

Yellow's Green Corner: Environmental News

Ban on Phthalates



In a victory, long overdue, Congressional negotiators finally agreed July, 2008, to a ban on a family of toxins found in children's products, handing a major victory to parents and health experts who have been clamoring for the government to remove harmful

chemicals from toys.

The ban, which would take effect in six months, would have significant implications for U.S. consumers, whose homes are filled with hundreds of plastic products designed for children that may be causing dangerous health effects.

The rare action by Congress reflects a growing body of scientific research showing that children ingest the toxins by acts as simple as chewing on a rubber duck. Used for decades in plastic production, the chemicals appear to act as hormones and potentially cause reproductive problems, especially in boys.

It also signals an important crack in the chemical industry's ability to fend off federal regulation and suggests that the landscape may be shifting to favor consumers. The movement to ban the toxins accelerated last year when California prohibited their use in children's products.

The European Union banned six phthalates from children's products in 1999 and more than a dozen other countries have done the same.

California's ban has been followed by legislation in Washington State and Vermont.

What are Phthalates?

Phthalates are a common industrial chemical used in PVC plastics, solvents, and synthetic fragrances. They've been around since the 1930's. They are used in a multitude of products in diverse industries. Today, approximately one billion pounds a year are produced worldwide. U.S. companies manufacture \$1.4 billion worth of phthalates annually.

Most phthalates are used to make vinyl soft and flexible. They are widely used to make children's toys. For more than fifty years, they have been a key ingredient in fragrances and in nail polish. One kind of phthalate fixes the fragrance in perfumes and other products to make it last longer. Another type is used in nail polish (as well as in tool handles and outdoor signs) to help prevent chipping and breaking.

Uses of phthalates include softeners of plastics, oily substances in perfumes, additives to hairsprays, lubricants and wood finishers. That new car smell, which becomes especially pungent after the car has been sitting in the sun for a few hours, is partly the pungent odor of phthalates volatilizing from a hot plastic dashboard of the windshield, or the smell in the new shower curtain.

Health experts argue that dangers may be more significant from cumulative exposure, because phthalates surround babies not only in toys and products but also in breast milk if the mother has been exposed to the chemicals. When they tested 289 people in 2000, the CDC found phthalates in all of the subjects' blood at surprisingly high levels.



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Phthalates are classified as endocrine disruptors and are linked to problems of the reproductive system, including decreased sperm motility and concentration in men and genital abnormalities in baby boys.

Research Summary

The American Academy of Pediatrics entered the debate in June 2003, issuing a report in Pediatrics that recommended more research was needed on phthalates for assessing potentially harmful effects on the fetus and infants.

Federally funded research by the Center for Reproductive Epidemiology at the University of Rochester Medical School found that male babies born to women with high levels of phthalates in their blood exhibited changes related to low sperm count, undescended testicles, and other reproductive problems. In that study, the infants were exposed to phthalate levels way below the doses administered in rat experiments. Other studies have connected some phthalates to liver and kidney cancer.

In May 2005, for the first time, researchers identified an association between pregnant women's exposure to phthalates and adverse effects on genital development in their male children. The pattern of genital changes seen in these baby boys is consistent with the "phthalate syndrome" previously observed in rodents prenatally exposed to phthalates. It is also suggestive of "testicular dysgenesis syndrome," a human health condition proposed to be linked to exposure to endocrine-disrupting compounds. The adverse effects are seen at phthalate levels below those found in one-quarter of women in the United States, based on a nation-wide survey by the Centers for Disease Control.

A major study by researchers at the University of Washington and Seattle Children's Hospital Research Institute found that babies recently treated with infant personal care products such as lotion, shampoo and powder were more likely to have man-made chemicals called phthalates in their urine than other babies. This is cause for concern because phthalate exposure in early childhood has been associated with altered hormone concentrations in adults as well as increased allergies and eczema.

Animal-based studies of phthalates have found that the synthetic chemicals can harm reproductive system development, and studies in humans have found that prenatal exposure or exposure through breast milk can alter hormone concentrations.

The study's lead author, Sheela Sathyanarayana, an acting assistant professor of pediatrics, said, "We found that infant exposure to phthalates is widespread, and that exposure to personal care products applied onto the skin may be an important source." Babies may be more at risk because their reproductive, endocrine and immune systems are still developing.

Phthalates are added to a number of common consumer products. They are primarily used to soften plastics. But they are also commonly found in cosmetics and scented products such as perfumes, soaps, lotions and shampoos; even when products are labeled as natural skincare products.

"Phthalate Free" Products

Phthalates are typically not listed on labels because the chemicals are hiding in the "fragrance" and companies are not required to list fragrance ingredients on labels. Even natural skincare



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products labeled “fragrance free” can have masking fragrances that contain phthalates.

Consumers concern over phthalates has caused many natural skincare companies to eliminate them from their product lines. Seeking out products advertised as “phthalate free” is one way to avoid these potential toxic chemicals. Other Plastic by products including Bisphenol A and DEHP appear to pose a health risk.

Advocates for a healthy environment recommend the following:

Product Bans

The federal government should ban the use of BPA and DEHP in all plastic products specifically intended for use and contact by children below the age of three.

Labeling: The federal government should mandate that all plastic products be labeled to indicate their chemical ingredients and country of origin. This would require a new coding system that would permit the consumer to easily associate ingredients with codes. This coding system should be different from the current numerical recycling code.

Warnings: The federal government should warn pregnant women, and women intending to become pregnant, to avoid consuming food or beverages from containers made from BPA or DEHP.

Fragrances: The federal government should require labeling to disclose the phthalate ingredients in fragrances, air fresheners, scented candles, dryer sheets, and other consumer products that are commonly found in children’s environments. Reference Dose (RfD) Periodic

Review: The EPA and FDA should review their acceptable exposure limits (RfDs) for DEHP and BPA ingredients in plastics at least every five years. RfDs for both BPA and DEHP are more than 15 years old, yet relatively recent peer-reviewed scientific reports show that low-dose exposures are becoming increasingly important. When establishing acceptable exposure limits for packaging ingredients in foods, the FDA should continue to employ a 1,000-fold uncertainty factor to judge acceptable human exposure.

Certification: The federal government should develop and require a Plastics Certification System modeled after the Food Production Act of 1990 that establishes an accurate labeling system that identifies plastics free from BPA, DEHP, lead and other potentially hazardous compounds.

Biomonitoring: The U.S. Centers for Disease Control and Prevention should expand its human tissue-sampling program (NHANES) to test for plastic ingredients in human tissues every two years within individual states.

Sign the Petition for Banning BPA on homepage: www.earthrose.org

For more information
www.safecosmetics.org
www.ewg.org