



State of Illinois  
Illinois Department of Public Health

# Activities to Reduce Lead Exposure

Get the Lead Out



**ACTIVITIES**  
**TO**  
**REDUCE**  
**LEAD EXPOSURE**

**ILLINOIS DEPARTMENT  
OF PUBLIC HEALTH**

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## ACTIVITIES TO REDUCE LEAD EXPOSURE

Everyone is exposed to some lead each day. Lead lasts forever and is capable of building up in our environment and bodies. Once inside the human body, lead has no beneficial function and may be harmful.

Our bodies can remove small amounts of lead. However, exposure to higher levels on a regular basis can cause serious health problems. Children and the unborn are the most sensitive because lead can adversely affect normal development, often without symptoms. If symptoms occur, they may be mistaken for stomachache, colic, flu, fatigue, hyperactivity or even emotional problems. That is why screening for lead in children 6 years of age and younger is required for those who reside in areas determined by the Illinois Department of Public Health to be high-risk and for those who are assessed to be at high risk by a physician using the Department's risk assessment questionnaire. Generally, children around 2 years of age run the greatest risk of high blood lead levels.

Materials containing lead are durable, rustproof and weather-resistant, all properties that have contributed to its wide use in many processes and products. Small amounts of lead are found naturally in water, soil and vegetation. Man introduces large amounts of lead into the environment each year by mining, battery manufacturing, ore processing and other industrial uses. High levels of lead in soils are common in urban areas, particularly near roadways, as a result of emissions from vehicles that have used lead-based gas, or structures covered with leaded coatings or paints.

Although paint is the major source of lead in homes, it is dust from such paint — generally around friction-bearing surfaces like windows or doors — that is the major source of lead exposure in children. Homes and surfaces containing lead-based paint or other coatings, even if in relatively good repair, can give rise to lead-laden dust. Remodeling projects can create large amounts of lead dust as paint or building components are removed.

Lead dust also can be introduced into homes from contaminated soils or the workplace. Carpeting, rugs and upholstery easily collect this dust. Caution should be exercised, however, when sweeping or vacuuming or doing other housecleaning activities that could cause lead dust to re-enter the air, where it can easily be inhaled. Children, especially toddlers, are particularly at risk of inhaling lead dust. A child's tendency to put objects in his or her mouth can result in lead exposure if the object is coated with lead dust. Because of this, families should take all possible steps to reduce the amount of lead dust in their homes.

Practicing good housekeeping techniques, providing nutritional meals and snacks, and supervising children can go a long way in protecting family members from lead in their environment. This pamphlet suggests ways to reduce lead exposure; not all of them are necessary in every home. Before beginning any remodeling or for additional information on lead and lead exposure reduction strategies, please contact the Illinois Department of Public Health.

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## HOUSEHOLD ACTIVITIES

- Remove shoes upon entering your home. Provide mats and storage for outdoor shoes at entry ways.
- Vacuum carpeting, rugs and upholstery often. High efficiency particulate air (HEPA) vacuums are the best type to collect lead dust, since conventional vacuums disperse some dust into the air where it can be inhaled. However, if HEPA vacuums are not available, conventional vacuums equipped with special dust bags can be used. Conventional vacuums also must be well maintained (belts tightened, etc.). Regular vacuuming will keep dust from accumulating to the point of being a problem.
- Window frames, sills and wells are often “hot spots” for lead dust in homes. Vacuum, then wipe these surfaces regularly with a detergent. Detergents containing phosphates or phosphate-free lead dissolving detergents are best, but not always available.

- Seal leaded stained glass, with shellac or waxing, if within reach by children. Remove non-essential pieces from their reach.
- Remove loose paint **only if a small area is involved**. Moisten or mist the loose paint with water. Carefully scrape peeling paint from the surface and collect it on a drop cloth. Collect the debris and seal it tightly in a plastic bag for disposal.
- If your home needs major renovation, please refer to the Illinois Department of Public Health publication **Homeowner's Lead-based Paint Abatement Guide**.
- Move children's furniture and cribs away from unsafe areas, such as damaged walls and window wells.
- Cover crib rails with plastic guards to prevent children from chewing on paint or varnish.
- Damaged areas on walls may be temporarily covered or patched. Place heavy furniture in front of bad areas until the damage is properly repaired.
- Use only residential paint in your home. Industrial paints and coatings may contain high levels of lead.
- Children should not be left unsupervised in areas where there are lead-based paint chips or dust, particularly if they are at an age when they put things in their mouth.

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## PLUMBING CONSIDERATIONS

Groundwater and surface water used for drinking are rarely sources of lead themselves. Most lead in water comes from the plumbing, either lead pipes or the solder joining copper pipes. The longer the water stands in the pipes and the softer the water, the greater the opportunity for lead contamination from the pipes. Determine if pipes and fixtures containing lead or leaded solder were used in your home's plumbing or your community's distribution system. If lead components have been used —

- Allow tap water to run until you feel a temperature change. This flushes water that may have become contaminated while standing in the pipes.
- Use only cold water for drinking and cooking. Keep a pitcher of water from flushed pipes in the refrigerator.
- If lead pipes are accessible to children, consider either sealing the pipes and exterior surfaces or eliminating access.
- When replacing household plumbing, select only lead-free materials.
- Clean aerators and screens on spigots regularly.
- Have a licensed electrician check and relocate ground wires that may be attached to water pipes.
- Obtain the U.S. Environmental Protection Agency's (USEPA) document **Lead in Drinking Water** by calling the Drinking Water Hotline, 800-426-4791, or the Illinois Department of Public Health, Division of Environmental Health, 217-782-5830 (TTY, hearing impaired use only, 800-547-0466). Check with the Illinois Environmental Protection Agency's Division of Public Water Supply, 217-785-8653, or your water company to determine the level of lead contamination in the public water supply in your community.

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## HEATING, AIR CONDITIONING AND VENTILATION SYSTEMS

- Change filters on furnaces and air conditioners at least monthly during high-use periods. Cover vents during an abatement project and clean vents contaminated with lead dust by vacuuming and damp wiping.
- Cover old lead painted steam radiators with metal screening so toddlers cannot pick at the paint. Keep areas around radiators clean.

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## **FIREPLACES AND STOVES**

- Do not burn colored paper or painted wood in stoves or fireplaces because they may contain lead that can be released into the air.

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## **SMOKING**

- Lead is present in tobacco and cigarette smoke and ash. Either do not smoke inside or ventilate the area well when smoking. Keep smoking areas clean.

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## **LEAD-CONTAMINATED SOILS**

If there is a known or suspected problem with soil lead contamination around your home —

- Keep windows closed on windy days, at least on the windward side of the house, to reduce lead dust from soil being blown inside.
- Fences and vegetation such as grass and bushes help reduce wind from carrying contaminated soils elsewhere.
- Some cements or concretes also may contain relatively high levels of lead. Hose down porches or sidewalks regularly.
- Do not let children dig or play in dirt, including potting soil. Bare soil should be re-sodded or covered with fresh top soil or plastic covered with decorative rock or wood chips. Rototilling can be done to dilute lead in surface soil if lead levels are not excessive.
- Test garden soils periodically for pH levels and phosphorous content. Neutral pH levels and optimum phosphorous may reduce the uptake of lead by certain plants. Contact your local office of the University of Illinois Extension for more information.

- Children should not play in areas where demolition, rehabilitation or sandblasting is occurring or near structures (for instance, water towers, bridges, etc.) that may be painted with lead-based paint. Gross contamination (paint chips) should be picked up or vacuumed.
- Build a sandbox with a bottom and fill with clean lead-free sand to provide children with a safe play area.
- Place outdoor play equipment away from painted structures. Steel play equipment such as swings should be maintained since the paint may contain lead.
- Street dust often contains lead from soil and past use of lead in gasoline. Do not allow children to play in alleys and streets. Regular street cleaning may serve to reduce this lead source.

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## **PERSONAL HYGIENE**

- Wash children's hands and faces frequently, especially before eating and at bedtime. Keep fingernails clean and cut short. Adults should not smoke, eat, drink or feed their children without first washing their hands. Discourage children from placing fingers and non-food items in their mouths.
- Clean toys or objects that children put in their mouths frequently. Discourage playing with objects, particularly those with painted metals, other than those labeled as non-toxic.

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## **FOOD AND FOOD CONTAINERS**

- Do not heat or store foods in ceramic containers. Hand wash ceramics to preserve the glaze that seals in leaded pigments. Unless labeled as lead-free, it is best to use pottery for decorative purposes only.
- Do not turn printed plastic wrappers inside-out to store any food. Wrapper inks may contain lead-based dyes.



- Try to buy foods packaged in lead-free materials. Cardboard, plastic, glass or paperboard containers are usually lead-free. Cans that are three pieces soldered together with wide side seams usually have some lead content. Two-piece cans with a rounded bottom welded with a narrow and dark colored seam are most often lead-free.
- Do not store food and beverages in leaded crystal.
- Always eat at a clean table. Children should not eat food dropped on the floor or ground. Children should not eat outdoors.
- Rinsing garden harvests with water may not remove all leaded dust. In areas known to contain high soil lead, remove outer leaves of garden vegetables (for instance, lettuce and cabbage) and discard or use a mild vinegar rinse on garden vegetables that do not have a removable peel (such as tomatoes and carrots) to reduce exterior lead contamination.
- Plant gardens away from painted structures and roadways.

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## **LEAD-RELATED INDUSTRY**

- If your workplace provides showers, use them at the end of your shift. Change clothes after work.
- Do not eat, drink, smoke or apply cosmetics in areas where lead is used.
- When working around lead, a respirator and other protective gear should be used. If not, rinse mouth and wash hands frequently. Contact the Illinois Department of Labor, the Federal Occupational Safety and Health Administration (OSHA) or Illinois Department of Public Health if workplace conditions are of concern.
- Wash work clothes separately from the rest of the laundry to avoid cross-contamination.

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## **NUTRITION**

- Eat foods high in iron (lean meat, fish, eggs, beans, peas, peanut butter, raisins), calcium (milk products, green vegetables) and vitamin C (citrus, green vegetables and potatoes with skins). These foods will help decrease the amount of ingested lead that is absorbed into the body.
- Provide healthy snacks to children throughout the day. This will satisfy their need to chew and reduce their interest in putting nonfood items in their mouths. It will also improve overall nutrition.
- Do not use bone meal as a dietary supplement. If animals have been exposed to lead, it can be stored in bone tissue. Check with your doctor about taking iron and calcium supplements.
- Children should not eat snow or icicles or drink water that has run off a building.

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## **SCREENING FOR LEAD EXPOSURE**

- Screening for lead is required by Illinois law for children who reside in areas determined by the Department to be high-risk and for those who are assessed to be at high risk by a physician using the Department's risk assessment questionnaire.

Adults need to have their blood tested if they are employed in an industry that uses or produces materials containing lead, have been remodeling a house containing lead-based paint or use lead in a hobby.

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**FOR MORE INFORMATION ON  
LEAD ABATEMENT, CONTACT**

**Illinois Department of Public Health**

Division of Environmental Health

525 W. Jefferson St.

Springfield, IL 62761

217-782-3517

TTY (hearing impaired use only)

800-547-0466

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