National Learning and Developmental Disabilities Advocacy Groups Analyze Body Burden Studies

~~~~~~

Andrea Martin has at least 95 industrial chemicals in her body, 59 of which are known carcinogens. A survivor of two bouts of breast cancer who currently fights brain cancer*, Andrea recalls her childhood in Memphis, where she would chase the spray of the insecticide trucks that roamed the town. Later, she developed a passion for water skiing—on lakes clouded by chemical pollutants.* ***She does not know whether these pollutants****, acting alone or in combination over the decades since her youth****, can be named as the cause of the cancers*** *she later developed.* ***But now she has just cause for suspicion.***

Two Groundbreaking Studies:

In January 2003, the Centers for Disease Control and Prevention (CDC) released the results of a biomonitoring study **showing that industrial chemicals, most of which did not exist 60-70 years ago, now reside in the bodies of ordinary Americans.** Blood, urine, and hair samples were analyzed for 116 chemicals, all of which were found in varying amounts in every one of the 2,500 test subjects.

"This is irrefutable proof that humans carry around scores of industrial chemicals, most of which have never been tested for human health effects," says Jane Houlihan, vice president of research at the Washington, D.C. office of the Environmental Working Group (EWG). EWG, in collaboration with the Mount Sinai School of Medicine and Commonweal, developed a similar, peer-reviewed study designed to put an ordinary human face on the universal problem of chemical body burden. The report, issued by EWG, **connects the chemicals found in nine test subjects' bodies to 11,700 consumer products and to 164 past and current manufacturers.**

Several of the compounds studied, including lead, mercury, cadmium, pesticides and a wide array of polychlorinated biphenyls (PCBs), are known neurotoxicants—in other words, they can interfere with the brain's healthy development. **The CDC Report's proof that Americans now have these neurotoxic compounds in their bodies strengthens some scientists' and doctors' growing suspicions that exposure to these chemicals may be related to the increasing incidence of autism spectrum disorder, learning and developmental disabilities, and brain cancer.**

The reality of chemical body burden should come as no surprise. In addition to manufacturing thousands of products that contain harmful chemicals, **industry reported dumping 7.1 billion pounds of hazardous compounds into the air and water in the U.S. in the year 2000**, according to the U.S. Environmental Protection Agency's most recent Toxic Release Inventory.

Children are at Greater Risk.

Public health experts say one of the CDC report's most disturbing findings is that children's bodies had higher levels than adults of some of the most toxic compounds, including lead, environmental tobacco smoke (ETS), organophosphate (OP) pesticides, and the metabolites of some highly toxic phthalates. "**This is a concern because of the potential of toxic chemicals to interfere with development,"** comments Dr. Lynn Goldman, a former EPA official and a professor at the Johns Hopkins University School of Public Health. For example, children tested had twice the level of adults of the metabolites that indicate exposure to common organophosphate pesticides like
~~~~~~

Malathion and Diazinon, cousins of Chlorpyrifos (Dursban®), a pesticide that is now being taken off the market after studies showed structural alterations to the developing brain at all doses tested.[1]

These studies suggest that the chemicals children are now commonly exposed to may be related to the apparent rise in neurological cancers and learning and developmental disabilities. For instance,

- Autism spectrum disorder is estimated to affect 450,000 children under the age of 18 **and it appears to be 10 times more prevalent today than it was in the 1980s** (Journal of the American Medical Association, January 2003).
- An estimated **12 million children (17%) in the U.S. suffer from one or more learning, developmental, or behavioral disability** and these numbers appear to be increasing (Boyle, Decouffle, Yeargin-Allsopp, Journal of Pediatrics, 93(3):399-403, 1994).
- Incidence of **childhood brain and nervous system cancers jumped 1.8% per year, or 40%** from 1973 to 1994 (Gurney, Smith, Bunin, "Cancer Incidence and Survival Among Children and Adolescents," National Cancer Institute, 1999).

The majority of Americans mistakenly believe that the government tests chemicals used in consumer products to ensure safety, according to an opinion poll recently released by the Washington Toxics Coalition. However, under the Toxic Substances Control Act (TSCA), **there is no legal requirement to test most chemicals for health effects, including impacts on neurological development, at any stage of production, marketing, and use.**

What Can Be Done?

Only the chemical producers currently have the right to know whether their products are dangerous and likely to contaminate people. As a first step toward a public understanding of the extent of the problem, **chemical producers must provide a comprehensive analysis of health impacts before marketing, with full public disclosure—revealing problems before people are widely exposed.** Further, they must bear the burden of repairing, by extensive clean-up initiatives, some of the harm done to our communities, and investing in the creation of safer alternatives to those chemicals found to be harmful.

On personal level and institutional levels, we all need to seek to protect ourselves, our families, and future generations by avoiding products and foods treated with or containing harmful chemicals**. We need to educate policymakers about these concerns in order to eliminate toxic threats to health. Moreover, we must demand our right to know about what chemicals are in our environment and the products we buy as well as what risks they may pose to future generations,** so that all of us can make healthier choices for ourselves, our families, our communities and future generations.

Remember: we all have a fundamental right to live and raise children in a world free from chemical trespass—a world that does not threaten our health simply because we eat, breathe, and drink water in the normal course of our daily lives.

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

For more information:

Visit the Centers for Disease Control and Prevention's Exposure Report at **www.cdc.gov/exposurereport** and the Environmental Working Group's Body Burden Report at **www.ewg.org/reports/bodyburden.** See also the Collaborative on Health and the Environment, **www.cheforhealth.org**, Physicians for Social Responsibility, **www.psr.org**, the National Environmental Trust, **www.net.org,** and the Institute for Children's Environmmental Health, **www.iceh.org.** For expert commentary, contact Ted Schettler, M.D., M.P.H. at tschettler@igc.org, or John "Pete" Myers, Ph.D. at jpmyers@ourstolenfuture.org.

[1] U.S. EPA. Office of Pesticides Programs. Health Effects Division. 2000.Human Health Risk Assessment: chlorpyrifos. www.epa.gov/pesticides.
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~