

Mercury in High-Fructose Corn Syrup?

Researchers Say 17 Products Tested Had Some Mercury; Industry Group Says Syrup Is Safe

By [Miranda Hitti](#)

FROM THE WEBMD ARCHIVES

Jan. 27, 2009 -- Some foods and drinks rich in high-fructose corn syrup may contain detectable levels of mercury, a new report shows.

The report, published on the web site of the Minneapolis-based nonprofit Institute for Agriculture and Trade Policy (IATP), shows detectable levels of mercury in 17 out of 55 tested products rich in high-fructose corn syrup.

But the researchers aren't telling people to avoid those products or other items containing high-fructose corn syrup, and they aren't sure what form of mercury those products contained.

The Corn Refiners Association stands by high-fructose corn syrup, calling it "safe."

Mercury and High-Fructose Corn Syrup

The new report comes from researchers including David Wallinga, MD, director of the IATP's food and health program. They bought 55 products that list high-fructose corn syrup first or second on their list of ingredients, which means high-fructose corn syrup was a leading ingredient in those products.

Wallinga's team sent samples of those products to a commercial lab, which checked the levels of total mercury in each sample.

"Overall, we found detectable mercury in 17 of 55 samples, or around 31%," write Wallinga and colleagues.

Here is the list of those products:

- Quaker Oatmeal to Go bars
- Jack Daniel's Barbecue Sauce
- Hershey's [Chocolate](#) Syrup
- Kraft Original Barbecue Sauce
- Nutri-Grain Strawberry Cereal Bars
- Manwich Gold Sloppy Joe
- Market Pantry Grape Jelly
- Smucker's Strawberry Jelly
- Pop-Tarts Frosted Blueberry
- Hunt's Tomato Ketchup
- Wish-Bone Western Sweet & Smooth Dressing
- Coca-Cola Classic: no mercury found on a second test

- Yoplait Strawberry Yogurt
- Minute Maid Berry Punch
- Yoo-hoo [Chocolate](#) Drink
- Nesquik [Chocolate](#) Milk
- Kemps Fat Free [Chocolate](#) Milk

Wallinga and colleagues caution that their list was "just a snapshot in time; we only tested one sample of each product. That clearly is not sufficient grounds to give definitive advice to consumers."

Mercury exposure at high levels can harm the [brain](#), [heart](#), [kidneys](#), [lungs](#), and immune system. A form of mercury called methylmercury is particularly risky to a baby's developing [brain and nervous system](#), according to background information from the Environmental Protection Agency (EPA).

Wallinga points out that the lab only tested for total mercury levels, not methylmercury or other types of mercury. He also notes that the EPA has a "reference dose," or upper limit, for methylmercury intake but not for other forms of mercury.

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Where Did the Mercury Come From?

Wallinga's report doesn't prove that the mercury in the tested products came from high-fructose corn syrup, but "I'm hard pressed to say where else it would come from," Wallinga tells WebMD.

Wallinga explains that mercury can be used to make caustic soda, which is one of the products used to make high-fructose corn syrup. That's outdated technology; mercury isn't needed to make caustic soda, notes Audrae Erickson, president of the Corn Refiners Association, in a statement emailed to WebMD.

Erickson didn't comment specifically on Wallinga's study. Instead, her statement focuses on a new study published online in *Environmental Health*, which shows mercury in some samples of commercial high-fructose corn syrup tested in 2005.

"This study appears to be based on outdated information of dubious significance," Erickson states. "Our industry has used mercury-free versions of the two re-agents mentioned in the study, hydrochloric acid and caustic soda, for several years."

Wallinga agrees about the technological shift away from mercury. "If you just look within the confines of the U.S., yes, about 90% of production now is not using mercury," says Wallinga.

"The problem is that we don't actually know where our companies are buying their high-fructose corn syrup from ... it's a global industry."

"For me, the take-home message is really that this is a totally avoidable, unnecessary exposure to mercury," says Wallinga. "We've got a safer, more efficient technology for making these chemicals that are part of the ingredients used to manufacture high-fructose corn syrup."

Mercury's Form Unknown

Like Wallinga's report, the study published in *Environmental Health* doesn't specify the form of mercury present in the high-fructose corn syrup.

"I would imagine that a good majority of the mercury that is detected would have been in the form of elemental mercury," not methylmercury, toxicologist Carl Winter, PhD, tells WebMD. Winter, who directs the FoodSafe Program at the University of California, Davis, says that methylmercury is "by far the most toxic form of mercury" because methylmercury is better absorbed by the body than other forms of mercury.

"We have a principle in toxicology, which is the dose makes the poison," says Winter. "It's the amount of a chemical, not its presence or absence, that determines the potential for harm, and frankly, I don't see based on their findings that they've made much of a case that this is something that consumers need to worry about."

Besides his academic work, Winter is a volunteer spokesman for the Institute of Food Technologists, a nonprofit scientific society that includes food science and technology professionals in industry, academia, and government. Winter says his work has never been funded by food or chemical industries.

Companies Respond

WebMD contacted the makers of all 17 products that tested positive for mercury in Wallinga's report.

ConAgra Foods, which makes Manwich Bold Sloppy Joe and Hunt's Tomato Ketchup, is "absolutely confident in the safety of our products," ConAgra Foods spokeswoman Stephanie Childs tells WebMD.

Childs notes that "the levels of mercury reported in our ketchup are well below the EPA's safe exposure level. In fact, we estimate that you'd have to eat more than 100 pounds of ketchup per day to even come anywhere near the EPA's safe exposure level in terms of mercury.

A spokeswoman for Kraft Foods, Adrienne Dimopoulos, tells WebMD that Kraft has not had time to review the study's findings. However, "Kraft Foods' highest priority is the safety and quality of our products and the safety of our consumers. All of the ingredients we use are approved and deemed safe for food use by regulatory agencies, including the US FDA."

Amy Reilly, a spokeswoman for Target, which makes Market Pantry Grape Jelly, tells WebMD that Target is carefully evaluating the information and that "Target looks to the Food and Drug Administration to provide guidance on the safety of [food additives](#) and ingredients."

An FDA spokesperson tells WebMD that the FDA takes mercury contamination in food very seriously and that methylmercury is the form of mercury that's of the greatest concern. Dietary exposure to methylmercury comes almost exclusively from fish, and the new research on mercury in high fructose corn syrup doesn't provide enough information or analysis because it focuses on total mercury levels and the potential levels of exposure are extremely low, the spokesperson notes.

WebMD Health News Reviewed by [Louise Chang, MD](#) on January 27, 2009

Sources

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