

# PREVENTING LEAD POISONING

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## The Problem

Childhood lead poisoning is the number one environmental health risk facing children in industrialized countries today. In the United States, more than 3 million children age six and younger—that's one out of every six children in that age group—has toxic levels of lead in their bodies. Similar proportions of children are affected in other countries, from Germany to Australia, that have used lead in industry and consumer products. Lead poisoning affects families from every socioeconomic level, though the problem tends to be worse in neighborhoods where buildings are not well cared for.

Lead is a powerful neurotoxin that interferes with the development and functioning of almost all body organs, particularly the kidneys, red blood cells, and central nervous system. In young children, lead retards the development of the central nervous system and brain. High levels of lead exposure can result in coma, convulsions, and death.

At low levels, lead can cause reduced IQ, reading and learning disabilities, attention deficit disorder, and behavioral problems. As a result, childhood lead poisoning is associated with lower educational achievement, higher

rates of high school drop-out, and increased behavioral problems. In the long run, children who are lead poisoned may be less likely to become positive contributors to our communities and economy.

The overwhelming cause of lead poisoning in children is lead-based paint in homes. In the United States, lead was banned in residential paint in 1978. About half of all older homes in the US contain some leaded paint and approximately 2 to 3 million homes have lead-based paint that is peeling or flaking, an immediate hazard to children.

Invisible lead dust on household surfaces is just as hazardous to children as paint chips. Most children are lead-poisoned today through the ingestion of leaded household dust. This dust can be created by friction—the opening of windows or the rubbing of a tight door. Children also are being poisoned by home renovation projects that generate lead dust. Many home owners are not aware of the hazards of lead removal and unknowingly poison their children.

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## Preventing Lead Poisoning

Lead poisoning is entirely preventable. All it requires is:

- ☐ Awareness of the risk of lead poisoning and particularly the danger in home renovations.
- ☐ Identification of children who are at risk or who already are poisoned.
- ☐ Removal and reduction of the lead hazards in homes, child-care centers, and schools.

Kiwanis clubs can help eliminate lead poisoning by working in any of these areas.

Clubs may be able to coordinate their activities with the local health department. In areas where lead poisoning is not yet identified as a priority, clubs can spearhead a coalition with local pediatricians, children's hospitals, contracting firms, home builders, and schools.

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## Raising Awareness

The first challenge of an awareness campaign is to alert the community to the problem: childhood lead poisoning is a

threat to all children under the age of six.

Misconceptions about lead poisoning prevent action. Many people think the problem of lead poisoning was solved when lead was taken out of paint and gasoline. Others believe that a few youngsters living in extreme poverty get lead poisoning when they eat chips of peeling paint. The truth is that lead poisoning will continue to threaten children as long as lead is present in our environment and homes.

Many people fixing up their homes unknowingly place themselves and their families at risk of lead poisoning. Improper removal of lead-based paint creates leaded dust, which is hazardous both to the worker and the family. Young children and pregnant women are particularly at risk. Alerting the public to this risk is one of the best methods of preventing childhood lead poisoning.

The public also should learn about other possible sources of lead poisoning: in soil around lead-painted homes, in drinking water, in some enameled dishes and crystal, and hobbies.

Kiwanis clubs could play a key role in prevention by launching a comprehensive public education campaign. It should include every possible method of spreading the word.

- ❑ *The Media*—press articles, newspaper advertisements, radio public service announcements, television and radio interviews.
- ❑ *Special Events*—Town meetings, community forums, fairs, social club meetings, professional organization meetings.
- ❑ *Printed Materials*—Brochures, pamphlets, fliers, posters.

Try to identify the places in your community where your target audience might go or meet. For example, people involved in home

repair will go to the hardware store or lumberyard. Most pregnant women will be receiving care from an obstetrician or a clinic. Target your activities to these places.

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## Identifying Lead Poisoning

Early identification of lead poisoning can ensure proper medical treatment and reduce the long-term threat to a child's development. A simple blood test is all that is needed. All children should be tested by their first birthday and then at least once a year until age seven.

Nine out of 10 children never are tested for lead poisoning. This means many of the children affected are never identified. Early identification of children with lead poisoning can ensure proper medical and environmental follow-up and can prevent more serious damage due to continued lead exposure.

A community-wide screening fair would be an important step toward identifying all the children with lead poisoning in the community. The screening also could serve as a way to raise awareness about the problem, the risk of renovation, and the need to clean up the lead in a child's environment. Lead screening could be incorporated into a larger health screening effort, such as a health fair or immunization drive, or it can be organized on its own. In either situation, a club can help in several ways.

## Professional Recruitment

A club should find trained medical professionals who would be willing to volunteer their time to do the screening. It will be important to arrange for medical follow-up for children identified with high levels of lead. Locate private pediatricians, clinics and

hospitals that provide care to lead-poisoned children. The club also may offer to pay for follow-up treatment if no other resource is available.

In some areas, lead poisoning prevention activities will be coordinated by the local or state health department or a local children's hospital. Clubs interested in screening first should contact the health department and hospital to identify current programs and resources and to discuss options for screening: locations, events, and so forth.

However, the local health department may not have established any program or be interested in the project. Some health departments may believe that lead poisoning is not a problem in their communities. The only way to know if there is a problem is through screening children, and a club can organize that screening.

## Site Selection

The best sites are centrally located, offer easy access, and draw young children and their parents. Shopping centers, toy stores, churches, museums and fast food restaurants are possibilities. So are child-care centers, preschools, Head Start programs, and playgrounds. Contact the director or manager of a few possible sites, and discuss the possibility of a screening.

## Joint Projects

Reaching all children at risk may require some special planning to draw children. A screening effort can be coordinated with a health fair, immunization drive, or some other special event. Incorporating lead screening may be cost effective and help increase participation.

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## Getting the Lead Out

Ultimately, preventing childhood lead poisoning may require removing the lead in a child's environment. This is the best way to prevent lead poisoning, and it is vital for children who already are poisoned. Removing lead-based paint, called abatement, can be hazardous and requires specialized training and safety precautions. Many localities, however, do not have the trained work force, materials, or resources to safely and properly identify and remove lead-based paint. Kiwanis clubs can help build this capacity in a number of ways.

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## Providing Resources

The cost of properly removing lead-based paint can be prohibitive. Many families and small-scale property owners cannot afford this expense. If the lead is not properly removed, lead-poisoned children will be continuously exposed and poisoned anew.

- *Providing Loans/ Grants*—A club can help by developing a revolving loan fund to finance lead-based paint abatement or by guaranteeing a loan made from a local bank.
- *Purchasing Equipment*—The best way to check for lead-based paint in a building is to bring in a portable X-ray fluorescence machine. Safe clean-up involves a HEPA vacuum (High Efficiency Particulate Air vacuum). These pieces of equipment cost more than \$1,000 each.

- *Purchasing Materials*—Windows, doors, and woodwork often need to be replaced. Walls need to be paneled or covered.
- *Providing Temporary Shelter*—The best time to abate a home is when it is unoccupied. All occupants should be out of the house, but it is particularly important for children and pregnant women. A club could provide a lead-safe home for families who need to be temporarily relocated.
- *Training Workers*—Improperly conducted abatement also can create a danger to the worker and the family. Lead is a hazardous substance, and people working with it must be trained in safety techniques to protect their own health. A club could send members of the community (including club members) to a training center for lead-based paint abatement. To learn more about these training centers, contact the Alliance to End Childhood Lead Poisoning (address and phone below).

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## Resources

The organizations listed below offer materials that may assist a club in developing a lead-poisoning prevention program.

### **Alliance to End Childhood Lead Poisoning**

**Alliance for Healthy Homes**  
227 Massachusetts Ave NE  
Suite 200  
Washington, DC 20002  
U.S.A.  
202/543-1147  
Fax: 202/543-4466  
Web site: [www.aeclp.org](http://www.aeclp.org)  
[www.afhh.org](http://www.afhh.org)

The Alliance for Healthy Homes was founded in 1990 as the Alliance to End Childhood Lead Poisoning. Their name change in 2003 reflects the expansion of our work on lead poisoning prevention to address other housing-related health hazards. The Alliance works to achieve: primary prevention, practical solutions, environmental justice, and holistic approaches

The Alliance for Healthy Homes has created a four-part Lead-Safe Housing Policy Guidance Series to assist state and local policy makers and government agency staff in establishing a primary prevention-based framework to advance lead-safe housing. The guidance series is available from AFHH free of charge.

### **Community Environmental Health Resource Center (CEHRC)**

227 Massachusetts Ave, NE  
Suite 200  
Washington, DC 20002  
202/543-1147  
E-mail: [cehrc@afhh.org](mailto:cehrc@afhh.org)  
Web: [www.cehrc.org](http://www.cehrc.org)

The CEHRC seeks to help community-based organizations protect children at highest risk from environmental health hazards, particularly hazards posed by substandard housing (e.g., lead, carbon monoxide, pesticides and environmental factors related to asthma) consistent with its established principles of primary prevention, right-to-know, community organizing and empowerment, environmental justice, responsibility, accountability, and respect.

### **National Lead Information Center**

422 South Clinton Ave  
Rochester, NY 14620  
U.S.A.  
1-800-424-LEAD (5323)  
Fax: 585/232-3111  
Web: [www.epa.gov/lead/hlic.htm](http://www.epa.gov/lead/hlic.htm)

The National Lead Information Center (NLIC) provides the general public and professionals with information about lead hazards and their prevention. NLIC operates under a contract with the U.S. Environmental Protection Agency (EPA) with funding from EPA, the Centers for Disease Control and Prevention, and the Department of Housing and Urban Development.

Contact the National Lead Information Center to receive a general information packet, to order other documents, or for detailed information or questions.

### **National Maternal and Child Health Clearinghouse**

Circle Solutions Inc.  
2070 Chain Bridge Road  
Suite 450  
Vienna, VA 22182  
703/902-1232  
Fax: 703/821-1054  
Email: nmchc@circsol.com  
Web: www.nmchc.org

### **Health Resources and Services Administration**

US Dept of Health & Human Services  
Parklawn Bldg  
5600 Fishers Lane  
Rockville, MD 20857  
1-888-ASK-HRSA (275-4772)  
Web: www.hrsa.gov

The National Maternal and Child Health Clearinghouse has merged with Health Resources and Service Administration.

They offer two publications on lead poisoning.

### **National Safety Council**

1121 Spring Lake Drive  
Itasca, IL 60143-3201  
630/285-1121  
Fax: 630/285-1315  
www.nsc.org/issures/lead

Provides materials/resources to help prevent lead poisoning.

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## **Do-It-Yourself Testing Kits**

### **Lead Paint and Coatings**

Kits designed to test for lead paint only indicate whether lead is present in the paint and do not indicate the amount of lead. Low levels of lead detected by a laboratory often aren't detected by these kits. Listed below is a list of organizations that provide lead test kits. Please contact the individual organizations for prices. You may also be able to get test kits at a local hardware store.

### **Carolina Environment Lead Check**

PO Box 26661  
Charlotte, NC 28221  
704/598-1397  
Web: [www.ibiblio.org/hass/R\\_7.2\\_lead.html](http://www.ibiblio.org/hass/R_7.2_lead.html)

Tests are available for ceramics, paint, dust, soil, and water.

### **Clean Water Fund of N.C.**

Clean Water Lead Testing  
29 1/2 Page Avenue  
Asheville, NC 28801  
704/251-0518  
Web: [www.ibiblio.org/hass/R\\_7.2\\_lead.html](http://www.ibiblio.org/hass/R_7.2_lead.html)

Offers testing through the mail for lead in water, dust, paint, soil, and ceramics.

### **Frandon Lead Alert**

81 Finchdene Square  
Scarborough, ON M1X 1B4  
CANADA  
800/359-9000  
800/884-6073, ext108  
Web: [www.fda.gov/opacom/backgrounders/lead.html](http://www.fda.gov/opacom/backgrounders/lead.html)

Tests are available for soil, paint, dust, ceramics, utensils, and water.

**Lead Inspector's Kit Know Lead Carolina Environment**  
800/448-LEAD

### **Lead Check Swabs Hybrivet**

P.O. Box 1210  
Framingham, MA 01701  
U.S.A.  
508/651-7881  
Web: [www.leadcheck.com/LeadCheckSwab.shtml#activate](http://www.leadcheck.com/LeadCheckSwab.shtml#activate)

Tests are available for paint, ceramics, and china.

### **Leadcheck II Michigan Ceramics Supplies**

4048 Seventh Street  
PO Box 342  
Wyandotte, MI 48192  
313/281-2300  
800/860-2332  
Web: [www.ibiblio.org/hass/R\\_7.2\\_lead.html](http://www.ibiblio.org/hass/R_7.2_lead.html)

### **National Safety Council Lead Dust Test Kits**

1025 Connecticut Ave, NW  
Suite 1200  
Washington DC 20036  
202/833-1071  
800/424-5323  
Fax: 202/293-0032  
Web: [www.nsc.org/issues/lead/](http://www.nsc.org/issues/lead/)

### **National Testing Laboratories, Ltd. Network**

Watercheck  
6555 Wilson Mills Road  
Suite 102  
Cleveland, OH 44143  
U.S.A.  
(800) 458-3330  
440/449-2525  
Fax: 440/449-8585  
Web: [www.ntllabs.com](http://www.ntllabs.com)

### **Suburban Water Testing**

4600 Kutztown Road  
Temple, PA 19560-1548  
U.S.A.  
800/433-6595  
E-mail: [info/h2otest.com](mailto:info/h2otest.com)  
Web: [www.h2otest.com](http://www.h2otest.com)

## Sample Press Release

### Instructions

For each of these samples, retype the text double-spaced and with appropriate margins (2" for the radio scripts; 1" for the others). Make copies of the radio PSAs and distribute them to local radio stations. Develop and distribute your own press release using a format similar to the sample. Use the letter as a model for a lead-testing effort in a child care or preschool setting.

Create a poster similar to the one on the back of this bulletin to publicize your lead-testing event.

### FOR IMMEDIATE RELEASE

For more information, contact:  
Van Johnson  
Kiwanis Club of Hyde Park

"Hyde Park children are in danger of lead poisoning, and Kiwanians want to make sure they're protected," says Kiwanis club president John Claridge. That's why the Hyde Park Kiwanians are launching an education campaign and offering free blood tests for children.

The Kiwanis Club of Hyde Park will conduct free blood tests for lead poisoning each Saturday in September from 9:00 a.m. to noon, at the Stop and Shop Grocery, Dorchester and 53<sup>rd</sup> Street.

Brochures on lead poisoning will be distributed at the Stop and Shop, Ellis Avenue Clinic, Walgreen's Drugstore, Toys and Tots, O'Gara's Bookstore, and a number of churches. The Kiwanis club plans to distribute 10,000 brochures.

In the United States, one preschooler in six has lead poisoning, according to the Environmental Protection Agency. Because of the number of older buildings in Hyde Park, the proportion with lead poisoning may be higher here, suggests Claridge. Lead was used in paints until 1978 and in some plumbing fixtures and pipes.

In very small amounts, lead affects the kidneys, red blood cells, and central nervous system, according to the brochure being distributed by the Kiwanis club. In young children, it can permanently lower the IQ, reduce attention span, and delay development.

A preschooler can ingest enough lead to be poisoned from the dust of lead-based paint on a window sill. Swallowing the equivalent of a few grains of sugar each day could result in blood lead levels two to three times the official lead poisoning level of 10 micrograms in a deciliter of blood.

Simple precautions will protect children from many sources of lead. These include damp dusting with a high-phosphate detergent, keeping toddlers from chewing window sills and woodwork, and running water for a minute before drinking it. Other suggestions appear in the brochure.

Parents whose children test high for lead may need to have their homes tested to determine the sources of lead poisoning.

### Radio PSAs

#### RADIO PUBLIC SERVICE ANNOUNCEMENTS

##### **SCRIPT #1—15 seconds**

Your young child probably won't show any symptoms of lead poisoning. But a little lead in a child's system before age five can affect his or her IQ for life. Play it safe. Have your child tested for lead.

A message from this radio station and the Kiwanis Club of Amo.

##### **SCRIPT #2—15 seconds**

There's lead in old paint. In soil around houses. In some water pipes. Maybe in the dust around your house. And it can all hurt your children. Find out more. Request our lead poisoning fact sheet.

A service project of this radio station and the Kiwanis Club of Rile.

##### **SCRIPT #3—30 seconds**

Before you start sanding or cutting holes in walls, we'd like to tell you three facts about lead paint.

One: Lead-based paint was manufactured until 1978, so it's in most houses. Two: Just the dust from a remodeling project will spread enough lead through your house to affect the IQ of a young child. Three: You can have your house tested for lead paint or do it yourself.

A message from this radio station and the Kiwanis Club of Wales.

##### **SCRIPT #4—30 seconds**

There are 300 tons of lead-based paint on buildings in this country. And when it flakes or peels or is sanded, it can poison children. That's why every child under six should be tested for lead. And parents need to learn how to protect their children from lead. Find out how. Request our lead poisoning fact sheet.

A service project of this radio station and the Kiwanis Club of Bloom Township.

### Letter to parents

Dear Parents:

One preschooler in six has lead poisoning. Lead poisoning can lower a child's IQ, decrease attention span, and slow development

That's why the Kiwanis Club of Kankakee is offering to provide free lead testing to all children in the Kankakee Valley Preschool Program. We also will be prepared to test younger siblings at the end of the school day.

The testing will be conducted by Dr. Van Halen from the Morrison Clinic. It will involve taking a small blood sample from each child.

We have scheduled the testing for Friday, October 18. If you would like your child or children tested, please complete the attached form and turn it in to the preschool by Wednesday, October 16.

Also enclosed with this letter is a brochure about lead poisoning. If you have any questions about lead poisoning or the testing process, please call me.

Sincerely,

Edward Van Leuwenhook  
Young Children Chairman  
Kankakee Valley Kiwanis

## Instructions for handout brochure

The brochure on the next two pages can be cut out of this bulletin and used as a master for printing. Consider printing the brochure and distributing it throughout your community. To use the master, remove the staples in the gutter between the pages, cut along the fold, and then have the brochure printed, double sided. Have the printed brochures folded like business letters (#10 letter fold), with the panel that reads "Get the Lead OUT" as the cover.

This brochure also can be downloaded from the Web at [www.servingchildren.org](http://www.servingchildren.org).

### **PROTECT YOUR CHILDREN!**

One preschooler in six has  
lead poisoning—enough to lower  
his or her IQ for life.

**You can have your children tested for free:**

**Saturday, May 24  
10:00 a.m. to 2:00 p.m.  
At the Gazebo in Westfield Park**

Free Ice Cream and Helium Balloons

Contact the Kiwanis Club of Westfield  
or the Westfield Dairy Queen  
for more information.



Service Programs Department  
Kiwanis International  
3636 Woodview Trace  
Indianapolis, IN 46268-3196  
U.S.A.  
317/875-8755 Worldwide  
800/546-2647 US and Canada  
317/879-0204 Fax  
[service@kiwanis.org](mailto:service@kiwanis.org)  
[www.kiwanis.org](http://www.kiwanis.org)

- ❑ Always use cold water for cooking and preparing baby formula
- ❑ Install a reverse-osmosis filter (Approximately \$100).

What should I feed my children to protect them from lead?

Children with adequate calcium and iron in their diets absorb lead less readily. After age two, children should avoid high-fat foods, which increase lead absorption. So, feed your children milk (skim after age two), green leafy vegetables, raisins, beans, and lean red meat.

What should I do during home improvements?

- ❑ Children and pregnant women should move elsewhere.
- ❑ Whenever possible, cover lead-paint surfaces with wood, Sheetrock, or plasterboard.
- ❑ Whenever possible, use a professional to remove materials covered with lead-based paint.
- ❑ Seal off the room being renovated with plastic.
- ❑ Don't use a sander or heat gun to remove lead-based paint. Use a chemical stripper that doesn't contain methylene chloride.
- ❑ Cleanup should begin with a High Efficiency Particulate Air (HEPA) vacuum with a smallpore filter.
- ❑ Cleanup should end with a thorough washing using a trisodium phosphate detergent. Use two buckets for washing and rinsing.
- ❑ None of the materials taken out of the house should be burned.

Distributed by your local Kiwanis Club as part of the  
Kiwanis International service program Young  
Children: Priority One.



Kiwanis International  
3636 Woodview Trace  
Indianapolis, IN 46268  
(317) 875-8755  
www.kiwanis.org

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# GET THE LEAD OUT

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One in every six preschoolers  
has lead poisoning.

**Protect your Children!**

## The facts about lead

Lead is a poison. In very small amounts, it affects the nervous system and brain. In slightly larger amounts it affects red blood cells, kidneys, the reproductive system, and other organs.

In children under age six, very small amounts of lead can affect their development, attention span, and IQ. There is no known cure. Once it is in a child's brain, lead cannot be removed.

### How much lead is dangerous?

Swallowing a few grains a day is enough to hurt a child and that can be in the dust on a windowsill.

The official danger level is 10 micrograms per deciliter in a blood sample. The more lead in the blood, the more damaging it can be.

Young children take lead into their bodies 30 times better than adults do, and it does the most harm to them, especially between 15 months and four years.

### How can I tell if my children have lead poisoning?

Most children with lead poisoning show no symptoms. Some will complain of headaches or stomachaches or have nosebleeds.

The only way to be sure your children are safe is to have their blood tested.

### How do I get my children tested?

Call your family doctor or the county health department and ask about testing for lead poisoning. Request a venous blood-lead test, not a just a finger-prick test. In many areas, the health department will do this for free. Doctors will charge \$15 to \$40.

### Where is lead?

Lead may be in many places around your home. It was in paint until 1978. So, it can be in paint chips, the dust from painted surfaces rubbing together, or the dirt around a house where paint peeled off.

Lead was used in older water pipes and, until recently, was in solder used to join copper water pipes. So, it can be in water that sits in your water pipes too long.

Lead is in imported pottery glazes, leaded crystal, and the solder in some cans. So, lead can be in food that sits too long in these containers.

Lead is in some items burned in incinerators. So, it is in the air and soil near many incinerators.

Lead is used in industries and hobbies. So, it can be on clothes worn home from work or spread in your home by your hobby.

Lead was in gasoline for many years, so it is in the soil near busy roads.

## How do I check my home for lead?

Have a professional test for lead. Ask the health department to test your home. If the health department can't, ask for a list of state-certified inspectors and testing laboratories. Have tests done in four places:

- ❑ Painted Surfaces—Inspectors will either bring a portable detector that uses X-rays or will take paint samples and send them to a laboratory.
- ❑ Household Dust—Inspectors wet-wipe surfaces and send the samples to a lab for testing.
- ❑ Water—Inspectors take two samples, one after the water has been in the pipes over night and another after the water has run for several minutes.
- ❑ Soil—Inspectors take samples from around the house and from areas where soil is likely to be tracked into the house.

## How can I protect my children...

### ...from lead dust in the house?

- ❑ Damp-mop and damp-dust frequently with a detergent containing trisodium phosphate (TSP), such as powdered dishwashing detergent. Concentrate on places where painted surfaces rub together, by windows and doors.
- ❑ Don't sand or scrape walls or woodwork covered with lead paint.
- ❑ Wash children's hands frequently.
- ❑ Give toddlers pacifiers and chew toys so they don't chew on woodwork or painted toys.
- ❑ Put furniture in front of window sills that toddlers want to chew on.
- ❑ Wash baby toys and pacifiers that fall on the ground.
- ❑ Avoid hobbies involving lead, like making stained glass windows or fish sinkers.

### ...from lead in the soil?

- ❑ Don't let toddlers eat dirt.
- ❑ Plant shrubs and grass near buildings, where lead paint could have flaked off.
- ❑ Keep children away from play areas near highways.
- ❑ Make children wash their hands when they come inside.

### ...from lead in the water?

- ❑ Run the water for two minutes if it has been standing in the pipes for several hours.
- ❑ Run the water until it gets cold (20-30 seconds) if the tap has been used recently.