

TOXIC TOY STORY

Ever wonder what your child's toys are made of? Chances are, if the toys aren't wood or metal, they're some kind of plastic. But what kind? Unlike most food containers or packaging, toys generally aren't marked with the triangle of "chasing arrows" and a "1," "2," or "4" in the middle that indicates the type of plastic used in its manufacture.

As a curious environmental activist and concerned parent of two, I decided to do some checking. I started with one of my girlhood icons, BarbieTM. Over a year ago, McDonald's restaurants were giving away miniature Barbies with their Happy Meals. A friend of mine was collecting them for her niece. I scanned Barbie's body for some sort of resin code (the ones that appear in the "chasing arrows" triangle) and found none. I called McDonald's to see what McBarbie (not her real name) was made of. They seemed perplexed that I should ask this question-why did I want to know? So I said my son had pulled off Barbie's leg and I wanted to know if she was recyclable. They assured me that yes, she was, but they didn't know what she was made of. So I called Mattel, the company that manufactures Barbie. Customer service representatives said that all Barbies are made of a plastic called polyvinyl chloride, or PVC.

Hearing this concerned me a great deal, and I began looking at my son Alex's plastic toys. Most of them were not labeled either, and the ones that were tended to be "2s" (high density polyethylene) or "5s" (polypropylene).

What's Wrong with PVC?

I'm concerned about PVC in my sons' toys for a couple of reasons: its potential for affecting their health, and its potential for harming the environment.

My son Bennett is almost 18 months old, and is working on his last four teeth. Everything goes into his mouth and is chewed with abandon. From my research, the risks to him come primarily from plasticizers called "phthalates" that are used to make the flexible PVC items like teethers. There are several phthalates that may be used in PVC, but the most common are di-ethylhexyl-phthalate (DEHP), di-isodecyl phthalate (DIDP), and di-isononyl-phthalate (DINP). Phthalates are not chemically bound to the PVC. Instead, they sit side by side with the polymer. This means that the phthalates can leach out of the PVC and into the surrounding environment-which may include my son's mouth. The Danish Department of Environmental Chemistry recently studied teething rings sold in Denmark and reported that "significant migration of certain phthalates was found...."

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A large variety of health effects in wildlife and humans have been associated with phthalates. One of the most frightening, I think, is the possibility that phthalates may be chemicals that behave similarly to hormones in our bodies. Eight phthalates have been shown to be weakly estrogenic, which means they can cause responses in the body similar to those elicited by estrogen. As you probably know, estrogen is a hormone involved in reproduction and sexual development. Both men and women produce estrogen to regulate those important functions, but I don't want my son exposed to anything that might upset his body's own delicate balance.

Other effects of phthalates:

- DEHP has been shown to cause liver cancer in rats and is considered a potential human carcinogen.
- Rats exposed to dehp over long periods exhibited kidney damage similar to that seen in humans undergoing long-term kidney dialysis.
- High doses of DEHP and di-n-butyl-phthalate (DBP) have also been shown to affect reproduction and sperm production in rats.
- In the human body, dehp is converted to mono-2-ethylhexyl-phthalate (MEHP). MEHP has been found to cause cardiac and respiratory arrest in rats.

It must be noted that other than DEHP, many of the phthalates have not been well-evaluated for their possible health effects to humans. In my opinion, this means that my children are serving as guinea pigs. I would have hoped that our actions on thalidomide and diethylstilbestrol (DES) would have taught us to heed the warning sirens sounded by effects on animals.

The Consumer Product Safety Commission's (CPSC) Chronic Hazard Panel has met several times to discuss DEHP, but to date, the only action has been a voluntary reduction by domestic toy makers in its use for children's toys; the CPSC has not taken action on other phthalates or called for more studies on other phthalates, despite mounting evidence about their possible hormone-disrupting properties and other health effects. Personally, I would prefer that if toys must be made of plastic for some reason, a resin which does not require plasticizers should be used.

Alex, who is six, doesn't put his toys in his mouth much anymore. Ben, however, who doesn't yet understand the "laws" of toy ownership, does not discriminate between his own toys and Alex's. Were I to let him, Ben would just as soon chew on the PVC-stuffed Beanie Baby Alex got for his sixth birthday as his own polyester-filled terrycloth cow. That Beanie Baby, as well as other plastic toys in my house, has posed health as well as environmental dilemmas for me. Here's why:

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