

Study shows link between canned food, exposure to hormone-disrupting chemical BPA

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The hormone-disrupting chemical BPA is a compound used to make, among other things, resins that coat the inside of food cans and jar lids. Credit: Evlakhov Valeriy/Shutterstock

New Stanford research resolves the debate on the link between canned food and exposure to the hormone-disrupting chemical known as Bisphenol A, or BPA.

A new study by researchers at Stanford and Johns Hopkins universities puts to rest any lingering doubt about whether eating canned food increases exposure to a chemical linked to diabetes, cardiovascular disease and other health effects.

The research, a first-of-its-kind national sample, also highlights specific canned foods linked to higher levels of the chemical Bisphenol A, or BPA.

The study, published online June 29 in *Environmental Research*, highlights the challenges consumers face in trying to limit their exposure to BPA, a compound used to make, among other

things, resins that coat the inside of food cans and jar lids. Different foods have different amounts of BPA contamination.

"I could eat three cans of peaches, and you could eat one can of cream of mushroom soup and have a greater exposure to BPA," said lead author Jennifer Hartle, PhD, postdoctoral scholar at the Stanford Prevention Research Center at the School of Medicine.

Previous research has focused on analyzing levels of BPA in canned products and measuring BPA exposure within groups of fewer than 75 people. Evaluating both dietary sources of BPA contamination and BPA levels in the urine of people who recently consumed canned food, the new analysis assessed thousands of people of various ages, and geographic and socioeconomic backgrounds.

Urinary BPA concentrations

Hartle and her colleagues found that canned food was associated with higher urinary BPA concentrations, and the more canned food consumed, the higher the BPA. The result confirms canned food's outsized influence on exposure to BPA. The researchers also found that particular kinds of canned food were associated with higher urinary BPA concentrations. The worst offenders (in descending order): canned soup, canned pasta, and canned vegetables and fruit.

A previous study led by Hartle found that children, who are especially susceptible to hormone disruption from BPA, are at risk from school meals that often come from cans and other packaging. This uptick in packaging is a result of schools' efforts to streamline food preparation and meet federal nutrition standards while keeping costs low.

In 2015, as part of the Stanford Woods Institute for the Environment's Rising Environmental Leaders Program, Hartle met with members of Congress who are working on regulating BPA in food packaging.

California has listed BPA as a female reproductive toxicant, and the U.S. Food and Drug Administration has restricted its use in some products. However, the FDA is still working to "answer key questions and clarify uncertainties about BPA," according to the agency's website.

"The FDA no longer allows BPA to be used in baby bottles, sippy cups and liquid infant formula canned linings, and many food and beverage companies are moving away from the use of BPA," Hartle said. "However, we do not know if synthetic BPA replacements are safe either."

The researchers suggest that federal regulators expand testing beyond BPA to other chemicals used as BPA replacements in food packaging, none of which are included in national monitoring studies.

Provided by Stanford University Medical Center

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