They line the nursery section children's toy stores like brightly colored candies: rubber duckies for bathtime, chewable rings for teething, soft-covered books for pawing and mouthing. Parents shopping for their babies can be forgiven if they assume that everything on those shelves is 100% child safe. So why did the city of San Francisco issue a ban last week on the sale of certain plastic toys aimed at children under 3? And why are activists warning holiday shoppers in the most alarming terms against buying them? "Sucking on some of these teethers and toys," says Rachel Gibson of Environment California, a nonprofit, "is like sucking on a toxic lollipop."

At issue are contaminants in plastics used to make the toys. Environmentalists have long argued that some of these chemicals can leach out and harm children, pointing to animal studies that link the substances to birth defects, cancer and developmental abnormalities. Those warnings are hotly disputed by the chemical industry and toy manufacturers, which cite stacks of scientific studies that have found the plastics to be safe at federally approved levels. But the issue has gained traction on the strength of new evidence from independent and university-sponsored studies. The European Union has banned some chemicals in toys since 1999, and now half a dozen state legislatures are considering similar laws.

The controversy centers on a family of chemicals called phthalates (pronounced "thalates"), which are used to soften vinyl, and on bisphenol A (BPA), a substance used to make clear and shatterproof plastic. Most are known to be so-called endocrine disrupters, capable of interfering with the hormones that regulate masculinity and femininity. Several hundred animal studies have linked phthalates to prostate and breast cancers, abnormal genitals, early puberty onset and obesity. More recently, they've been shown to affect humans as well. In a paper published last year in the journal Environmental Health Perspectives, scientists from the Centers for Disease Control and Prevention and several universities found that boys born to mothers with higher phthalate levels are far more likely to show altered genital development, linked to incomplete testicular descent. Harvard School of Public Health studies report that men with higher phthalate levels have lower sperm counts and damaged sperm DNA.

The American Chemistry Council (ACC), which represents manufacturers such as ExxonMobil and Dow Chemical, says the crackdowns on toys are not justified by the science. "The E.U. aims to ban products that
show adverse effect at very high doses in rats," says the ACC's Marian Stanley. "Many essential products are made from starting materials that can be quite toxic at high doses. This does not mean that the final consumer products are toxic." As for recent phthalate studies on humans, she says, they are either preliminary or "overhyped." Meanwhile, toy companies are relying on a 2001 review by a Consumer Product Safety Commission panel that found "no demonstrated health risk" in toys made with DINP--one of the phthalates used in vinyl. Critics fault the panel for failing to examine the effect of DINP when combined with other phthalates.

The focus on BPA is new. Its use is widespread--it's found in dental sealants and the epoxy linings on food cans as well as in baby bottles. Studies in animals over the past five years have found that the substance, which mimics the human hormone estrogen, alters brain structure and chemistry as well as the immune system and reproductive organs. Some of these effects show up at extremely low doses, in some cases 2,000 times below the Environmental Protection Agency (EPA) safety guideline, according to Frederick vom Saal, a University of Missouri endocrinologist. Chemical companies say the findings are not applicable to humans, but the federal National Toxicology Program has launched a reassessment of the safety standard. "The literature around BPA is very controversial," warns EPA scientist Earl Gray. "Next year's review should clarify things."

The problem for retailers--and parents--is that the U.S. does not require manufacturers to disclose ingredients in most consumer products. How can you tell which contain the contaminants when chemical companies guard the information as proprietary? "Stores have products stacked to the ceiling for the holidays," says Daniel Grossman, CEO of San Francisco's Wild Planet Toys. "They have no idea what has phthalates and what doesn't."

They may soon find out. The San Francisco Chronicle recently had 16 toys tested in a private lab. One rubber ducky contained the phthalate DEHP at 13 times San Francisco's allowed level. A teether contained another phthalate at five times the limit. Meanwhile, a rattle, two waterproof books and a doll contained BPA, which is prohibited by the city at any level. Although the products comply with U.S. law, some toymakers, including Goldberger Doll, are cutting out phthalates. Richard Woo, owner of a local store called Citikids, estimates that he might have to pull a third of his items off the shelves. Next month manufacturers will go to court to block the new law. Whatever the ruling, parents will be left wondering how safe their children's toys really are.

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