Petition Supporters

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Research Supporting this Petition

Other significant research supports the issues summarized in the "Basis for Petition" section.

First, although there has been considerable controversy about the toxicity of BPA, the emerging scientific consensus is that BPA toxicity is significant. In 2015, an expert panel of scientists unanimously recommended that California identify BPA as a chemical that causes reproductive harm. (8) In addition, recent reviews support and expand the conclusions of the 2014 review summarized in the previous section. The range of health effects associated with human exposure to BPA and documented in these reviews is startling and a call to action. A recent review (2013) listed the following associated health effects and diseases: IVF success, reduced embryo quality, miscarriage, premature delivery, reduced male sexual function, reduced sperm quality, polycystic ovary syndrome, altered thyroid hormone concentrations, blunted immune function, type-2 diabetes, heart disease, hypertension, cholesterol levels, obesity, abnormal gestation time,

reduced birth weight, abnormal male genitals, altered behavior in children, and childhood wheeze/asthma. (9) Two 2015 reviews provided detailed evidence supporting the association with diabetes, obesity, and hypertension (10) and identified mechanism by which BPA exposure increases risks of prostate and breast cancer (11).

Second, there is detailed information about the extent of Americans' exposure to BPA. The Centers for Disease Control and Prevention published an analysis of BPA body burdens in 2008 based on a carefully designed national survey. The study found that almost 93% of Americans carry BPA in their bodies. Concentrations are highest in children, followed by adolescents, while adult body burdens are lower. Body burdens in wealthier Americans are lower than in low-income Americans, and higher in white and black Americans than in Hispanics. (12)

Finally, results of the FDA survey of canned food described in the previous section are supported by a 2015 EPA study that measured BPA concentrations in a variety of commonly eaten canned foods. The researchers found that 73% of the samples tested contained BPA and that concentrations were as high as 149 parts per billion (ppb). (13)

Other researchers have demonstrated the importance of bisphenol A exposure through a dietary intervention study. When the study participants were provided with a diet that minimized canned foods, bisphenol A urine levels declined by 66%. (14) Recently, an analysis of Centers for Disease Control and Prevention data showed that consumption of just one canned food item is associated with increased BPA urine levels. (15) There are 123 billion cans produced annually in the US, so exposure is widespread. (16)

BPA in the Food Can Supply Chain

Understanding and working with the entire canned food industry supply chain is critical to preventing toxic substitutions for BPA in food can linings. For example, the internal lining companies are an important part of the canned food supply chain because they not only develop the can linings, but they also conduct the safety testing of these materials and the migration studies.

The largest supplier of the linings used in food cans is Valspar (17), which provides linings to 70% of the canned food industry and 50% of the beverage industry. Valspar makes both BPA and alternative linings (18).

Nine companies manufacture 98 percent of the cans in the United States. (16)

The can-makers and in some cases the food manufacturers conduct shelf testing to ensure the can lining material is stable and does not leach into the food can contents.

Major manufacturers of canned food with BPA linings include Campbell's, Del Monte, General Mills, H.J. Heinz Company, and Nestle. (1)

Market Transition Away from BPA

Some of these manufacturers have announced plans to phase out BPA in canned products. Campbell's announced they are eliminating BPA in North American cans by the end of 2017. Nestle started to remove BPA in 2009 and expects to move fully to BPA alternatives by the end of 2016. (1)

Alternatives to BPA epoxies in canned food include acrylic resins, polyester resins (14), polyvinylchloride copolymers, and oleoresins (1). However, "identifying the safety of BPA alternatives is challenging given the limited FDA review and approval of packaging additives and highly protected trade secrets in this product sector," according to experts at the Breast Cancer Fund. (1)

Despite limited data in the published scientific literature regarding the health effects of BPA epoxy replacements, there are serious concerns that some of them may be toxic substitutes. (1) For example, PVC is a polymer made from vinyl chloride one of the first chemicals designated by the International Agency for Research on Cancer (IARC) to be a human carcinogen (19). Styrene acrylic combinations are also used as can linings, but polystyrene is a plastic made from styrene, which is "reasonably anticipated to be a human carcinogen based on the limited evidence of carcinogenicity from studies in humans, according to the US National Toxicology Program. (20)

References for Supporting Document

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