

TOXIC TOYS 2010: IS CADMIUM THIS YEAR'S WORST TOY-TAINTER?¹

Emily Main[©]

It started this spring with jewelry from teen-targeted accessory shops. Necklaces, bracelets, and other trinkets were recalled because they were contaminated with the heavy metal cadmium. A few months later, an Associated Press (AP) investigation revealed high levels of cadmium in the paint used on Shrek drinking glasses sold at McDonald's. Then, late last month, another AP drinking-glass investigation uncovered dangerous levels of cadmium on glasses manufactured by Coca Cola. So is this a significant toy-safety threat like lead or phthalates, or exaggerated fodder for parental anxiety?

A little bit of both, says Jeff Gearhart, research director of the Ecology Center, which tests toys for toxic metals and chemicals and publishes their results at HealthyToys.org. "We don't have evidence that the cadmium problem is as widespread as the lead problem was...yet," he says. "But we do see enough evidence that it's showing up that it warrants attention." In their most recent tests, conducted in November, the center detected cadmium in 48 percent of the toys tested.

THE DETAILS: Cadmium is a heavy metal that has many of the same physical properties as lead, Gearhart says. And that makes it attractive as a potential replacement for lead, which the CPSC has put strict limits on. "I don't have any direct evidence of that substitution happening," Gearhart is quick to point out, "but from a physical- and chemical-property standpoint, you could do it." And because it's a cheap by-product from mining other metals, such as zinc and copper, he adds, unscrupulous manufacturers view it as an attractive lead alternative.

Like lead, cadmium increases the strength of metal alloys used in kid's jewelry, and it's used to create the red, orange, and yellow pigments that wind up decorating drinking glasses and in toy paints (it's also used in a variety of industrial applications, including nickel-cadmium batteries and agricultural fertilizers). And, as there is for lead, there's a pretty comprehensive body of research pointing to how bad cadmium is for people, says Carolyn Cox, research director at the Berkeley, California-based Center for Environmental Health. In addition to the fact that it can cause kidney problems and bone loss, research has suggested that it can contribute to kidney and prostate cancers. "Some people actually call it a 'metallohormone' because of the way it impacts the hormone system in your body," Cox says. Similar to the ways that bisphenol A, phthalates, and other hormone-disrupting chemicals interfere with estrogen and testosterone, cadmium has been found to attach to hormone receptor cells and affect the reproductive systems of men and women, Cox says, adding that, once we're exposed, the metal can stay in our bodies for more than 20 years. That's a hefty price to pay for the joy of drinking out of a glass decked out with your favorite cartoon character.

Gearhart says that the Ecology Center's tests simply detect the presence of cadmium, not how much a child might be exposed to if he or she handles a cadmium-painted backpack or chews on a piece of cadmium-filled jewelry. "But we know that cadmium used in these ways can be released from these materials," he says.

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WHAT IT MEANS: The good news is that there is some movement at the regulatory level to institute limits on cadmium, as there are for lead. The Consumer Product Safety Commission (CPSC) recently adopted industry-developed standards that would limit the amount of cadmium that migrates out of products to 75 parts per million (ppm). However, the standard doesn't limit how much cadmium can be used in the product, essentially giving manufacturers free reign to use cadmium so long as it doesn't migrate out. The AP found in one of its tests that a bracelet sold in Claire's accessories chain stores contained 910,000 ppm of cadmium; basically, 91 percent of the product was made from cadmium. Finding the CPSC's standards lacking, some states, including Washington, California, Connecticut, Minnesota, and Illinois, have instituted stricter limits on total cadmium allowed in toys (not just the cadmium that leaches out).

But these laws don't really get to the heart of the problem. "Why is there cadmium in these products at all?" asks Tracey Easthope, MPH, director of the Ecology Center's environmental health program. It's not necessary, and there are alternative ways to make toys without it. Adding to the issue, she points out that the Ecology Center's tests are still turning up other hazardous chemicals, including flame retardants and other harmful heavy metals, that the CPSC hasn't addressed at all. "It's like playing whack-a-mole," she says. "We keep going from one chemical to the next chemical to the next chemical because there's no safety standard that chemicals need to meet prior to getting on the market. That's the broader problem here." Easthope and Gearhart are working to get reform passed on the sorely outdated Toxic Substances Control Act, which, theoretically, is supposed to keep chemicals like cadmium off the market. But that could take years.

There aren't any easy, at-home cadmium test strips like there are for lead, so here are some Rodale.com picks for toy companies that are making healthy, green toys that won't pose heavy-metal risks to the kids on your holiday shopping list:

- **Dr. Toy's Green Products Awards, 2010.** Not so much a toy company but a rating system, "Dr. Toy" finds companies that use organic materials or use healthier manufacturing processes that keep heavy metals out of the supply chain. It's the best place to start: www.drtoy.com.
- **Hazelnut Kids.** An online retailer that sells wood and organic-cotton toys as well as safer art supplies made from soy and beeswax: www.hazelnutkids.com
- **Imagination Box Co.** Great for the budding artist. The company sells recycled-cardboard playhouses (barns, castles, cottages, and the like) that kids can paint and decorate themselves: www.imaginationboxco.com.
- **Maple Landmark.** A Vermont-based company that makes everything from wooden toy trains for kids to wooden chess sets and household décor items for adults. The company uses responsibly harvested Vermont wood as well as natural dyes and finishes: www.maplelandmark.com.
- **Clementine Art.** One of our favorite art suppliers, Clementine makes kid-friendly art supplies, paints, and modeling clays from plant-based ingredients, designed to foster creativity without polluting your home or your child: www.clementineart.com
- **Lucy Hammett Games.** Creative "art bingo" games that feature educational images of bugs, birds, animals, and various geographic locales: www.lucybingogames.com.