What is lead?

Lead is a highly toxic metal occurring naturally in the environment that was used for many years in products found in and around our homes. Children are more vulnerable to lead than adults because their brains are still developing and they absorb more of the lead they ingest than adults. The Centers for Disease Control and Prevention (CDC) have set a reference level at which they recommend public health actions to reduce lead exposure at 5 or more micrograms of lead in a deciliter (µg/dL) of blood for children 15 years old or younger. Virginia law requires physicians and directors of laboratories to report any detectable blood lead level in a child to the Virginia Department of Health.

Which children are exposed to lead?

While all children are at risk of lead exposure, children living in older housing and in poverty are most likely to be exposed. Deteriorating lead-based paint is a main source of exposure for most lead-poisoned children. In 1978 lead-based paint was banned, but older houses still have lead-based paint in them. The older a house, the more lead-based paint it is likely to have in it. Houses built before 1950 are especially likely to have lead-based paint.

Over time the paint can peel and flake. Some children may eat paint chips directly, but most children ingest small amounts of dirt and dust that contain lead. Outside, peeling siding deposits paint flakes and lead dust in soil that children play in. Inside, opening and closing doors and windows causes friction that rubs off tiny amounts of lead-based paint dust. When children play on the ground or floor and put their toys or hands in their mouth, they can consume the lead-containing dust or soil.

Children can also be exposed to lead in drinking water. Houses with old plumbing may have lead plumbing and lead can leach into the water over time. Lead has been found in certain imported toys, folk remedies or medicines, and ceramic dishes. Another possible source of lead exposure is take-home lead from a parents' whose job exposes them to lead. Examples of jobs that could result in lead exposure are working at a firing range, construction work, industrial painting, and natural gas drilling. Some parents may have hobbies that could result in take-home lead exposure, like auto repair, battery recycling, creating bullets, buckshot or fishing weights from molds, and collecting scrap metal.

How can lead affect children's health?

While lead poisoning at levels as low as 5 µg/dL puts children at risk for developmental delay, lowered intelligence quotient (IQ), and attention deficit/hyperactivity disorder (ADHD), most children who have elevated levels of lead in the blood do not have any symptoms. Blood lead levels have to reach around 20 µg/dL before symptoms such as stomach ache, poor appetite, and irritability appear, and these are often confused with other childhood illnesses. Very severe lead exposure (blood lead levels greater than 80 µg/dL) can cause coma, convulsions and even death.

How likely is lead to cause cancer?

Lead is considered to be a possible carcinogen, but this is being studied as a potential risk for adults with occupational exposure to lead.

Is there a medical test to determine whether my child has been exposed to lead?

Your family physician can perform a routine blood test to determine lead levels in your child. Children who are at high risk for elevated blood lead levels should be tested at 6 months of age. Other children should be tested at age 12-15 months. In Virginia, children from 6 to 72 months of age are being targeted for screening efforts.

How can I reduce the risk of exposure to lead?

Keeping the home clean, eating a good diet, and washing hands can reduce the risk of lead exposure. Adults can check the home for potential danger areas, looking for flaking paint, crumbling plaster, and indoor dust and outdoor dirt that may have lead in it. Any peeling paint should be removed, the paint chips cleaned up, and the area cleaned with wet cloths. Children should not be present when scraping or cleaning up paint chips. Dust should be kept to a minimum by damp mopping and using a wet cloth to clean walls, window sills, and other surfaces. Sweeping and vacuuming can spread lead dust. Children should not be allowed to play in bare dirt, especially near the foundation of a house. Painted wood should not be burned for heating.

If an adult in the household has a job or hobby that involves lead exposure, he or she should change clothing and wash his or her hands upon returning home. Clothes and shoes contaminated with lead should be kept outside or bagged for washing so that lead-containing dust is not tracked into the home.

Has the federal government made recommendations to protect human health?

Renovation in a house containing lead-based paint can create a large amount of lead dust. Because of this, the U.S. Environmental Protection Agency (EPA) requires any contactor doing renovation, repair, or painting (RRP) in houses built before 1978 to be certified by EPA and follow lead-safe work practices. If you have a house built before 1978, make sure any contractor you hire has this certification.

If you have a home built before 1978 and are doing your own renovation or repair work instead of using an RRP-certified contractor, please see the EPA's guidance for "do-it-yourselfers" to be sure you are working safely:
https://www.epa.gov/lead/renovation-repair-and-painting-program-do-it-yourselfers.

More tips for preventing childhood lead poisoning are included in the pamphlet entitled "Protect Your Family from Lead in Your Home." This pamphlet can be obtained by calling 1-800-424-LEAD.

Where can I get more information on childhood lead poisoning?

- If you have concerns about lead, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at http://www.vdh.virginia.gov/local-health-districts/.
- The Virginia Department of Health's Childhood Lead Poisoning Prevention Program has information at http://www.vdh.virginia.gov/leadsafe/.
- Contact the Virginia Department of Health, Division of Environmental Epidemiology at (804)

864-8182 or at toxicology@vdh.virginia.gov.

- For additional information, please visit the Agency for Toxic Substances and Disease Registry website at https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=22 or the Centers for Disease Control and Prevention website at http://www.cdc.gov/nceh/lead/ACCLPP/Lead_Levels_in_Children_Fact_Sheet.pdf.

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