

## Ottawa conference seeks global consensus on risks of bisphenol A

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When it comes to human exposure to bisphenol A, the lowly tin can packs quite a punch.

Practically everyone eats canned food, the main reason that more than 90 per cent of Canadians carry detectable levels of BPA in their bodies – tiny bits of the compound leach into food from the epoxy liners on the insides of cans.



Health authorities have always believed these trace exposures were harmless. But the question of whether eating canned food entails any health risks because of BPA, a compound that mimics the female hormone estrogen, is about to receive one of its most thorough reviews.

The World Health Organization has asked experts on the chemical to come to Ottawa this week for a five-day symposium that will help it evaluate the potential risks from BPA. Much of the attention will be focused on the migration of the compound from cans into food and beverages, and whether there are subpopulations, such as pregnant women and their fetuses, more at risk from these exposures.

The WHO meeting is being held in Canada, in part because it is the leading jurisdiction in the world on BPA regulation. The federal government was the first in the world to add the man-made chemical to a national toxic substances list last month, after having earlier banned baby bottles made from the compound, another international first.

The intense scrutiny of tin cans is a new stage in the ongoing safety debate over BPA, a key material in the manufacture of many plastics.

Worries about the chemical have already led several major food companies serving the Canadian market, including organic food purveyor Hain Celestial and ketchup king H.J. Heinz, to publicly commit to eliminating BPA.

The WHO gathering is supported by two heavyweight international regulators, the U.S. Food and Drug Administration, which is currently conducting its own review of BPA, and the European Food Safety Authority, which recently concluded food exposures aren't a concern.

The goal of the meetings "is to bring together some of the foremost experts in the world to review the most recent scientific information available on BPA and try to establish an international consensus on the safety of BPA, with a particular focus on food applications," Health Canada says.

Studies by academic laboratories have linked low-levels of BPA to such conditions as prostate enlargement and skewed mammary gland development in test animals indirectly exposed during fetal development through doses given their pregnant mothers. Adverse outcomes have been observed at exposures well below Health Canada's current safe level, but research funded by the plastics industry hasn't detected these effects.

Health Canada says it banned BPA baby bottles as a precaution for infants, but isn't worried about exposures to mothers and their fetuses. They aren't at risk as the amounts ingested by adults are "well below levels" that could cause harm, Health Canada said in response to written questions from The Globe and Mail.

Health Canada also says it is continuing to study the issue, however. Back in 2009, the federal agency launched an in-

investigation into in utero exposures to BPA, and the potential effects of the chemical on fetal development. The results aren't expected to be released until June, 2011.

There is also growing evidence that BPA has impacts in the wider population. A study published last week in the journal *Fertility and Sterility* of workers in Chinese factories who used BPA linked the chemical to poor sperm quality among those with the highest exposures. Earlier this year, another study, of typical Americans, found those with the most BPA had a 45 per cent higher risk of developing cardiovascular disease.

These kinds of findings are having huge reverberations in the food industry.

"We are seeing some serious momentum in the food and beverage industry to address BPA in can linings," said Emily Stone, a shareholder advocate at Green Century Capital Management, a U.S. mutual fund company that has reviewed food company responses to the BPA controversy.

Officials at companies seeking to replace BPA say they're responding to consumer demand.

Hain Celestial, for example, expects to have BPA-free containers next year. "What you're doing is giving the consumer an option, whether they elect to buy a product that's in BPA-free packaging or not, that really is their decision," said Gerald Amantea, Hain Celestial's vice-president of technical services.

To avoid BPA, the industry is looking at such techniques as shifting chunky, acidic foods normally found in cans, such as tomatoes, into Tetra Paks. Another technique under investigation is applying a thin polyester liner on top of the BPA to prevent the chemical from coming into contact with foods or beverages, an approach that has been used in Japan.

The Japanese cut BPA levels in people by about 50 per cent after they adopted different canning techniques, a reduction that is "very significant," according to Fred vom Saal, a biologist at the University of Missouri and one of the experts the WHO has invited to the Ottawa meeting.

### **As common as can be**

Practically all canned food contains minute amounts of bisphenol A.

A Health Canada survey released in June found detectible levels in 77 of 78 cans purchased at supermarkets. Can liners contain BPA, which accounts for how it gets into food.

Flaked light tuna in water had the most, followed by condensed soups. There was huge variation, with some types of tuna having about 500 times more than tomato paste, the item with the least. The full survey is available [here](#).

Health Canada says the amounts aren't a worry because a person weighing 60 kilograms would have to eat 20 cans of the most BPA-laden tuna a day to exceed its safety limit.