

Chemical Hysteria and Environmental Politics

by Doug Bandow

Chemicals are one of the wonders of human creation. They help heal and feed us; they help fuel our autos and heat our homes; they help produce toys and computers. Yet some chemicals can hurt, making them a perfect target for alarmists who detest most anything modern.

There's no doubt that chemicals have become an integral part of our lives. The Centers for Disease Control (CDC) has released its latest "National Report on Human Exposure to Environmental Chemicals," which reviewed Americans' exposure to 116 different substances. The study confirms that most people have contact with a plethora of chemicals.

Yet this conclusion reflects the dramatic advances in bio-monitoring: scientists are now capable of detecting the minutest trace of different substances in human beings. Researchers measure concentrations of a thousandth, millionth, and billionth parts.

This enables us to better understand our environment, assess chemical exposure, and understand risks. But it also provides a tool for alarmists, who conveniently ignore actual contact levels when claiming an epidemic of chemical exposure.

At a time when many people fear for their lives, the CDC found much good news.

Contributing editor Doug Bandow, a nationally syndicated columnist, is a senior fellow at the Cato Institute and the author and editor of several books.

Exposure to lead, which is particularly harmful to the development of children, and cotinine, a tobacco residue, is down.

Moreover, exposure levels to some of the most toxic chemicals were extraordinarily low. Reported the CDC: "For dioxin, furans and coplanar PCBs, most people in the Second Report had levels that were below what the analytic method could detect."

Even the bad news was bad mainly relative to overall successes. For instance, during the 1990s cotinine exposure dropped 55 percent for teens, 58 percent for kids, and 75 percent for adults; yet today the exposure of black children remains disproportionately high.

Alas, good news does not dampen the alarmist impulse in some people. The Environmental Working Group (EWG) conducted its own study and found an average of "91 industrial compounds, pollutants, and other chemicals" in the nine volunteers studied. All told, the EWG reported 167 different chemicals, many of which, it claimed, caused cancer, birth defects, or other harms. The result was a significant "body burden," as the group put it.

But this is fear-mongering at its misleading worst. Simple exposure demonstrates nothing. As the CDC explained: "Just because people have an environmental chemical in their blood or urine does not mean that the chemical causes disease."

This is the case even for substances known to be capable of causing harm. Observes

Elizabeth Whelan, president of the American Council on Science and Health (ASCH), people “should remember the basic tenet of toxicology—the dose makes the poison.” Almost anything can prove toxic if ingested in a high-enough concentration, one vastly above the levels faced by even the most at-risk person.

Yet animal tests not only rely on huge dosage levels, but also can fall afoul of the substantial differences between rodents and primates. In many cases absorption rates and hormonal reactions, which vary among creatures, matter far more than exposure levels.

Todd Seavey of ACSH argues, “Thanks to the CDC report, we’re now more certain than ever that the synthetic chemical amounts we are routinely subjected to are trivial. We ought to feel safer than ever.”

Another argument has been advanced by groups like the Collaborative on Health and the Environment (CHE), an umbrella group for the most active alarmists. It claims that multiple chemical exposure can be harmful—indeed, that chemicals are currently hurting one-third of the population. CHE is aided by the PR firm Fenton Communications, which specializes in turning junk science into newspaper headlines.

It’s an attractive argument for the scientifically uninformed, but it fails the basic test of evidence. As Steven Milloy, publisher of JunkScience.Com, points out: “Despite more than 40 years and countless billions of dollars of research, no credible scientific evidence exists to link typical exposures to chemicals in the environment with disease.”

Indeed, though our theoretical exposure to chemicals has increased dramatically over the last half century, actual chemical contamination of the environment has been falling. And we are living longer and healthier lives than ever. Apparently the human body is able to bear the alleged chemical burden.

Children at Risk?

What of children? People naturally worry about the impact on youthful development, but ACSH warns, “We are at a juncture

where emotion, fear, and uncertainty compete with scientific data, toxicological principles, and principles of risk analysis.” In fact, ACSH reports in a new book, *Are Children More Vulnerable to Environmental Chemicals?*, “There is little toxicological evidence to support the premise that children are consistently more susceptible to environmental chemicals than adults.”

Where there is a problem, as with lead and PCBs, kids need to be protected. But parents need not live in fear of a world that is actually getting safer and healthier day by day. And they need to be aware of what ACSH warns as a “disturbing pattern in which activists with a nonscience agenda manipulate the public’s legitimate and appropriate concern for children’s health in an effort to promote legislation, litigation, and regulation.”

This is the fundamental problem. Alarmist groups with radical political agendas are ever-ready to manipulate science to promote their own ends. A particularly apt example is the case of acrylamide, a chemical coagulant used in drinking water, wastewater treatment, and tunnel construction. In April 2002 the Swedish National Food Administration and researchers at Stockholm University held a press conference announcing that disturbingly high levels of acrylamide had been found in food.

The revelation set off a media sensation around the world. French fries and potato chips cause cancer! California environmental activists sued snack-food makers and fast-food restaurants to warn customers that their products included a chemical “known to the State of California to cause cancer.”

Acrylamide is formed naturally in the cooking of many foods. It appears to cause cancer in rodents fed exceptionally high doses. In fact, in this case the doses not only well-exceeded human consumption, but they also may have exceeded medically tolerable levels for mice, since more died from other causes than from cancer.

Moreover, extrapolating such results to humans is always problematic: genetic differences between rodents and primates often result in different metabolic reactions to

chemicals. Dr. Joseph Rosen of Rutgers University observes: "There is substantial evidence that the rodent studies may not be accurately predicting relevance to human health."

Last January the *British Journal of Cancer* published a study announcing that there was no apparent link between acrylamide in food and cancer. One British newspaper headline trumpeted: "Crisps Do Not Cause Cancer!" A Swedish paper went onto suggest that

acrylamide in food might actually reduce cancer risks.

Obviously, some substances do cause cancer, and evidence of carcinogenic properties requires investigation. But as Waldemar Ingdahl puts it, "Publication by press conference is not good scientific publishing," especially when there is a transparent political agenda. Constantly crying wolf will make it harder to deal with the few cases where there is a legitimate health issue. □

Explore the Relationship Between Commerce and Liberty in *Commerce, Culture, and Liberty: Readings on Capitalism Before Adam Smith*

Edited by Henry C. Clark

Commerce, Culture, and Liberty makes available a rich body of reflections on the larger import of the birth of the modern economy, a viewpoint that has been largely absent from recent academic discourse. Moreover, it presents thirty-seven significant, though hard-to-find writings by Defoe, Fielding, Montesquieu, Voltaire, and other less familiar authors. It also includes a little-known essay by Rousseau. Ten of the readings are first-time translations from French into English. This new collection supplies a wealth of important essays that formed the intellectual context within which Adam Smith produced his ground-breaking ideas.



Liberty Fund, Inc.

To place an order or request a catalog:
Liberty Fund, Inc.
Order Dept. AIOL73
8335 Allison Pointe Trail, Suite 300
Indianapolis, IN 46250-1684

April 2003. 6 x 9. 703 pages.
Hardcover. ISBN 0-86597-378-4. \$25.00.
Paperback. ISBN 0-86597-379-2. \$15.00.

Tel: (800) 955-8335
Fax: (317) 579-6060

www.libertyfund.org