

# Consumption of high-fructose corn syrup increased in Canada after tariffs lowered in NAFTA

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Lower tariffs on high-fructose corn syrup (HFCS) in the North American Free Trade Agreement (NAFTA) were linked to higher supply and likely consumption of added sweeteners in Canada, including HFCS, found new research published in *CMAJ (Canadian Medical Association Journal)*

The structuring of tariffs in NAFTA, which separated food and beverage syrups containing cane and beet sugars from HFCS, changed during NAFTA. Tariffs were removed from food and drink syrups made from HFCS between 1994 and 1998, but remained on those containing cane and beet sugars.

"Here we take advantage of an exceptional natural experiment in which tariffs on HFCS were withdrawn, within an existing system of free [trade](#) in goods," writes Pepita Barlow, University of Oxford, Oxford, United Kingdom, with coauthors.

The study, covering 1985-2000, found that lower tariffs on HFCS were associated with an increase of about 41.6 kcal in caloric sweeteners supplied and likely consumed per person per day in Canada. This increase in the supply of HFCS correlates with a large rise in obesity rates, from 5.6% in 1985 to 14.8% in 1998, as well as increases in diabetes. Even seemingly small increases in caloric intake can contribute to weight gain, with small daily increases adding up over time.

The study provides evidence on the impact that a US free trade agreement, such as NAFTA, may have on diet and health.

"Our findings are consistent with the hypothesis that US trade relations may have been an underlying population-level factor contributing to Canada's comparatively high rates of obesity, diabetes and noncommunicable diseases, through increased population-level exposure to added sugars," the authors write.

They note that their findings are consistent with other studies showing a change in food environments in countries that enter trade deals with the United States. These trade agreements may have important implications for health policy, as NAFTA is seen as a blueprint for future free trade agreements. These agreements include the Trans-Pacific Partnership between the US and 11 Pacific Rim countries, the Transatlantic Trade and Investment Partnership between the US and the European Union and a potential new [agreement](#) between the US and the United Kingdom after Brexit.

"Our analysis of the effects of NAFTA raises concern that these new trade deals could harm population health should lower tariffs lead to increased supply and potential consumption of unhealthy food items, particularly those containing HFCS," write the authors.

Data limitations did not allow the study authors to fully test how US exports reacted to tariffs and the impact of HFCS on health in Canada. Also, there may have been other factors in Canada that coincided with changes in NAFTA that could account for these findings.

"These limitations notwithstanding, we find evidence that lower tariffs following NAFTA were associated with increased supply and likely consumption of [caloric sweeteners](#) in Canada including potentially hazardous HFCS," they state.

"A key message is that US free trade agreements can increase exposure to potentially hazardous commodities—it's as much about changes to the harmful ingredients in peoples' diets as it is about the total number of calories consumed," says Ms. Barlow. The authors urge that when negotiating trade agreements, other countries should be aware of these potential effects.

In a related [commentary](#), Dr. Ronald Labonté, School of Epidemiology, University of Ottawa, with coauthor Ashley Schram, writes, "the uncertainty surrounding future trade negotiations, together with the economic impacts and societal value of trade and investment agreements being increasingly questioned in the mainstream media, provides public health with a new opportunity to influence the conversation. Public health should take advantage of the newly shifted terrain to make the case that any trade or investment policy that prizes economic growth over reducing health inequities and enhancing ecological sustainability is bad policy."

He commends the study authors for their innovative approach to research, important for supporting evidence-based policy for trade and [health](#).

**More information:** Pepita Barlow et al. Impact of the North American Free Trade Agreement on high-fructose corn syrup supply in Canada: a natural experiment using synthetic control methods, *Canadian Medical Association Journal* (2017). [DOI: 10.1503/cmaj.161152](https://doi.org/10.1503/cmaj.161152)

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