



Eco-Healthy Child Care®

Eco-Healthy Child Care® helps early childhood learning environments to be as healthy, safe and green as possible by reducing children's exposure to toxic chemicals.



Lead

What Is Lead and How Is It Used?

Lead is a naturally occurring heavy metal found in the environment. Lead is odorless and colorless. It is currently used in the production of certain batteries, metal and PVC (polyvinyl chloride) piping, electronic products, art supplies, ceramics and other common and industrial items. Due to health concerns, lead has been significantly reduced in paint, ceramic products, caulking, and pipe solder. The federal government banned lead-based paint from housing in 1978 but older houses can still have lead paint (both inside and outside). Lead was also banned as a gasoline additive in the U.S. in 1978. Lead can still be found in many products including play jewelry, art supplies, PVC toys, paint, ceramic pottery, and piping. Many urban areas have high levels of lead in their soil .

Health Concerns

There is no safe level of lead exposure. Lead is a neurotoxicant. It accumulates in bones, muscles, and fat, creating a long-term source of low level exposure inside the body. Children exposed to lead can experience headaches, abdominal pain, constipation, hearing problems, delayed growth, decreased IQ, behavioral and learning problems, and damage to the brain and nervous system. At high levels, it can be fatal. Adult exposure can lead to reproductive problems, muscle and joint pain, decreased reaction time, memory loss, kidney problems, and nerve disorders. The people most at risk to exposures are pregnant women, breast feeding mothers, and children under the age of six.

Lead Is Especially Harmful to Children

Young children are at a greater risk of lead poisoning for several reasons. First, they often put their hands and other objects in their mouths – these objects may have lead dust on them. If they live or go to school in a place

with high levels of lead, in the paint or dust, their bodies can easily absorb the lead. Lead-based paint can have a sweet taste, making children more likely to eat it.

A child's body reacts differently to lead, as compared to an adult's body. Lead substitutes for calcium; young bodies need calcium, so children can absorb 50% of the lead they ingest, while adults only absorb about 10%. Children can also absorb more lead through their stomach than adults, especially if they are deficient in iron, an important nutrient. Finally, because children's brains and nervous systems are still developing, they are more sensitive to the neurotoxic effects of lead than adults.

Reducing Exposure to Lead

Symptoms of lead poisoning can be easily overlooked, so prevention and testing are necessary.

- Reduce childhood lead exposure.
 - ◇ *Frequently wash hands, especially after coming inside, and before eating. Remove shoes when coming inside. Vacuum often. Clean floors, window frames, and window sills weekly. Use a mop, sponge or paper towel with warm water and a general all-purpose cleaner.*
- Some American children have high blood lead levels.
 - ◇ *Exposure is measured by assessing one's blood lead level. Refer families who reside near major road ways, in homes with lead based paint, or homes with old piping systems (pre 1986) to their physician for lead testing.*
- Children are exposed to lead by eating old paint chips (before 1978) or ingesting old paint particles and dust.
 - ◇ *Projects that disturb lead-based paint can create dust and endanger you and your family. If you are*

planning to paint, renovate or remodel a child care facility built before 1978, make sure the contractor you hire is from a 'Lead-Safe Certified Firm.' Be sure the professional follows the work safe practices as outlined in EPA's brochure, "The Lead-Safe Certified Guide to Renovate Right." Visit www.epa.gov/lead/lead-safe-certified-guide-renovate-right

- Lead can get into drinking water by leaching from plumbing materials and fixtures.
 - ◊ Cold water is less likely to leach lead from pipes. Use only cold water for drinking, cooking, and making baby formula. If water has been sitting in pipes for 6 hours or more, flush cooking and drinking outlets before using the water.
 - ◊ To find out more about protecting children from lead in tap water and if you should test your tap water for lead, visit EHCC's Lead in Tap Water FAQ at: www.cehn.org/ehcc/toxFAQs.
- Imported, old, or handmade pottery may contain lead.
 - ◊ Avoid these types of pottery when eating, drinking, and cooking.
- Soil is often contaminated with lead, especially the soil around old homes (built before 1977) and alongside major roadways.
 - ◊ Use a rough mat for wiping feet or go shoe-free inside where allowable. Frequently damp mop.
- Many children's painted toys and vinyl products (rubber duckies, rain coats, and nap mats) contain high levels of lead. See EHCC's *Plastics & Plastic*

Toys fact sheet.

- ◊ Avoid imported painted toys (especially those with bright red and yellow paint) and children's vinyl products. Subscribe to the CPSC recall listserve for contaminated toy recalls, see resources below.
- Some non-traditional medicines (folk remedies) can contain dangerously high levels of lead.
 - ◊ Use caution when considering use of non-traditional remedies. Avoid use of Azarcon.
- Costume jewelry and jewelry sold in vending machines may contain lead.
 - ◊ Keep metal jewelry away from children.
- Imported candies, such as tamarind candy, can contain high levels of lead.
 - ◊ Keep imported candy away from children.
- Some artificial turf/grass contains lead.
 - ◊ Use caution when purchasing artificial turf/grass. Ensure children wash hands and remove their shoes before coming inside - after playing on artificial turf/grass that may contain lead.
- Hands and toys can become contaminated with lead from household dust and exterior soil.
 - ◊ Regularly wash children's hands, toys, and pacifiers.
- Reduce lead absorption by eating well.
 - ◊ Eat a balanced diet high in calcium (kale, collard greens, milk, cheese, yogurt) and iron (e.g. lean red meat, chicken, spinach, broccoli).

Lead Resources

- Environmental Protection Agency:
<http://www2.epa.gov/lead>
<http://water.epa.gov/drink/info/index.cfm>
<http://water.epa.gov/infrastructure/drinkingwater/schools/guidance.cfm#sdwa>
- Consumer Product Safety Commission (CPSC)
www.cpsc.gov
- Lead Hotline—The National Lead Information Center
 1-800-424-LEAD (5323)
- Eco-Healthy FAQs on Lead in Tap Water:
www.cehn.org/ehcc/toxFAQs

FOR MORE INFORMATION

Call: 202-543-4033, ext. 13
Email: ehcc@cehn.org
Visit: www.cehn.org/ehcc

Eco-Healthy Child Care® (EHCC) is a science-based, award-winning national program that seeks to improve the environmental health of children by partnering with child care professionals to eliminate or reduce environmental health hazards found in child care facilities.

Eco-Healthy Child Care®

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