

found BPA slightly increased the rate of breast cancer tumors in rats during lactation — but only after a secondary chemical fed to the animals induced tumors. In other reports, BPA pellets inserted into the uterus of mice led to abnormalities or were injected directly into organs or the blood stream. To regulators such research is not given much weight, but readers were never told that, in part because journalists are usually ill-trained to evaluate risk-based empirical studies. From this ambiguous animal research emerged a widely disseminated conclusion by *Consumer Reports* that linked BPA “to a wide array of health effects including reproductive abnormalities, heightened risk of breast and prostate cancers, diabetes, and heart disease” in humans — a conclusion no study or science-based regulatory body has found.

### FDA Weighs in—Again

Reflecting this consensus by the regulatory community, in January the FDA released its second review of BPA in two years, again declaring it poses “negligible” or “minimal” concern for most adults and “is not proven to harm children or adults.” The FDA also reiterated prior skepticism about the novel hypothesis, stating that rodent studies suggesting some problems were not “experimentally consistent” — some showed no problems and many tests could not be replicated. “Studies . . . have supported the safety of current low levels of human exposure to BPA,” the FDA concluded.

When asked if children faced health dangers, Joshua Sharfstein, M.D., the FDA’s principal deputy commissioner, minced no words: “The FDA is not saying that it’s unsafe to use a baby bottle with BPA. FDA does support the use of bottles with BPA because the benefit of nutrition outweighs the potential risk of BPA. If we thought it was unsafe, we would be taking strong regulatory action.”

The FDA did introduce an ele-

## Facts and Consequences

Jon Entine’s case is compelling, and his article raises a fundamental question that has been largely lost in the bisphenol A debate. The question is how to balance the need to feed the world by maintaining a safe food supply system with the desire to be cautious in protecting human health from chemical exposures that may pose harm. As outside counsel to the North American Metal Packaging Alliance, Inc., I do not purport to be without strong views regarding the inherent safety of BPA-derived epoxy resins to make coatings for metal food and beverage packaging. My views are based on a review of the science, not a reflective allegiance to client interests.

The issue I find disturbing in the debate is the seemingly willful avoidance by BPA detractors to acknowledge the global adverse consequences of eliminating the use of BPA-derived epoxy resins in food and beverage containers. Metal packaging technology is a highly evolved science. Because metal packaging can be infinitely recycled, it is among the most sustainable packaging choices from a lifecycle perspective. In fact, the inherent value of metal packaging together with paper subsidizes the recycling of other materials and makes curbside collection of household materials possible.

The metal can itself is a resilient innovation. Now over 200 years old, the metal can is entirely tamper-resistant and thus a trusted form of food and beverage packaging. The unique value of BPA-derived epoxy coating is its unsurpassed ability to sustain the high temperature food packaging conditions required for sterilization, the process that guarantees that packed food is safe from

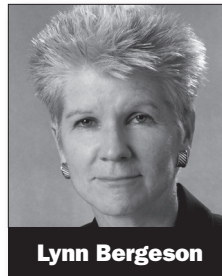
microbiological contamination, which causes food poisoning.

The transition decades ago to epoxy resin technologies has enabled dramatic increases in the shelf-life of packed food products. This, in turn, has dramatically diminished food waste due to product expiration — no small accomplishment in a world challenged by food shortages that will only become more acute with the passage of time. Today’s canned foods have shelf-lives of two years or more. Because metal packaging is the only container that is completely light-proof and oxygen-proof, the quality and nutritional value of the packed food remains unchanged over the shelf-life of the product.

BPA detractors claim alternatives exist. This is true, but only conditionally. What is seldom mentioned is that no other coating alternative offers the same level of food protection for as many food and beverage container applications, or protects packed food for as long as BPA-derived epoxy resins. The consequences that flow from this indisputable fact are many. They include, among others, the cost of a diminished shelf-life of canned goods, perhaps by as much as half; the potential for increased incidents of food poisoning; and the lifecycle burden occasioned by diminished use of metal packaging options.

The public’s ability to make informed food packaging choices is no less important than the question of the safety of BPA-derived epoxy resin coatings. These unintended consequences of limiting uses of epoxy resins are important, and must be part of the debate.

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