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Leona K. Hawks
Utah State University

Andria B. Hansen
Utah State University

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Lead

Leona K. Hawks, Professor, Extension Housing Specialist
Andria B. Hansen, Family Life Center Assistant Director

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What is Lead?

Until recently, paint and water pipes often had a metal in them called lead. Lead was also in gasoline and got into the air and soil from car exhaust. It's not used in these ways anymore, but there is still plenty of lead around. Lead is dangerous because it is so widely used and lasts forever in the environment. It never breaks down into a harmless substance.

Health Effects of Lead

Lead, depending upon the level, can have wide-ranging effects on humans. Lead can poison people by getting into their mouths or lungs from breathing it in from the air. Even very low lead levels in children can slow mental development and cause learning and behavioral problems. Higher levels may cause damage to the nervous system and the reproductive system. Children with too much lead in their bodies may not even look or feel sick. A simple blood test is the only way to know if your child is being exposed to lead. If a pregnant woman gets lead into her body, it can harm the fetus. Lead can also cause high blood pressure in adults. Sadly, the effects of lead poisoning are frequently irreversible.

Sources of Lead

Most problems with lead come from old paint. You are most likely to have lead in your home if you live in an older house or apartment. Lead-based paint that is in good condition is not an immediate problem; it may be a risk in the future, though. You can't always tell if you have a lead problem just by looking at the paint. Lead can be a fine dust from the paint in your house that's created as paint ages or as painted surfaces rub against each other. Lead can also be in dirt tracked inside, in the soil and air around your home or in your drinking water. If lead-based paint is cracking, chipping, flaking, or being rubbed by contact, the danger of lead exposure is much higher than if the paint is perfectly intact.

Although your drinking water is not usually a concentrated lead source like paint or soil, it can still pose risks to your family. Lead can enter your water from several points: lead pipes that bring water to the home, lead pipe connectors, lead-soldered joints in copper plumbing, and lead-containing brass faucets and pump components. In some private wells, underwater pumps with brass fittings can cause elevated lead concentrations in drinking water, especially with new pumps or if the water is soft. Water that is soft or acidic can be corrosive and tends to dissolve lead from pipes and fittings more easily.

Home water softeners may increase the amount of lead leached into your drinking water *only if* lead is present in your water system.

Detection of Lead

Many large hardware or building supply stores have products where you can test for lead. You can also contact the Department of Health for testing supplies. Test paint, soil, and/or water to determine if it contains lead.

If you have, or suspect you have, lead-based paint in your home, it is important to have young children (under 6) tested. Contact your physician or the local Department of Health about testing for blood-lead levels. You can find the phone number of your county health department in your local phone directory under your county name or the government section; or call the Utah Department of Health at (801) 538-6101.

In 1996, federal regulations were instituted requiring property sellers and landlords to disclose known lead hazards in housing built before 1978. Remodelers should be cautioned to keep accurate records of lead testing or remediation. As of June 1999, according to the Federally regulated Lead-Based Pre-Renovation Education (Lead PRE) Rule, remodeling contractors who will be disturbing more than 2 square feet of lead-based paint in pre-1978 housing are required to disclose the risks of lead to their clients.

Reducing Lead Problems

There is no completely safe “Do-It-Yourself” method to remove lead paint.

What can you do about lead-based paint?

- Replace the painted item, especially if it can be easily removed without creating lead dust; for example, install a new door or molding.
- Cover over the lead-based paint, such as with new wall board, plaster, or paneling.
- If it is necessary to strip the lead-based paint (for example, to maintain the historic integrity of molding), try to remove the item from the home for stripping.

Stripping lead-based paint

In the process of stripping lead-based paint, most agree how NOT to do it, few agree how TO do it.

Definitely do not:

- Burn off paint with a torch or high temperature heat gun - releases toxic fumes
- Power sand or dry scrape the paint - releases large amounts of dust
- Chemically strip with methylene chloride -leaves a lead residue (and the stripper is toxic)
- Grit blast - leaves a dust residue

Maybe: depending on precautions and the training of the worker:

- Use a chemical stripper to soften (therefore less likely to be airborne), then scrape. Use a respirator.
- Paint over it

Safety Precautions for Lead

Here are some general guidelines for how a trained professional works with lead-containing materials. Do not attempt to remove lead-containing materials without proper training.

1. Seal off room. Do not let children, pets, or other household members into the area; post a warning sign.
2. Shut down heating or cooling systems. This avoids distribution of fumes, fibers, or dust.
3. Keep dust and fibers in the work area. Use disposable plastic floor and shoe coverings.
4. Wear a respirator and protective gear. Wear disposable protective coverup and gloves.
5. Wet lead-containing materials. Wet lead-containing materials with a solution of water and detergent (about one teaspoon detergent to one quart water) with a hand sprayer to minimize dust when removing loose or flaking lead-based paint.
6. Avoid handling, breaking and cutting materials.
7. Dispose of contaminated debris properly. Encase all lead-containing debris in two layers of plastic for disposal; follow local requirements for proper disposal.
8. Do not eat or drink in the work area.
9. Thoroughly wet clean the removal area. Vacuum using a special cleaner with a high efficiency particulate air (HEPA) filter and wet clean again.
10. Families with young children or pregnant women should move out of the house during major remodeling if lead hazards are present.

Sources: Healthy Indoor Air for America's Homes (3rd ed.), *Hidden Environmental Hazards for the Home Remodeler Instructional Module*; *Help Yourself to a Healthy Home: Protect Your Children's Health*; and *Home*A*Syst: An Environmental Risk-Assessment Guide for the Home*. Funding for this brochure from Healthy Indoor Air for America's Homes: CSREES, EPA, MSU

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