of lead poisoning. If the child has an elevated blood lead level, then he or she should be screened again every few months to make sure the level does not continue to increase to the point of being dangerous.

**Interpreting Screening Results**

If the blood lead level is over a certain threshold (10 micrograms per deciliter), the child should be screened frequently to make sure that the level does not continue to rise. It is wise to search out and eliminate sources of lead in the environment to prevent further exposure and possibly higher, more dangerous, blood lead levels.

A result of 15 micrograms per deciliter or higher indicates that the child should be tested for iron deficiency. Special attention should be paid to the child’s diet and to finding the source of lead in the child’s environment. If the child’s home contains lead paint, extra care should be paid to hand washing and to cleaning floors and other horizontal hard surfaces that are accessible to the child. Cleaning should be done with wet cloths and mops that pick the lead dust up rather than with dry cloths, brooms or vacuum, which spread the dust around.

A blood lead level of 20 micrograms per deciliter or above may call for a more thorough investigation of, and efforts to control, the source of lead, as well as a complete medical examination. Medical treatment may be prescribed, depending on the particular situation.

If the child has over 40 or 50 micrograms of lead per deciliter of blood, medical treatment (chelation therapy) and a thorough environmental investigation will be needed.

A blood lead level of 70 micrograms per deciliter is considered a medical emergency and requires immediate medical treatment, environmental investigation, and source control.

**Medical Treatment**

If a child has an elevated blood lead level, a medical practitioner might do a more thorough physical examination. The child might be checked for anemia (low hemoglobin or red blood cell count caused by iron deficiency). Not every lead poisoned child is anemic. However, if a child is found to be anemic, an iron supplement may be prescribed.

If a child has severe lead poisoning he or she will be given a drug called a chelating agent to remove some of the lead from the blood. Usually this is done orally, but sometimes it has to be done by injection or intravenously and may require hospitalization.

In order for the treatment to be effective, it is critical that the lead in the child’s environment also be removed. If a child is treated and then exposed to lead again, the child will be poisoned again.
Where To Go For Help

A family with a lead poisoned child is confronted by a number of issues. They may need to get medical treatment for the child. They may need assistance with behavior problems or learning disabilities. They might also need help dealing with the psycho-social issues, the guilt, anger and stress that can result from finding that one’s child has been or may be harmed, and with the financial demands of dealing with the situation.

Assistance is available at many levels. State and tribal health agencies can help with screening, interpreting screening results, and any necessary medical treatment. Tribal environmental specialists can help to locate sources of lead in the home. Social workers, both state and tribal, can offer support. There are parent support groups in some areas, where families share their experiences to benefit others in similar situations. Federal agencies have outreach workers to help people deal with lead poisoning, too, as well as toll-free hot-lines that provide free information on lead poisoning to the public.

If a child has learning disabilities, the family can get help from early intervention and Head Start programs. Some disabilities qualify a child for special education services from public school systems. The special education department of local public school departments can advise families on how to have children evaluated for special needs before reaching school age.

Resources for supporting families of lead poisoned children are listed in the resource section of this manual.
When children have lead poisoning, they may have various learning and behavioral problems. These challenging children frequently feel that they are “bad”, and these feelings may make them angry, and aggressive. Caring adults —parents, daycare providers, or others—can help by spending short periods of one-on-one time with these children in pleasant activities, such as reading a story or doing a project. Such activities help develop warm relationships, and children often begin to feel better about themselves.

Although challenging behaviors may indicate that a child has lead poisoning, they may also be caused by other problems. All children need patience, love and support.

Routines

Challenging children usually behave more appropriately if they have a daily routine, a well established sequence of events. The routine may include waking-up time, washing, eating breakfast, dressing, having free play, leaving for the sitter/daycare/school, eating snack on returning home, playing outdoors, watching TV, eating dinner, washing up, and going to bed. A routine should allow for some flexibility but it should also provide a regular structure for the child’s day. Children should know what to expect and what the rules are for the routine.

Adjust the Environment

Adults should try to arrange the environment so that children are not in situations that encourage inappropriate behaviors. For example, if a child becomes over-stimulated by noise, use carpeting to reduce the sound level, limit the number of children who can play in an area at any one time, and use plastic toys rather than metal ones.

Use nonjudgmental labels to identify inappropriate behaviors, and tell children what they need to do about them. For example, “You’re overexcited. You need to take a break before something gets broken.” Or, “I know you’re having trouble paying attention, but I want you to look at me and listen to my instructions.” Explain that it is the behavior and not the child him or herself that is objectionable. (“Even though I don’t like your behavior, I still love you.”) Ask “What did I just say?” and have the child explain it back to you to be sure the he or she really understands what you are expecting.
Techniques for Specific Problems

For very active children: Step in before children lose control. Tell them that they are too excited. They may move to another activity, cool off with a quiet activity (for example, reading or drawing), or blow off steam by active but safe play. Stay calm and speak with a soft voice, even if the children are screaming. Squat or sit down so that you are at the children’s level and can establish eye contact without looking down on them. Act as a good role model, and show the children that you are under control, even if they are not.

For children who are easily distracted: Move children to new activities if they can no longer concentrate on a task or give them a break and have them return to the task later. Remember that most preschool children normally have relatively short attention spans.

For unpredictable children: Provide a structured routine so that children know what to expect. Don’t make a big fuss over their unpredictable traits. For example, at mealtime, tell the child that they are expected to eat at the table, but don’t force them to eat. Don’t keep them at the table for very long.

For children whose senses are extremely sensitive: Some children are very sensitive to sights, sounds, smells, tastes, or touch. When possible, adjust the environment and adapt to their wishes: Reduce loud noises and bright lights, let a child wear the same coat every day, or give him a tuna sandwich for lunch every day. Otherwise, offer the child choices and give her time to adjust gradually. For example, if the child is a picky eater, allow her to choose among a variety of new items and let her get used to seeing and smelling them as others eat them.

For children who withdraw or adapt poorly to new things: Warn the child that something different is about to happen. Tell the child what the sequence of events will be. Present the new experience in a positive light, as an adventure—something interesting and enjoyable. Allow the child time to adjust to a new situation, letting him or her watch from the sidelines for a while. Encourage the child to stay near a caring adult during the experience.

For children with negative moods: Ignore the negative mood or attitude, which you cannot change, and concentrate on the child’s behavior. Encourage and praise behaviors that you feel are positive.
The key to preventing lead poisoning is understanding as many of the sources of lead that a child might be exposed to as possible. Lead accumulates in a child’s body. When children are exposed to small amounts of lead from a number of different sources, such as soil, dust, paint, water, air and plastic products, the exposure can add up can be harmful even though each separate piece might be very small.

**Examples of Some Sources of Lead**

- Vinyl mini-blinds, plastic or PVC products
- Paint chips from peeling lead based paint
- Dust from the friction of opening or closing of lead painted windows
- Leaded crystal decanters
- Foil from old or imported wines
- Calcium supplements
- Vegetables grown in lead-contaminated soil
- Imported or “craft” ceramics that use lead glaze
- Drinking water contaminated with lead
- Lead dust brought home on the shoes or clothing of lead or metal workers
- Toys that are imported or have been contaminated by lead dust or soil
House Paint

Most cases of lead poisoning are caused by ingesting lead-based paint and breathing in lead dust. Children can ingest large, harmful amounts of lead if they chew on surfaces painted with lead-based paint, such as window sills or trim, or old painted furniture or toys. They can also poison themselves severely if they eat paint chips that have fallen from old painted ceilings, walls or woodwork. Lead paint (especially older household paint and paint intended for commercial or marine use) is so toxic that ingesting only a few grains a day, the size of sugar crystals, can poison a young child.

About 64 million, or a total of two thirds of the houses and apartments in this country still contain lead-based paint. Any home built before 1978 (or painted with paint manufactured before 1978 or paint supplied by the Bureau of Indian Affairs) might contain lead paint. Older homes are more likely to contain lead. Old varnish and plaster might also contain lead. When the property is poorly maintained, the paint is more likely to be peeling or flaking and poses a greater danger to young children.
DETECTING LEAD-BASED PAINT

When you buy or rent a home, the owner is required by law to tell you if he or she knows the house contains lead paint. You cannot assume, however, that the fact that you are not told there is lead paint in the home means that you are safe. The owner might not have had the paint tested or might have had only part of the home tested. There are three ways you can find out if the paint in your house contains lead.

1. You can send paint chips to a laboratory to be analyzed. Your state lead poisoning prevention program, the National Lead Information Center’s toll-free line or web site, or HUD’s Lead Listing can give you names and addresses of laboratories that are recognized as being competent to do this. (See the resource section of this manual.)

2. You can have an inspector come to measure the lead in the paint in your home. This can be done with a machine called an XRF (short for X-ray Fluorescence). Although the XRF is very effective and is safe if handled correctly, it does use radiation, and it is important that it be handled by a properly trained operator. Make sure that the inspector is certified by your state or tribe, if they have a certification program, or by the EPA. Ask to see his or her credentials. HUD’s Lead Listing or the National Lead Abatement Council can help you find a trained inspector. (See the resource section of this manual).

3. You can buy a kit at a hardware store to test the paint yourself. Home test kits are not as accurate or precise as the previous methods. You cannot assume that you have no lead paint just because you get a negative result from a test kit. Nor can you assume that you really do have lead in your paint if the test kit indicates you do. A test kit simply gives you an indication, but you need to confirm the results with one of the other methods to know for sure.

It is important to realize that you will only know if your paint has lead in the specific spots that are tested. If only flaking areas are tested, other walls or woodwork that are not flaking may have lead. Although these areas might not be tested because they are believed not to pose an immediate threat, you should be alert to the possibility that they might present a hazard if they ever do peel or flake, or if they are disrupted in any way, such as during renovation.
Where Lead is Found in the Home

- Door and Window Trim
- Interior Walls
- Baseboard
- Radiator
- Stair Trim
- Exterior Walls, Windows and Railings

Based on data from HUD
CONTROLLING LEAD-BASED PAINT

If there are places in your home where the paint is peeling or flaking, be sure to keep children from touching them. You can cover a small spot with contact paper or duct tape. You can keep children from reaching other areas by placing furniture in front of them. (Be careful not to place a chair or sofa under a window, however, in a situation where a young child might be able to climb up and fall out of the window.) Or you can remove a small patch of peeling paint by carefully scraping it off after wetting it, and disposing of the chips immediately.

(If the cause of the peeling paint was moisture from a water leak or poor ventilation, that problem should be addressed as well so that the paint will not flake again.)

Hazards caused by lead paint dust created from the friction of a window frame can be eliminated by installing plastic or metal liners in the window channels. Other friction surfaces, such as doors, stairs, and outside corners of walls, can similarly be treated to prevent friction from releasing lead dust.

You can also control the hazard for the long term by covering flat surfaces with lead-based paint in a very secure way. A wall painted with lead-based paint can be covered with wallboard or paneling, thoroughly and carefully sealed at the seams, top and bottom. Or it can be coated with an encapsulant, a liquid that looks like paint and prevents lead dust from escaping. These are not permanent solutions, however. If the covering is ever removed, punctured, or disturbed in any way, the lead from the paint can get back into the living environment.

Removing the paint is the only permanent solution. You can replace entire elements that are covered with lead paint, such as windows or baseboards. You can strip the paint itself off taking proper precautions (listed below).

Any work that will disrupt the paint on a lead-painted surface must be done with precautions to protect both those doing the work and those living in the house.

Precautions For Working With Lead-based Paint

- Pregnant women, young children, and pets should be out of the house when the work is being done.
- Anyone working with lead-painted surfaces, whether hired workers, tenants, or property owners, should be protected from lead dust by wearing well-fitted respirators with HEPA (high efficiency particulate air) filters and protective clothing. They should not eat, drink, smoke or chew gum or tobacco in the work area.
- The areas being worked on should be isolated from the rest of the living space by keeping people from walking in and out of the work area and by hanging plastic sheeting over the doorway to keep lead dust from escaping. Doors and windows should be shut and drop cloths should cover the floors. Personal possessions and furniture should be removed or covered.
If any scraping or sanding is done, the surface should be wetted down first, so that as little lead dust as possible is created. Any time paint chips are loosened from a surface they should be carefully collected on plastic and disposed of safely before they could be spread around the home. Torches, power sanders or other methods that create a lot of dust or fumes should not be used.

The entire home should be cleaned extremely well afterwards. Each work area should be cleaned as the work is done. Cleaning should be done by wet mopping with a special lead cleaner and vacuuming with a HEPA vacuum cleaner. A normal vacuum cleaner should not be used because it will send fine lead dust back out into the air.