



No One Minding the Store

Wrinkle-free clothes, stain-resistant carpet, life-saving medical devices, bountiful plastic toys – there's no doubt synthetic chemicals have brought a wealth of convenience, comfort and fun to our lives. But what about the hidden impacts? With no government agency watching the store, these modern comforts and conveniences have come at a high price to our health.

Governments around the world recognize the dangers of these products, and many other countries have taken decisive action to protect their consumers. Regulations in the U.S., however, are either lax or non-existent.

“The United States is becoming a “dumping ground” for consumer goods that are unwanted and illegal in much of the world.”

— Michael Wilson, professor at UC Berkeley's Center for Occupational and Environmental Health.¹

Chemicals allowed in US products, but not in other countries include:

- **Toxic toys:** Phthalates banned from toys in Europe are perfectly legal in the U.S.²
- **Coal tar, lead acetate, and phthalates** banned from cosmetics in the European Union are allowed in cosmetics sold in the U.S.³
- **Cancer-causing formaldehyde** is restricted in products in Europe, Japan, and China – but allowed in U.S. products.⁴
- **Electronic items**, including Palm's Treo 650 smart phone and Apple's iSight camera, were pulled off shelves in Europe in the summer of 2006 because of lead containing components, yet they are still allowed to be sold in the U.S.⁵
- **Toxic herbicides** used in the billions of pounds in the U.S. – such as atrazine, endosulfan and aldicarb – are banned or severely restricted in other countries.⁶



CANCER CAUSING KITCHEN CABINETS?

Sold Here but Banned in Europe, China and Japan.

Formaldehyde can waft off the glues in plywood and particleboard made with formaldehyde-containing adhesives. Formaldehyde exposure has been shown in human studies to cause nose and throat cancer and possibly leukemia, as well as allergic reactions, asthma attacks, headaches and sore throats.

For this reason, China, Europe and Japan have stringent regulations on formaldehyde emissions from wood products sold in their countries. However, the manufacture and sale of formaldehyde-emitting products continues without regulation in the U.S. Therefore, some companies in foreign countries manufacture products with formaldehyde to sell in the U.S. that could not be sold in these countries' local stores. For example, testing



of one birch plank made in China, bought at a Home Depot store in Portland, Oregon, showed it gave off 100 times more formaldehyde than is legal in Japan and 30 times more than allowed in Europe and China.⁷

Without protective regulations in the U. S., particleboard that emits formaldehyde is often used to make cabinets and furniture, despite the fact that low-cost safer alternatives are available. The Massachusetts Toxic Use Reduction Institute identified a number of alternatives to formaldehyde-resin-based plywood in an alternative assessment, one of which (Columbia Forest PureBond veneer plywood) is made using a soy-based resin.⁸

California has now stepped in to protect its residents.⁹ In April of 2007, the California Air Resources Board unanimously passed a strict control on toxic formaldehyde in wood products widely used in kitchen cabinets, countertops and other construction.

The Air Board estimates that one out of every 10,000 Californians is at risk of contracting cancer from breathing average formaldehyde levels found in homes and offices.

"There is no safe threshold for this carcinogen, and we know how to eliminate it," said Harry Demorest, president and chief executive of Columbia Forest Products, an Oregon-based manufacturer that began taking formaldehyde out of its plywood in 2002.¹⁰



► Lunch Boxes with Lead Sold to Toddlers

Not So Super – This vinyl lunchbox and many others on the market were found to contain lead at levels up to 90 times higher than the 600 parts per million legal limit according to the Center for Environmental Health (CEH).¹¹

"Lead exposure should not be on the lunch menu when kids' go back to school this fall," said Michael Green, CEH Executive Director. "There is no reason to expose children to any lead from lunch boxes."¹²

► Ingredients that Mimic Hormones

Even countries with stronger safeguards against toxic products have lagged behind scientific discovery in one crucial area: the health effects of chemicals that

“The wrong amount of hormone, or hormone-like chemical, at the wrong time can have a disastrous impact on a developing fetus or child. The last 10 years of research has provided extensive evidence that this is true for bisphenol A.”

— John Peterson Myers, Ph.D.¹³

that mimic hormones. These chemicals, called

endocrine disruptors, have molecules that are perfectly shaped to form keys that open the hormonal locks that control the proper development and function of our bodies. Hormones are present at very low levels in our bodies, so exposure to extremely small amounts

of these chemicals can have dangerous effects.

Studies show that these hormone-disrupting chemicals are widespread in consumer products and have the potential to wreak havoc in the development of fetuses and children.

Bisphenol A, (BPA) is one of the largest volume materials used in the manufacture of plastics in the world today. BPA is found in polycarbonate plastics used in thousands of consumer products, including baby bottles, drinking water containers, metal food and beverage can liners and dental sealants. Because BPA is used in so many consumer products, it is found widely throughout the environment and in humans' bodies.

Dr. Ana Soto, a professor of cell biology at Tufts University School of Medicine in Boston, has discovered that exposure to BPA in the womb causes long-term effects on breast tissue development in mice, which **can lead to the development of cancer**, and also increases sensitivity to a chemical known to cause breast cancer.¹⁴

Dr. Soto points out that other studies have also found that BPA can lead to problems of the reproductive tract in both male and female rodents. These doses are “within the human exposure range,” she adds. “There is plenty of evidence now that low-dose levels lead to problems.”¹⁵

Another study suggests that exposure to BPA may contribute to prostate cancer; exposure to BPA early

in the life of male rats caused both genetic changes and prostate abnormalities later in life.¹⁶ The scientists found that as the exposed rats aged, they were more likely than unexposed animals to develop a type of cancerous lesion in the prostate which is generally accepted to be an early stage of prostate cancer in men.¹⁷ One in every six men develops prostate cancer, a rate that has increased over the last 30 years.¹⁸



Phthalates – used to soften vinyl plastic, and to hold scent and color in personal care products – are another widespread class of suspected hormone mimics.

“Exposure to phthalates comes from direct contact with products that contain them, such as vinyl flooring, detergents, automotive plastics, soap, shampoo, deodorants, fragrances, hair spray, nail polish, plastic bags, food packaging, garden hoses, inflatable toys, blood-storage bags and intravenous medical tubing,” according to the Centers for Disease Control and Prevention.¹⁹ A study released by the Centers for Disease Control (CDC) in 2005 confirmed that humans have measurable levels of certain phthalates in our bodies.²⁰

Recently, the National Toxicology Program (NTP) concluded that exposure to DEHP, a specific phthalate, **could cause harm to the developing reproductive system in humans**. Because many medical devices contain DEHP, critically ill male newborns and infants who receive prolonged medical treatment are especially at risk.²¹

The NTP and Food and Drug Administration have issued warnings about the dangers of DEHP in medical devices. However, these government agencies are looking *only* at DEHP exposures from medical devices – a sick baby exposed to DEHP in medical devices may also be exposed to the same toxic chemical from

plastic toys, car seats, shampoo, his mother's perfume and her breastmilk.

► New Consumer Protections Essential

The good news is that safer alternatives to many of these toxic products are already on the market, often at no greater cost to consumers. However, without new consumer product protections, the public

has no way to identify the safe products and companies have no incentives to switch to the safest alternatives. ■

To ensure safe products on our store shelves, and in our homes, we must pass new laws based on the latest science and designed to protect our health, and the healthy development of our children.

Endnotes

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Safe Products Made Safely

The Scientific, Economic and Common Sense Arguments for Passing the Safer Alternatives Bill

This is number five in a series of ten fact sheets.

To request copies of the other fact sheets or for more information, contact the Alliance for a Health Tomorrow, 617 338-8131, info@healthytomorrow.org.

