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## Stop scaring us

■Feinstein's bill to ban some chemicals in toys might help rats, but it's bad for people.

By Henry I. Miller

When Gov. Arnold Schwarzenegger signed a statewide ban in October on children's toys that contain more than minuscule amounts of chemicals called phthalates, he was simply carrying on a California tradition of misguided, often damaging "health" regulations. This is, after all, a state that requires most commercial establishments, from supermarkets to pet stores to hotel lobbies, to display "Proposition 65" signs proclaiming that customers are being exposed to trace amounts of chemicals that can cause cancer or birth defects.

Now, Sen. Dianne Feinstein (D-Calif.) is eager to expand California's folly to the entire nation. Undeterred by the judgment of experts but swayed by a few experiments with rats and a single flawed epidemiological study, Feinstein has introduced a bill that would ban six types of phthalates in toys. These chemicals are widely used to soften plastic toys and are found in shower curtains, traffic cones and scores of other common items. They also have crucial applications in surgical instruments and intravenous tubing.

Unfortunately, Feinstein's legislation ignores the basic principles of toxicology. For starters, a rat's metabolism differs significantly from a human's. Although rat studies may be useful for suggesting what sorts of toxicity to look for in humans, often they do not predict effects on humans. Indeed, the toxicity of phthalates in rats appears not to be replicated in humans or other primates.

Second, the dose makes the poison. This means that the mere presence of something in the body does not imply harm; one needs to know the dose and length of exposure, what the substance does (if anything) in the body, how it is

disposed of and so forth. Virtually any substance, including water, can be toxic at high enough levels. Consider an example taught to all medical students. Part of the work-up for hypertension (high blood pressure) is to inquire whether the patient eats large amounts of licorice, which contains glycyrrhizin, a chemical that promotes sodium and fluid retention and raises blood pressure.

Extremely versatile and cost-effective, phthalates have been rigorously studied in the U.S. and Europe. A panel of scientists chaired by former Surgeon General C. Everett Koop reviewed the scientific literature on phthalate exposure in 1999. "[Phthalate-containing] toys and medical devices are safe," said Koop. "The panel's findings confirm what the U.S. Food and Drug Administration and the Consumer Product Safety Commission have been saying about these products all along. There is no scientific evidence that they are harmful to children or adults."

Numerous studies have shown that human exposure to phthalates under ordinary circumstances is low and harmless. In fact, according to a review performed by the National Institutes of Health, the source of about 85% to 90% of phthalate exposure in adults, and 44% to 60% in infants, is not toys or consumer products but food. Nor are phthalates harmful even at high levels of exposure — in patients undergoing regular hemodialysis or oxygenation of their blood in an intensive-care unit, for example.

The Consumer Product Safety Commission rejected a national ban on vinyl toys in 2003, after calculating likely exposure to diisononyl phthalate (DINP), the most common phthalate in children's toys. The total time babies from 3 months to 12 months spend mouthing objects is about 10 minutes an hour. Pacifiers (which do not contain phthalates) account for most of babies' sucking time, with their own body parts next. Soft vinyl toys containing DINP

were sucked on for under 11 seconds an hour, or under 5 minutes a day. Even those whose sucking was in the 99th percentile were chewing on their DINP-containing toys for no more than 12 minutes a day. The Consumer Product Safety Commission concluded that a baby would have to suck about 10 times as long before he or she could consume enough DINP to have any potential adverse effects.

International scientists agree. In 2003, for example, the European Union's Institute for Health and Consumer Protection concluded in a risk assessment: "The end products containing DINP (clothes, building materials, toys and baby equipment) and the sources of exposure (car and public transport interiors, food and food packaging) are unlikely to pose a risk for consumers (adults, infants and newborns)." Despite the reassuring risk assessments, politicians overruled them, and the EU instituted a "permanent" ban on phthalates in children's toys in 2005.

The public is harmed when lawmakers proscribe the use of a product that has been proved safe and useful. Inevitably, manufacturers will turn to — and consumers will be exposed to — alternatives that are likely to be less well tested. Simply put, Feinstein's bill represents bad science, bad law and disregard for the public interest.

*Henry I. Miller, a physician and molecular biologist, is a fellow at Stanford University's Hoover Institution. He was an official at the NIH and the FDA from 1977 to 1994.*

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