded furniture and toys | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |

Porch Hazards



Children like to sit and play on porches. Children can get into lead-based paint chips and dust if the porch and house siding have been painted with lead-based paint.

Check ALL the areas listed below for chipping or peeling paint. Look for chewing on trim, steps, railings and spindles. Look for worn areas on painted floors.

These are **HAZARDS** that can cause lead poisoning.

Porch Check List:

| | | | | |
|----------|--------------------------|------|--------------------------|--------|
| Ceiling | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Walls | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Trim | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Floors | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Steps | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |
| Railings | <input type="checkbox"/> | Safe | <input type="checkbox"/> | HAZARD |

Exterior Hazards



Look for chipping and peeling paint on all surfaces. Be sure to check all exterior window frames (including basement windows) and overhangs.

Look for paint chips lying on the ground or sidewalk around all buildings on the property.

These are **HAZARDS** that can cause lead poisoning.

Exterior Building Check List:

| | | |
|------------------|-------------------------------|---------------------------------|
| Siding | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Window Frames | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Trim | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Overhangs | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Doors | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Gutters | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Soil & sidewalks | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |

Outside Play Area Hazards



Check all the places where your children play outside.

Look closely for chipping or peeling paint on nearby buildings.

Look for paint chips in the soil or on sidewalks.

Check for bare soil in play areas. Any bare soil near an old building may contain lead-based paint chips and dust - even if the building has been sided, repainted or torn down.

These are **HAZARDS** that may cause lead poisoning.

Play Area Check List:

| | | |
|---------------|-------------------------------|---------------------------------|
| Gym set | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Sand box | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Swimming pool | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |
| Other areas | <input type="checkbox"/> Safe | <input type="checkbox"/> HAZARD |

How Can You Safely Reduce Lead Hazards in Your Pre-1978 Home?

If the property is not owner-occupied, the renovation or repair work must be completed by a certified lead professional.

Certified Lead Professionals can help identify, repair or eliminate lead based paint and lead based hazards.

Any person that deals with lead-based paint must be certified.

Certified lead professionals must hire trained workers and follow strict safety rules to protect their workers and people who live in the homes where they work. (Read more about the safety rules on page 32 and 33.)

Protecting Your Family From Lead-Based Paint Hazards

If you find hazards in your home:

- Do not panic!
- If you rent, tell your landlord about the hazards that you find. Any hazards that are found must be fixed by a certified lead professional.
- If you own, do **NOT** sand, scrape or remove any paint, walls, windows or plaster until you know how to do it safely. Call the Iowa Department of Public Health at **800-972-2026** to find out how to do this work safely or find a list of lead safe renovators.
- Check also EPA's website: <https://www.epa.gov/lead/renovation-repair-and-painting-program-do-it-yourselfers>
- Have all children under the age of 6 years tested for lead poisoning.
- Supervise your children very carefully. Keep them away from areas where there is peeling and chipping paint.
- Do not allow children to chew on painted surfaces such as window sills, stair rails, furniture, jewelry or toys.

- Do not allow children to put paint chips or soil in their mouths.
 - Weekly, clean floors, baseboards and window sills where small children play. Wash woodwork and painted surfaces with warm water and a general all-purpose cleaner. **Remember: Never mix ammonia and bleach together since they form a dangerous gas.**
 - Wash toys, pacifiers and bottles that children drop on the floor.
 - Wash children's hands often, especially before they eat.
 - Pick up paint chips that you see on the floor, inside windows or in other places where your children play.
- Put the paint chips in a garbage bag and dispose of them in the landfill with your regular garbage.
- Do not let children play outside in areas where there are paint chips on the ground. Pick up as many of the paint chips as you can.

Cover the soil in these areas by seeding grass, laying sod, planting some shrubs or covering with mulch.



Nutrition

- **Serve your child at least three meals a day.**

A child with an empty stomach absorbs more lead. Children who have poor appetites, or who do not eat regularly, have a higher risk of becoming lead poisoned.

- **Serve your child healthy snacks.**

Healthy Snacks:

muffins
yogurt
broccoli
zucchini
celery sticks
melon cubes
carrot sticks



cheese cubes
saltine crackers
graham crackers
dry oat cereal rings
apple slices
orange sections
cottage cheese

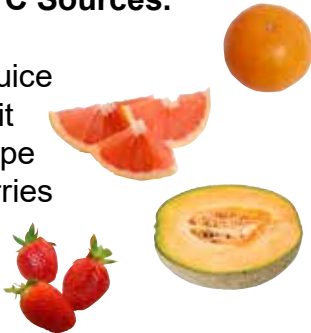


- **Serve your child food that are high in Vitamin C.**

Vitamin C helps the body absorb iron.

Vitamin C Sources:

orange
orange juice
grapefruit
cantaloupe
strawberries



peppers (green, red, chili)
broccoli
tomato
potatoes



- **Serve your child foods that are high in calcium and iron.** Iron helps stop the lead from being absorbed into the body.

Iron Sources:

chicken
beef
fish
pork
greens
oatmeal
cornmeal
soybeans
brown rice
dried beans
prune juice
dried apricots
enriched bread
iron-fortified cereal



liver
kidney
turkey
oysters
raisins
lentils
spinach
broccoli
sardines
dried peas
dried peaches
oat or wheat bran
whole wheat bread



Calcium also helps prevent lead from being absorbed into the body.

Calcium Sources:

milk
cheese
yogurt
pudding
ice cream
cottage cheese
calcium-fortified orange juice
sardines with bones
salmon with bones



tofu (firm, fortified)
fortified soy milk
milk-based soup
mustard greens
collard greens
broccoli
greens
sesame seeds



Keeping Your Family Safe During Renovation

If you are going to prepare for repainting, removing paint or tearing out walls in an old home, you should do one of the following:

- Have the paint tested to see if it is lead-based paint.
 1. Hire a certified lead inspector to safely and accurately assess the lead dangers in your home. You can search for certified lead inspectors on the IDPH website at <https://idph.iowa.gov/Environmental-Health-Services/Lead-Professional-Certification>.
- Assume that it is lead-based paint and take the appropriate precautions.*
 1. Never dry scrape, dry sand, power sand, power wash, grind, or blast with power tools and equipment not equipped with a shroud and HEPA vacuum attachment. Do not use a torch, needle gun, planer, or use a high temperature heat gun to remove lead-based paint.
 2. Clean up thoroughly every day. Dispose of waste in a heavy duty bag or sheet.

***NOTE: Only owner occupants can perform renovation, remodeling and repainting without certification.**

Call the Iowa Department of Public Health (IDPH) at **800-972-2026** to find out how to do this work safely or find a list of lead safe renovators. IDPH also has information about how to find a certified lead professional that will do the work safely. Check also EPA's website: <https://www.epa.gov/lead/renovation-repair-and-painting-program-do-it-yourselfers>



Your Responsibility as a Property Owner

You have the ultimate responsibility for the safety of your family, tenants or children in your care.

This means properly preparing for the renovation and keeping persons out of the work area (page 31). It also means ensuring the lead professional uses lead-safe work practices.

- ☑ **Make sure your lead professional is certified, and can clearly explain the details of the job and how the lead professional will minimize lead hazards during the work.**
 - You can verify that a lead professional is certified by searching the IDPH's website at dphregprograms.iowa.gov/PublicPortal/Iowa/IDPH/common/index.jsp.
 - Ask if the lead professional is trained to perform lead-safe work practices and to see a copy of their certification.
 - Ask them what lead-safe methods they will use to set up and perform the job in your home or child-occupied facility. You can also request references from at least three recent jobs involving homes built before 1978 and speak to each reference personally.



Always make sure the contract is clear about how the work will be set up, performed and cleaned.

- ❑ Share the results of any previous lead tests with the lead professional.
- ❑ You should specify in the contract that they follow the work practices described on pages 32-33 of this booklet.
- ❑ The contract should specify which parts of your home are part of the work area and specify which lead-safe practices will be used in those areas. Remember, your certified lead professional should confine dust and debris to the work area, and should minimize spreading that dust to other areas of the home.
- ❑ The contract should also specify that the certified lead professional will clean the work area, verify that it was cleaned adequately, and re-clean it if necessary.

If you think a worker is not doing what he or she is supposed to do or is doing something unsafe, you should:

- Direct the certified lead professional to comply with regulatory and contract requirements.
- Call the Iowa Department of Public Health Lead program at **800-972-2026**.



Call IDPH at 800 972 2026

Preparing for a Renovation

The work area should not be accessible to occupants while the work occurs.

Your family should plan accordingly if rooms or areas where work is being done may be blocked off or sealed with plastic sheeting to contain any dust that is generated. You may need:

- ❑ Alternative bedroom, bathroom and kitchen arrangements if work is occurring in those areas of your home.
- ❑ A safe place for pets because they too can be poisoned by lead, and can track lead dust into other areas of the home.
- ❑ A separate pathway for the lead professional from the work area to the outside in order to bring materials in and out of the home. Ideally, it should not be through the same entrance that your family uses.
- ❑ A place to store your furniture. All furniture and belongings may have to be moved from the work area while the work is being done. Items that can't be moved, such as cabinets, should be wrapped in plastic.
- ❑ To turn off forced-air heating and air conditioning systems while the work is being done. This prevents dust from spreading through vents from the work area to the rest of your home.

You may even want to move out of your home temporarily while all or parts of the work is being done. Child care facilities and schools may want to consider alternative accommodations for children and access to necessary facilities.



During the Renovation Work

Iowa law requires lead professionals to be certified and to follow specific work practices to prevent lead contamination when hired to perform renovation, repair and painting projects that may disturb paint in homes or child-occupied facilities built before 1978.

A lead professional must follow these three simple procedures:

1. Contain the work area.

The area must be contained so that dust and debris do not escape from that area. Warning signs must be put up and plastic or other impermeable material and tape must be used as appropriate to:

- Cover the floors and any furniture that cannot be moved.
- Seal off doors and heating and cooling systems.
- For exterior renovations, cover the ground.
- In some instances, a vertical containment system may be necessary.

2. 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.
- Uncontained water blasting.
- Using a heat gun at temperatures greater than 1100°F.
- Dry sanding and dry scraping.
- Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment.

There is no way to eliminate dust, but some renovation methods make less dust than others. Lead professionals may choose to use various methods to minimize dust generation, including using water to mist areas before sanding or scraping; scoring paint before separating components; and prying and pulling apart components instead of breaking them.

3. Clean up thoroughly.

The work area should be cleaned up daily to keep it as clean as possible. When all the work is done, the area must be cleaned up using special cleaning methods before taking down any plastic that isolates the work area from the rest of the home.

The special cleaning methods should include:

- Using a HEPA vacuum to clean up dust and debris on all surfaces, followed by
- Wet wiping and wet mopping using an all-purpose cleaner and with plenty of rinse water.



After the Renovation Work

Iowa law requires cleaning verification.

Iowa's rules for lead-safe renovation require lead professionals to follow a specific cleaning protocol.

The protocol requires the lead professional to use disposable cleaning cloths to wipe the floor and other surfaces of the work area and compare these cloths to a cleaning verification card to determine if the work area was adequately cleaned.

You may also be interested in having a lead-dust test done at the completion of the renovation work. **Lead-dust tests are wipe samples sent to a laboratory for analysis. You will get a report specifying the levels of lead found after the renovation work is completed.**

Contact the National Lead Information Center for more information including lists of EPA-recognized testing laboratories (page 39). If you decide you would like a lead professional to do the lead-dust test, specify this desire in your contract, prior to the start of work. To locate a lead professional, search the IDPH Regulatory Programs website <https://idph.iowa.gov/Environmental-Health-Services/Lead-Professional-Certification>.



Other Sources of Lead

Iowa children have also been poisoned by other sources of lead.

- Food and liquids cooked in lead-glazed pottery or stored in lead crystal or lead-glazed pottery or porcelain
- Lead in the air or in the soil around manufacturing and recycling businesses
- Folk or traditional home remedies that contain lead such as azarcon and Greta. For more information see [cdc.gov/nceh/lead/tips/folkmedicine.htm](https://www.cdc.gov/nceh/lead/tips/folkmedicine.htm).
- Candy that comes from Mexico or southeast Asia
- Toys or jewelry that contain lead or have lead in the surface paint design
- A history of living in or visiting places with a higher concentration of lead in the environment. Many countries have more lead exposure from the environment than the United States.
- Lead dust brought home by family members that work or have a hobby that exposes them to lead (see page 38)



Although some Iowa children have been lead-poisoned by these and other sources, **the major source is still lead-based paint used in homes built before 1960.**



Is Lead in Water a Problem for Your Family?

City and rural water departments must test their water for lead. If the lead level is high, they must send a notice to their customers. If you get one of these notices, you may be concerned.

However, lead in drinking water is not a major source of lead for most children.

Lead in water **may** cause lead poisoning in babies who drink formula made with water that has high lead levels.

This usually happens when formula is made using tap water. The water can pick up lead from pipes, solder or faucets when it sits in pipes overnight.

Therefore, tap water may have a high lead level first thing in the morning.

Hot water dissolves more lead than cold water. So, formula made with this hot tap water can have **very** high lead levels. Boiling does not take lead out of the water. In fact, boiling the water so long that part of the water boils away **increases** the concentration of lead in the remaining water.



Lead in water comes mainly from inside your home.

It can be in lead pipes, lead solder or faucets with brass parts.

Do not replace plumbing just because your water has a high lead level. Only replace faucets with new fixtures that don't contain lead.

Replacing old lead solder with new lead-free solder may also put more lead into your water. If you replace solder, be sure to get all the old solder out of the pipes.

If you use tap water to make baby formula, do the following to keep your baby safe:

1. Let the cold water run for several minutes before using it to make formula.
2. **Do NOT use hot tap water to make formula.** Always use cold water and warm it to the right temperature.
3. If your doctor recommends boiling the water before making formula, do **not** boil the water longer than **two minutes**.



If you would like to test your water for lead, contact the **State Hygienic Laboratory at the University of Iowa** 515-725-1600 shl.uiowa.edu/.

Lead in drinking water? Visit <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>. Also see the 2017 EPA PYF page 13.

Is Working with Lead a Problem for Your Family?

If you work with lead in your job or hobby, you can expose your children by bringing lead home.



Some employers are required to ensure that workers do the following to protect their families from lead:

- Change into work clothes and shoes at work.
- Keep street clothes and shoes in a clean locker or plastic bag or tote.
- Remove work clothes and shoes and leave them at work.
- Shower before putting on street clothes and shoes.

If your employer does not provide a place to shower or change, or if you have a hobby that exposes you to lead, you can still take steps to protect your family:

- Wash your hands, arms and face before getting in your car.
- If possible, change your shirt and shoes and put them in a plastic bag or tote in your trunk before getting in your car.
- Clean the interior of your car often to remove lead from the seats and steering wheel.
- Do not wear work clothes or shoes into your home beyond a place that can be cleaned regularly.
- Remove work clothes and shower before touching anyone or anything in the house.
- Keep all work clothes and shoes away from children.
- If you need to wash work clothes at home, do it separately from other clothes.
- Keep children out of hobby areas involving lead.

More Information

Iowa Department of Public Health 800-972-2026

Call for current information about lead in Iowa and download copies of this booklet [here](#). Internet: idph.iowa.gov then search for child lead contact info.

Hearing impaired, call Relay Iowa **800-735-2942**

Fax: **515-281-4529**

Your local city or county lead program, health department, or housing agency. (Some cities and counties have their own rules on lead-based paint activities.)

The National Lead Information Center Clearinghouse 800-424-LEAD (5323)

Call for other information on lead hazards.

Hearing impaired, call TDD **800-526-5456**

Fax: **301-585-7976** Internet: epa.gov/lead/nlic.htm

EPA's Safe Drinking Water Hotline 800-426-4791

Call for information about lead in drinking water.

Consumer Product Safety Commission (CPSC) Hotline

To request information on lead in consumer products or to report an unsafe consumer product or a product-related injury, call **800-638-2772**. Internet : info@cpsc.gov

Hearing impaired, call TDD **800-638-8270**.

EPA Regional Office

Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

Region 7 (Iowa, Kansas, Missouri and Nebraska)

11201 Renner Blvd., Lenexa, KS 66219 **913-551-7003**

CPSC Regional Office Consumer Product Safety

Commission Central Regional Center, 230 South Dearborn Street, Room 2944, Chicago, IL 60604-1601 **312-353-8260**

The National Lead Information Center can provide a variety of resource materials, including the following guides to lead-safe work practices.

- Steps to Lead Safe Renovation, Repair and Painting
- Protect Your Family from Lead in Your Home
- Lead in Your Home: A Parent's Reference Guide

These materials are available by calling **800-424-LEAD (5323)** or online at epa.gov/lead/documents-and-outreach-materials.

The Iowa Department of Public Health Lead Poisoning Prevention website also has downloadable copies of each of the following resources:

- Lead Poisoning: How to Protect Iowa Families
- Your Child's Venous Blood Lead Level and What it Means
- Your Child's Capillary Blood Lead Level and What it Means
- Lead Poisoning: Has your Child Been Tested?

Download these resources online at <http://idph.iowa.gov/Environmental-Health-Services/Childhood-Lead-Poisoning-Prevention/Resources>.



NOTICE TO RESIDENTS FOR WORK DONE IN COMMON AREAS OF MULTI-FAMILY HOUSING OR CHILD-OCCUPIED FACILITIES
NOTIFICATION PRIOR TO RENOVATION, REMODELING, OR REPAINTING
CHECK ONE BELOW
 Non-emergency renovation, remodeling, or repainting _____
 Emergency renovation, remodeling, or repainting _____

Address: _____

General nature of work: _____

Location of work: _____

Expected starting date: _____ Expected ending date: _____

Some of the paint disturbed during this renovation, remodeling, and repainting may contain lead. You can get a copy of the pamphlet, *Lead Poisoning: How to Protect Iowa Families*, at no cost, by calling me at _____. Please leave a message and be sure to include your name, address, and phone number. I will either mail you a pamphlet or leave one at your unit.

| | | |
|----------------------------------|-------------------------------|-------------------------|
| Printed Name of Contractor _____ | Signature of Contractor _____ | Date _____ |
| Contractor Address _____ | City _____ | State _____ Phone _____ |

RECORD OF TENANT NOTIFICATION PROCEDURES FOR WORK DONE IN COMMON AREAS OF MULTI-FAMILY HOUSING OR CHILD-OCCUPIED FACILITIES
NOTIFICATION PRIOR TO RENOVATION, REMODELING, OR REPAINTING

Project Address

Street _____

City _____ State _____ Zip Code _____

Owner of Multi-Family Housing _____

Number of Units in Multi-Family Housing _____

Method of Delivering Notices to Each Unit: _____

(ex., slipping under door, taping to door, putting in each mailbox, etc.)

| | | |
|----------------------------------|-------------------------------|-------------------------|
| Printed Name of Contractor _____ | Signature of Contractor _____ | Date _____ |
| Contractor Address _____ | City _____ | State _____ Phone _____ |

Printed Name of Person Delivering Notices (if other than contractor) _____ Date _____

Signature of Person Delivering Notices (if other than contractor) _____



**NOTICE TO OWNER FOR WORK DONE IN COMMON AREAS OF
MULTI-FAMILY HOUSING OR CHILD-OCCUPIED FACILITIES**

NOTIFICATION PRIOR TO RENOVATION, REMODELING, OR REPAINTING

CHECK ONE BELOW

Non-emergency renovation, remodeling, or repainting _____
 Emergency renovation, remodeling, or repainting _____

Address: _____

General nature of work: _____

Location of work: _____

Expected starting date: _____ Expected ending date: _____

I have received the pamphlet entitled *Lead Poisoning: How to Protect Iowa Families* and am aware of the potential health risk associated with remodeling, renovation, or repainting housing containing lead-based paint or lead-based paint hazards. Except in the case of emergency renovation, remodeling, and repainting, I received this pamphlet before the work began.

Printed Name of Owner _____ Signature of Owner _____ Date _____

Printed Name of Contractor _____ Signature of Contractor _____ Date _____

Contractor Address _____ City _____ State _____ Phone _____

Note Regarding Certificate of Mailing Option

As an alternative to delivery in person, you may mail the pamphlet to the owner via certified mail with return receipt or its equivalent at least 7 days before the work begins. In the case of emergency renovation, remodeling, and repainting, mail the pamphlet to the owner and/or tenant via certified mail with return receipt or its equivalent as soon as possible after the work begins.

On _____, I sent the pamphlet to the owner by _____.

Attach receipt for certified mail or its equivalent.

Printed Name of Contractor _____ Signature of Contractor _____ Date _____

Contractor Address _____ City _____ State _____ Phone _____

**EMERGENCY RENOVATION, REMODELING, AND REPAINTING WORK DONE
IN A SINGLE DWELLING UNIT OR CHILD-OCCUPIED FACILITY**
 NOTIFICATION PRIOR TO RENOVATION, REMODELING, OR REPAINTING

Address: _____

General nature of work: _____

Location of work: _____

Expected starting date: _____ Expected ending date: _____

Some of the paint disturbed during this emergency renovation, remodeling, and repainting may contain lead. I have included a copy of the pamphlet, *Lead Poisoning: How to Protect Iowa Families*, with this notice.

Printed Name of Contractor _____ Signature of Contractor _____ Date _____

Contractor Address _____ City _____ State _____ Phone _____

Note Regarding Certificate of Mailing Option

As an alternative to delivery in person, you may mail the pamphlet to the owner and/or tenant via certified mail with return receipt or its equivalent as soon as possible after the work begins.

On _____, I sent the pamphlet to the owner and/or tenant by _____.

Attach receipt for certified mail or its equivalent.

Printed Name of Contractor _____ Signature of Contractor _____ Date _____

Contractor Address _____ City _____ State _____ Phone _____



**WORK DONE IN A SINGLE DWELLING UNIT
OR CHILD-OCCUPIED FACILITY**
NOTIFICATION PRIOR TO RENOVATION, REMODELING, OR REPAINTING

Address: _____

General nature of work: _____

Location of work: _____

Expected starting date: _____ Expected ending date: _____

I have received the pamphlet entitled *Lead Poisoning: How to Protect Iowa Families* and am aware of the potential health risk associated with remodeling, renovation, or repainting housing containing lead-based paint or lead-based paint hazards. I received this pamphlet before the work began.

Printed Name of Owner Signature of Owner Date

Printed Name of Occupant Signature of Occupant Date

Printed Name of Contractor Signature of Contractor Date

Contractor Address City State Phone

Note Regarding Certificate of Mailing Option

As an alternative to delivery in person, you may mail the pamphlet to the owner and/or tenant via certified mail with return receipt or its equivalent at least 7 days before the work begins.

On _____, I sent the pamphlet to the owner and/or tenant by _____
Attach receipt for certified mail or its equivalent.

Printed Name of Contractor Signature of Contractor Date

Contractor Address City State Phone

If the pamphlet was delivered, but the signature of the known adult occupant could not be obtained, check the appropriate box below:

- I certify that I have made a good-faith effort to deliver the pamphlet, *Lead Poisoning: How to Protect Iowa Families*, to the unit listed below at the dates and times indicated, and that an adult occupant was unavailable to sign the acknowledgment. I further certify that I have left a copy of the pamphlet at the unit with the occupant.
- I certify that I have made a good-faith effort to deliver the pamphlet, *Lead Poisoning: How to Protect Iowa Families*, to the unit listed below at the dates and times indicated, and that the occupant refused to sign the acknowledgment. I further certify that I have left a copy of the pamphlet at the unit.

Printed Name of Person Certifying Lead Pamphlet Delivery Signature of Person Certifying Lead Pamphlet Delivery

Attempted Delivery Date and Time Where Pamphlet was Left (ex., taped to the door, slipped under the door, etc.)

Printed Name of Contractor Signature of Contractor Date

Contractor Address City State Phone

Home Purchase -- Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards

Lead Warning Statement

Every purchaser of any interest in residential real property on which a residential dwelling was built prior to 1978 is notified that such property may present exposure to lead from lead-based paint that may place young children at risk of developing lead poisoning. Lead poisoning in young children may produce permanent neurological damage, including learning disabilities, reduced intelligence quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The seller of any interest in residential real property is required to provide the buyer with any information on lead-based paint hazards from risk assessments or inspections in the seller's possession and notify the buyer of any known lead-based paint hazards. A risk assessment or inspection for possible lead-based paint hazards is recommended prior to purchase.

Seller's Disclosure

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

(i) _____ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).

(ii) _____ Seller has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the seller (check (i) or (ii) below):

(i) _____ Seller has provided the purchaser with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).

| | | |
|--|------------------|------------------|
| | Inspector/Author | Date of Document |
|--|------------------|------------------|

(ii) _____ Seller has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

Purchaser's Acknowledgment (initial)

(c) _____ Purchaser has received copies of all information listed above.

(d) _____ Purchaser has received the pamphlet *Protect Your Family from Lead in Your Home*.

(e) Purchaser has (check (i) or (ii) below):

(i) _____ Received a 10-day opportunity (or mutually agreed upon period) to conduct a risk assessment or inspection for the presence of lead-based paint and/or lead-based paint hazards; or

(ii) _____ Waived the opportunity to conduct a risk assessment or inspection for the presence of lead based paint and/or lead-based paint hazards.

Agent's Acknowledgment (initial)

(f) _____ Agent has informed the seller of the seller's obligations under 42 U.S.C. 4852d and is aware of his/her responsibility to ensure compliance.

Certification of Accuracy

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

| | | | |
|--|------|--|------|
| | Date | | Date |
|--|------|--|------|

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Home Rental -- Disclosure of Information on Lead-Based Paint and/or Lead-Based Paint Hazards

Lead Warning Statement

Housing built before 1978 may contain lead-based paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. Lead exposure is especially harmful to young children and pregnant women. Before renting pre-1978 housing, lessors must disclose the presence of known lead-based paint and/or lead-based paint hazards in the dwelling. Lessees must also receive a federally approved pamphlet on lead poisoning prevention.

Lessor's Disclosure

(a) Presence of lead-based paint and/or lead-based paint hazards (check (i) or (ii) below):

(i) _____ Known lead-based paint and/or lead-based paint hazards are present in the housing (explain).

(ii) _____ Lessor has no knowledge of lead-based paint and/or lead-based paint hazards in the housing.

(b) Records and reports available to the lessor (check (i) or (ii) below):

(i) _____ Lessor has provided the lessee with all available records and reports pertaining to lead-based paint and/or lead-based paint hazards in the housing (list documents below).

| | | |
|----------------------------|-------------------------|-------------------------|
| | | |
| <u>Name of Document(s)</u> | <u>Inspector/Author</u> | <u>Date of Document</u> |

(ii) _____ Lessor has no reports or records pertaining to lead-based paint and/or lead-based paint hazards in the housing.

Lessee's Acknowledgment (initial)

(c) _____ Lessee has received copies of all information listed above.

(d) _____ Lessee has received the pamphlet *Protect Your Family from Lead in Your Home*.

Agent's Acknowledgment (initial)

(e) _____ Agent has informed the lessor of the lessor's obligations under 42 U.S.C. 4852d and is aware of his/her responsibility to ensure compliance.

Certification of Accuracy

The following parties have reviewed the information above and certify, to the best of their knowledge, that the information they have provided is true and accurate.

| | | | |
|------------------------|------|------------------------|------|
| | Date | | Date |
| Signature of Lessor | | Signature of Lessor | |
| | | | |
| Printed Name of Lessor | | Printed Name of Lessor | |
| | | | |
| Signature of Lessee | Date | Signature of Lessee | Date |
| | | | |
| Printed Name of Lessee | | Printed Name of Lessee | |
| | | | |
| Signature of Agent | Date | Signature of Agent | Date |
| | | | |
| Printed Name of Agent | | Printed Name of Agent | |

Instructions for Property Management Company: If authorized to sign for Landlord, sign and print name, followed by "For [Landlord's name or Name of Company], and then also sign as the Agent.



**Iowa Department of Public Health
Lead Poisoning Prevention Program**



*Lucas State Office Building
Des Moines, Iowa 50319 0075
800 972-2026*

