



Outdated Regulatory System Fails to Protect

Most Americans incorrectly assume that chemicals in use today – and the everyday products that contain them, such as plastics, cosmetics, body care products, toys and furniture – are fully tested and safe for use.

But the truth is, when it comes to chemicals, nobody is protecting our health.

The current US regulatory system for toxic chemicals fails to protect our health and environment in two critical ways:

- Consumer products and our food supply are rarely tested or regulated for chemical content and resulting human health impacts, and
- Regulations on toxic chemicals in our air, water and land have not kept up with the knowledge gained through science on toxic chemical impacts over the past decades.



► **Consumer Products Are Not Regulated for Chemicals**

While the federal Consumer Product Safety Commission frequently takes action to prevent safety hazards in products (such as articles that are choking hazards), chemical toxicity hazards to consumers are far less regulated. Comprehensive pre-market safety testing or approval is not required under any federal law for chemicals in cosmetics, toys, clothing, furniture, carpets or construction materials.¹

Before new medicines can be marketed, the Food and Drug Administration requires a series of animal and human tests to demonstrate their safety and efficacy. **However, other chemical-containing products, such as cosmetics, have no such pre-market approval process.** In fact, fewer than five percent of synthetic chemicals (including ones used in everyday products) have been safety reviewed by government agencies,² even though – like drugs – these chemicals can be biologically active and impact our health in very low doses.³

Other countries, particularly in the European Union, have moved forward with advanced regulations for chemicals in cosmetics, children’s products, electronics, and packaging. **Because of tighter regulations elsewhere, consumer goods that may be banned for sale in Europe and Japan – due to toxic chemical content – can continue to be sold in the U.S.**

In its evaluation of EPA’s ability to assess health risks of chemicals, the federal General Accounting Office found that **“EPA does not routinely assess the risks of all existing chemicals and EPA faces challenges in obtaining the information necessary to do so.”**⁴ They determined that the EPA has found it difficult and costly to provide complete data on every chemical. Consequently, to obtain the test information needed on existing chemicals, EPA relies extensively on the chemical industry to perform specific tests of certain chemicals.⁵

► **Food Supply Not Monitored**

Tests show that chemicals known to cause health damage are widespread in our food, yet **the government is not protecting our food supply from toxic chemical contamination.** For example, dioxins, a class of highly cancer-causing chemicals, have been found in fish, dairy products, and meat.⁶ Perchlorate, a known thyroid hormone disruptor and water con-

taminant, has been detected in fruits, vegetables, milk, and beer.^{7,8,9} Yet these foods are not routinely tested for toxic chemical content.

While more pre-market testing is required for pesticides used in growing food, many pesticides that are known to be highly toxic to human health are still in widespread use for growing food.¹⁰ For example, diazinon and chlorpyrifos, two organophosphate pesticides now banned from household products due to health concerns, are still allowed for use in agriculture.¹¹

► **Regulations Outdated by New Science**

The federal law regulating chemicals has not been updated in nearly 30 years – longer than any other major environmental or public health statute. This law, the Toxics Substances Control Act of 1976, has failed to protect public health according to reports by the National Academy of Sciences (1984), the U.S. General Accounting Office (1994), the Congressional Office of Technology Assessment (1995), Environmental Defense (1997), the U.S. EPA (1998), and the U.S. Government Accountability Office (2005).¹²

Regulations that do exist to limit chemicals in our air, water and land are largely **based on assumptions that current science has proven false, including:**

- Regulations establish so-called “safe levels” based on analyzing one pollutant at a time. Yet testing has found that hundreds of chemicals exist simultaneously in our bodies, with potentially additive, cumulative, and synergistic impacts.
- Regulations primarily address risks of acute impacts and diseases like cancer. However, new science shows that very small exposures to chemicals – once considered harmless – are indeed capable of subtle biological changes that can lead to lifelong damage.
- Regulations are based on average, estimated, and usually adult-based “acceptable risk.” Yet science has shown that timing of chemical exposure, age, and individual variability in processing toxic chemicals must be taken into account to determine the true risk.
- Regulations require that a chemical be proven to cause an “unacceptable” level of harm before it is regulated. But assessing the health impact of the tens of thousands of chemicals in use today is beyond the reach of current science.

The EPA has only used its regulatory authority to restrict any industrial compounds once since it sought, unsuccessfully, to ban asbestos 18 years ago; the asbestos ban was overturned by the federal appeals court in 1991.¹³ Since then the EPA has only acted to limit hexavalent chromium (a known human carcinogen) for use in industrial cooling towers.¹⁴ At the time, hexavalent chromium was a known human carcinogen.

More recently, the EPA has relied mostly on voluntary regulatory efforts by chemical companies.¹⁵

U.S. law requires the EPA to prove a toxic substance “presents an unreasonable risk of injury to health or the environment” before it is strictly regulated.¹⁶ The EPA must consider the costs of restricting the use of a chemical and choose “the least burdensome” approach to regulate industry.¹⁷ This regulatory framework allows people to continue to be exposed to chemicals with unknown health effects.

U.S. regulations are the result of long, involved political processes in which special interests exert considerable influence. **Industries with significant financial investment in the continued use of a particular product or chemical have historically been quite successful in limiting regulatory controls.**¹⁸

► States Step in to Protect

In the absence of protective federal regulations, several states have stepped in to begin to protect the health of their residents.

Massachusetts: The Toxic Use Reduction Act, passed in 1989, has led to significant progress in reducing toxic chemical use, waste and emissions. Over 550 companies have had to assess toxic use reduction options with technical help supplied by university and government experts. Toxic use reduction strategies have included material substitution and product reformulation. Within ten years industry has reduced the use of toxic chemicals by over 40%, byproduct waste by 58% and toxic emissions by 80%. A financial analysis reveals that the same companies saved a total of 14 million dollars over this period through the adoption of more efficient and safer processes.^{19,20}

California: In 1986, California voters overwhelmingly approved Proposition 65, the California Safe Drinking Water and Toxic Enforcement Act. This consumer protection law requires the state government to maintain a list of chemicals that are known to the state to cause cancer, birth defects or other reproductive harm. The list now contains over 500 chemicals



TOXIC IGNORANCE

Since World War II, approximately 75,000 synthetic chemicals have been put out into commerce and the environment. At least 3,000 are produced in quantities greater than 1 million pounds per year. Most chemicals have never been tested for their impacts on health and the environment. A majority of chemicals that have been in use for many years were grandfathered in by federal laws and are allowed on the market without knowledge of their health impacts. New chemicals, while subject to more thorough regulations, are still inadequately tested and government review of them is very limited once they enter the market. The information that does exist has huge gaps, such as an understanding of the health effects of chemical mixtures, and the impacts of exposure to developing infants.

and includes chemicals such as dyes, solvents, pesticides, drugs, food additives, and byproducts of certain processes. The law requires warning labels on products that contain ingredients known to be carcinogenic or toxic to reproduction and/or development.²¹

The new California Safe Cosmetics Act, which came into force in January 2007, requires manufacturers to disclose to the state’s Department of Health Services (DHS) their use of potentially hazardous ingredients in personal care products using the same list of chemicals known to the state of California to cause cancer, birth defects or reproductive harm.

Maine: In early 2006, Maine’s Governor created a “Governor’s Task Force to Promote Safer Chemicals in Consumer Products.” This task force will develop recommendations for a comprehensive chemicals policy for Maine that will require that hazardous chemicals found in consumer products be replaced by safer substitutes and will create incentives to develop safer alternatives on a state and regional basis.

Michigan: In October 2006, the governor of Michigan signed the "Promotion of Green Chemistry for Sustainable Economic Development and Protection of Public Health" executive directive.²² The directive charges the Department of Environmental Quality to establish a Green Chemistry Support Program that will promote safe technologies and innovations aimed at lowering health risks and preventing harmful chemical pollution at the source. It will also help the state

to devise strategies to promote green chemistry and green engineering education.

Washington: The Washington state Department of Ecology has created the first program in the nation to create a plan for managing the worst Persistent Bio-accumulative Toxic chemicals. In 2007 the legislature passed the first in the nation ban on all forms of the toxic flame retardant, PBDE's used in electronics, furniture, and mattresses. ■

Endnotes

- 1 Denison, Richard. (2007) Not That Innocent: A comparative analysis of Canadian, European Union, and United States policies on industrial chemicals. Environmental Defense. April 2007. www.environmentaldefense.org/go/chempolicyreport
- 2 INFORM Inc. (1995) Toxics Watch 1995. ISBN 0-918780-64-0 http://informinc.org/xsum_tox95.php
- 3 McLachlan, J., et al. (1998) Environmental Signaling: A biological context for endocrine disruption. Environmental Health Perspectives. February 1998. 106, Suppl 1:5-10.
- 4 GAO-05-458, June 2005. Chemical Regulation. Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program.
- 5 Ibid.
- 6 National Academy of Science. (2003) "Dioxins and Dioxin-like Compounds in the Food Supply: Strategies to Decrease Exposure" 2003. <http://darwin.nap.edu/books/0309089611/html>
- 7 Renner, R. (2006) Perchlorate found in produce from around the world. Environmental Science & Technology. April 26, 2006. http://pubs.acs.org/subscribe/journals/esthagw/2006/apr/science/rr_produce.html, California Department of Food and Agriculture. As reported in: Sharp, Renee, Environmental Working Group (June 2004) Rocket Fuel Contamination in California Milk. www.ewg.org/reports_content/rocketmilk/pdf/rocketmilk.pdf
- 8 Kirk et al. (2005) Perchlorate and Iodide in Dairy and Breast Milk. Environmental Science Technol., 39 (7), 2011-2017, 2005.
- 9 Environmental Working Group. (April 2003) Suspect Salads www.ewg.org/reports/suspectsalads/es.php
- 10 North Carolina Department of Agriculture. Pesticide Update. Summer/Fall 2000. Vol XVIII. No. 2 www.agr.state.nc.us/str-pest/pesticides/summer2000.pdf
- 11 Environmental Protection Agency Press Release. December 5, 2000. "EPA Announces Elimination of all indoor uses of widely-used pesticide Diazinon." www.fs.fed.us/foresthealth/pesticide/news/subjects_tips/01_2/epa.html
- 12 Wilson, Michael. (2006) A Framework for Leadership in Chemicals Policy and Innovation. http://coeh.berkeley.edu/news/06_wilson_policy.htm
- 13 GAO-05-458, June 2005. Chemical Regulation. Options Exist to Improve EPA's Ability to Assess Health Risks and Manage Its Chemical Review Program.
- 14 Ibid.
- 15 Ibid.
- 16 Europa: European Commission. REACH Overview. February 2007 http://ec.europa.eu/environment/chemicals/reach/reach_intro.htm
- 17 Schierow, Linda. National Council for Science and the Environment. Summaries of Environmental Laws Administered by the EPA: Toxic Substances Control Act. Accessed May 2007. <http://ncseonline.org/NLE/CRSreports/BriefingBooks/Laws/k.cfm>
- 18 Coming Clean. "What is Body Burden?" Accessed May 2007. www.chemicalbodyburden.org/whatisbb.htm
- 19 Toxics Use Reduction Institute. (2004) Toxics Use Reduction Act Success Stories <http://turadata.turi.org/Success/ResultsToDate.html>
- 20 Thorpe, Beverly and Rossi, Mark (2005) Background Paper #1: Require Safer Substitutions and Solutions. Louisville Charter for safer chemicals. www.louisvillecharter.org/paper.substitutes.shtml
- 21 California OEHHA. Most Recent P65 Chemical Listed and Current Proposition 65 List of Chemicals. Accessed May 2007 www.oehha.ca.gov/prop65/prop65_list/Newlist.html
- 22 Michigan Office of the Governor. (2006) Executive Directive No. 2006-6: Promotion of Green Chemistry for Sustainable Economic Development and Protection of Public Health. www.michigan.gov/gov/0,1607,7-168-36898-153806--,00.html

The Alliance for a HEALTHY TOMORROW

www.healthytomorrow.org
617-338-8131



Safe Products Made Safely

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

This is number four 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.

