

Consuming sugary drinks during pregnancy may increase asthma risk in mid-childhood

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Children between the ages of 7 and 9 may be at greater risk for developing asthma if they consumed high amounts of fructose in early childhood or their mothers drank a lot of sugar-sweetened beverages while pregnant, according to new research published online in the *Annals of the American Thoracic Society*.

In "Prenatal and Early-life Fructose, Fructose-containing Beverages, and Mid-Childhood Asthma," researchers report on 1,068 mother-child pairs participating in Project Viva, a longitudinal study based in Eastern Massachusetts designed to find ways to improve the health of mothers and their children.

"Previous studies have linked intake of high fructose corn syrup sweetened beverages with asthma in school children, but there is little information about when during early development exposure to fructose might influence later health," said Sheryl L. Rifas-Shiman, MPH, a study lead author and senior research associate at Harvard Medical School and Harvard Pilgrim Health Care Institute.

After their first and second trimesters, mothers who participated in the study completed questionnaires about their food and beverage consumption, including regular soda and fruit drinks. When their children reached [early childhood](#) (3.3 years), the mothers completed another questionnaire to report their children's consumption of a variety of foods and beverages, including regular sodas and fruit drinks. Based on these responses, the researchers computed fructose intake and

analyzed results based on quartiles of sugar-sweetened beverage and fructose consumption.

The authors wrote that it was important to look at fructose consumption because it is a major contributor to total sugar intake and may have specific airway effects.

Asthma in mid-childhood was determined by a mother reporting a doctor's diagnosis of asthma, plus wheezing or [asthma medication](#) use in the past year.

The study found:

- In mid-childhood, 19 percent of the children had asthma.
- Mothers in the highest quartile of sugar-sweetened beverage and fructose consumption during pregnancy were 63 percent and 61 percent more likely, respectively, than those in the lowest quartile to have mid-childhood-age kids with asthma, when adjusted for pre-pregnancy body mass, age, race/ethnicity and other factors that may have affected results. The difference between the top and bottom quartiles was about 2 vs. 0 servings per day of [sugar-sweetened beverages](#) and 46 vs. 21 grams per day of fructose.
- Kids in the highest quartile of fructose consumption during their early childhoods were 64 percent more likely than those in the lowest quartile to have asthma in mid-childhood, when adjusted for maternal sugar-sweetened beverage [consumption](#), remained the same after adjusting for mid-childhood-age body mass. The difference between the top and bottom quartiles was about 44 vs. 15 grams per day of fructose.

The authors noted that other studies have found links between obesity and asthma and between sugar-sweetened beverage and high fructose

intake and increased asthma risk. Recent studies, they wrote, suggest that in addition to increasing [asthma risk](#) through obesity, [fructose](#) itself may cause inflammation in the lungs.

Study limitations include the fact that an observational study cannot show cause and effect, and study participants were mostly from more affluent families so findings may not be generalizable to socioeconomically disadvantaged families.

Still, Ms. Rifas-Shiman said, "avoiding high intake of sugary beverages during pregnancy and in early childhood could be one of several ways to reduce the risk of childhood [asthma](#)."

Provided by American Thoracic Society

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