Chemicals and Toxins in Consumer Goods Cause for Concern?

By Jeffrey A. Hank

Fast Facts

At least 42 billion pounds of chemicals are being produced or imported daily in the United States.

Up to 35 percent of children's toys are contaminated with unsafe levels of lead.

As controversy continues to surround Bisphenol-A (BPA), the Michigan legislature has proposed HB 4522 to remove BPA from certain products.

Lawmakers and consumers must take action now to control the proliferation of toxic chemicals in our environment affecting our health. This article proposes several actions each group can undertake to prevent possible health risks and protect the safety of our consumer goods.

Americans are bombarded with environmental exposure to chemicals from the time they are in utero until after death, with up to 42 billion pounds of chemicals being produced or imported daily in the United States.[1] According to the annual report of the 2009 President's Cancer Panel, which focused on the link between environmental exposure to chemicals and health risks, there are more than 80,000 synthetic chemicals used in the U.S. Some of the chemicals potentially hazardous to human health—bisphenol-A (BPA), benzene, formaldehyde, and dioxin—have been in the public spotlight recently, but the vast majority are unknown to most consumers. Some of these chemicals are carcinogenic, and with approximately 1.5 million Americans diagnosed with cancer every year and roughly 562,000 Americans dying from various forms of cancer in 2009 alone, it is imperative that consumers are educated to the potential risks of these substances so they

Continued on next page

are empowered to act preventively for the sake of human health. These chemicals are largely unregulated and understudied, with only a few hundred being adequately tested for safety.[2]

It seems as if not a week goes by when there is some announcement from private industry or the government warning of potential consumer exposure to toxins. In the past couple of years, the media has reported widely on consumer exposure to toxins. Examples abound, but a few popular examples show how widespread and serious the problem is. In 2007, Mattel recalled millions of children's toys, including Sesame Street characters and Fisher-Price toys, because they contained unsafe levels of lead paint. To Mattel's credit, the company acted swiftly, and luckily there were no reported injuries. Other toys, such as Thomas & Friends railway toys, were also recalled because of lead paint hazards. In both instances, the toys were produced in China and made it into the stream of commerce in the U.S., where their available lead paint content was above the current regulatory level of 0.06 percent, or 600 parts per million.[3] According to the Ecology Center, a Michigan-based nonprofit, and others, up to 35 percent of children's toys are contaminated with unsafe levels of lead.[4]

More recently, BPA has been in the news. BPA is a chemical used to manufacture polycarbonate plastics. It is often found in plastic food and beverage containers, water bottles, baby bottles, canned food, beverages such as beer and soda, and even in some dental fillings. Its use has been controversial for years, and at the time of drafting this article, the National Resource Defense Council had recently sued the Food and Drug Administration for not taking precautionary action against the use of BPA.[5] One Centers for Disease Control study reportedly found that more than 90 percent of Americans tested positive for BPA in their blood, and babies were found to have detectable levels at birth from exposure to the chemical from their mothers.[6] BPA can act like the female hormone estrogen in humans, and in animal studies early exposure to BPA is linked to prostate cancer, breast cancer, changes in metabolism, chromosome abnormalities, and changes in brain development and behavior.

Reports indicate that commonly sold women's cosmetics contain upwards of 20,000 different chemicals and that women who use cosmetics, lotions, and perfumes may expose themselves to up to 515 different chemicals daily.[7] Some cosmetics contain dangerous carcinogens such as formaldehyde, which is more commonly known as a preservative in embalming the deceased.

Sources of Toxins in Consumer Goods

Chemicals and toxins are used in every sector of life—medicine, agriculture, industry, even the military. According to the Federation of American Scientists, the U.S. military is one of the largest (if not the largest) polluters of toxic chemicals in the world and often requests and is granted by Congress exemptions from environmental and health-related regulations.[8] Agriculture is also a large source of the contaminants that enter the human population through the food supply. While many of these chemicals potentially pose general environmental risks, consumers are increasingly becoming aware that exposure to these chemicals occurs in their daily lives through the goods they use and the foods they eat. Consumers are exposed to dozens of pesticides in fruits and vegetables that can bio-accumulate; celery, peaches, apples, and strawberries are among the most likely sources of pesticides. One report states that non-organic celery may contain up to 67 different pesticides per serving[9] even after the food is power-washed. Some studies link pesticide exposure to the development of attention deficit hyperactivity disorder, cancer, nervous system damage, and general weakening of the immune system.[10]

Of particular concern is the fact that children are more susceptible to harm from environmental exposure to toxins than adults.[11] For this reason, Canada largely banned BPA in consumer goods in 2008 based on a review of 150 worldwide studies.[12] Minnesota has banned BPA in certain consumer goods, and similar bills are being debated in the New York and California legislatures as of the time of drafting this article. Michigan also has a proposed bill, HB 4522, which would remove BPA from certain products.[13] There is also evidence that reproductive health can be harmed by various chemicals, including dioxin, which reportedly lowers sperm counts and causes other adverse health effects.[14] In Michigan alone, various companies produce thousands of unregulated chemicals, and dioxin has contaminated parts of the Tittabawassee watershed.[15] Several other common consumer product ingredients such as parabens and phthalates have been identified as potential endocrine disruptors; they can interfere with the development of the reproductive tracts in children and act like hormones or hormone blockers. Many of these chemicals, such as

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dioxin, will remain in the environment for hundreds (if not thousands) of years. This is why we need to act now, as the substances we are using could destroy and inhibit life for generations to come. These substances enter our consumer goods in a multitude of ways, and only a complete evaluation of all consumer goods and the sources of their original parts can ensure our safety.

Reform Needed

Lawmakers and consumers can do several things to improve the regulation of toxic substances. From a legal perspective, first we need to reorient our regulation from a reactionary to a precautionary posture. This would include Congress reforming the Toxic Substances Control Act to include a proof-of-safety test provision at a minimum. Regulation should be simple, clear, and without ambiguity or exception. An example of this would be the experimental chemicals used by Beyond Petroleum (formerly known as British Petroleum) in the recent Gulf of Mexico oil disaster. The EPA and other agencies have not tested these chemicals, and they may very well be hazardous to life. Second, we need coordination, reformation, and perhaps consolidation of the various agencies that regulate and study these issues, such as the Food and Drug Administration, Department of Health and Human Services, Centers for Disease Control, U.S. Department of Agriculture (USDA), National Institutes of Health, and others. Third, we need increased funding for the study of these substances. Part of this reform would be creating more uniform standards and metrics for safety studies and regulation. Fourth, we need better systems of consumer labeling for chemicals, which should be standardized and easy to understand and required on packaging for all primary-market consumer goods. Fifth, we need to coordinate efforts with other nations through the United Nations and the World Health Organization for worldwide regulation, study, and labeling of chemicals and consumer goods. In a global marketplace, Americans need to know what chemicals a Chinese supplier and a Guatemalan manufacturer are using, for example. Common international labeling standards could go a long way toward protecting and informing consumers around the globe.

Closer to home, the Michigan legislature needs to do several things. First, improving labeling requirements when preemption by federal agencies is not applicable could go a long way toward informing and empowering consumers. In particular, labeling laws need to be updated to include informing consumers of the presence of BPA, phthalates, genetically modified organisms, hormones, parabens, and other understudied or potentially dangerous substances. The Michigan legislature should immediately move to approve HB 4522, which criminalizes the use of BPA in certain consumer products and, in current legislative form, is a simple, clear law that, according to the House Fiscal Agency, would have little or no substantive regulatory cost for government.[16]

The current standards for labeling organic food are a bit misleading and confusing. Under federal law, the USDA classifies products as "100 percent organic" if they contain only organically produced ingredients and processing aids (excluding water and salt), while "organic" means that at least 95 percent of ingredients are organically produced (excluding water and salt) and any remaining ingredients must consist of nonagricultural substances approved on the national list, including specific non-organically produced agricultural products that are not commercially available in organic form.[17] Products with at least 70 percent organic ingredients can use the phrase "made with organic ingredients" and list certain ingredients as organic. There are other consumer product manufacturing methods governed by the standards, but with the "organic" and "green" markets just beginning to blossom in the mainstream, the system is still evolving. Currently, no regulations at the federal level cover the use of terms such as "sustainably harvested," "free range," or "no drugs or growth hormones used." Without such terms defined, consumers are left unprotected and without common standards to evaluate certain everyday products. Michigan legislators should create simple, clear labeling laws for all consumer goods, but for edible goods in particular.

Michigan also needs to improve the Michigan Consumer Protection Act (MCPA)[18] to provide and secure for the people rights of action against the polluters who poison our consumer goods, our lands, our air, and perhaps our most precious resource, our water. Since the Michigan Supreme Court has limited the right of the people to hold many violators of the MCPA accountable, the legislature must specifically overturn precedents that weaken these protections in our state when possible.[19] The seriousness of the need for better consumer protection in Michigan and improvement of the MCPA in particular is beyond the scope of this article, but it is absolutely crucial to empowering people to protect the health and safety of consumer goods. Pro-consumer reform of the act is a main goal of the SBM Consumer Law Section. The state should also improve water quality standards and reform environmental contamination laws. The state needs to hire more scientists and regulators to police the safety of consumer goods. Despite the calls for less government in lean economic times, providing for the safety and welfare of citizens is the very core function of government. Keeping our daily products free of dangerous substances is absolutely within the police power of the state and in the best interests of the people.

Hope for the Future

Michigan has taken positive steps with the enactment of the Michigan Green Chemistry Directive of 2006, which will hopefully spur industrial advances of safer chemicals.[20] The program should be expanded by the state legislature, and state educators should begin incorporating health and environmental studies into the chemistry curriculum. The *Los Angeles Times* reported in 2008 that most universities do not combine any education in toxicology or related sciences with the chemistry curriculum and, as a result, there is currently a holistic disconnection between chemistry and consumer protection.[21] Training the next generation of minds to seize the opportunities of so-called "green" chemistry could substantially improve the safety of consumer goods in the near future.

As consumers, we can educate ourselves and others about common toxins. Consumers can be the catalyst to improve product safety simply by voicing concerns or by market purchasing power. We can demand that our local stores provide information regarding the source and content of consumer products. We can demand that product manufacturers disclose what ingredients are in consumer goods. We can avoid using certain plastics and other products and choose to consume organic products less likely to contain contaminants. We have access to good Internet resources such as the Household Products Database.[22] Parents can research toy safety online at www.HealthyStuff.org, run by the Ecology Center.[23] We need to contact our legislators and make sure they are informed of the most up-to-date information to protect consumers. Ultimately, the people make up the marketplace, and with our economic choices, we have the power to shape the future by becoming educated and not purchasing products that could be potentially dangerous to our well-being. One day, we hopefully will rid our environment of such dangerous substances and be more happy and healthy as a result. ■

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FOOTNOTES

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