Pregnant moms and their kids should limit added sugars to protect childhood cognition

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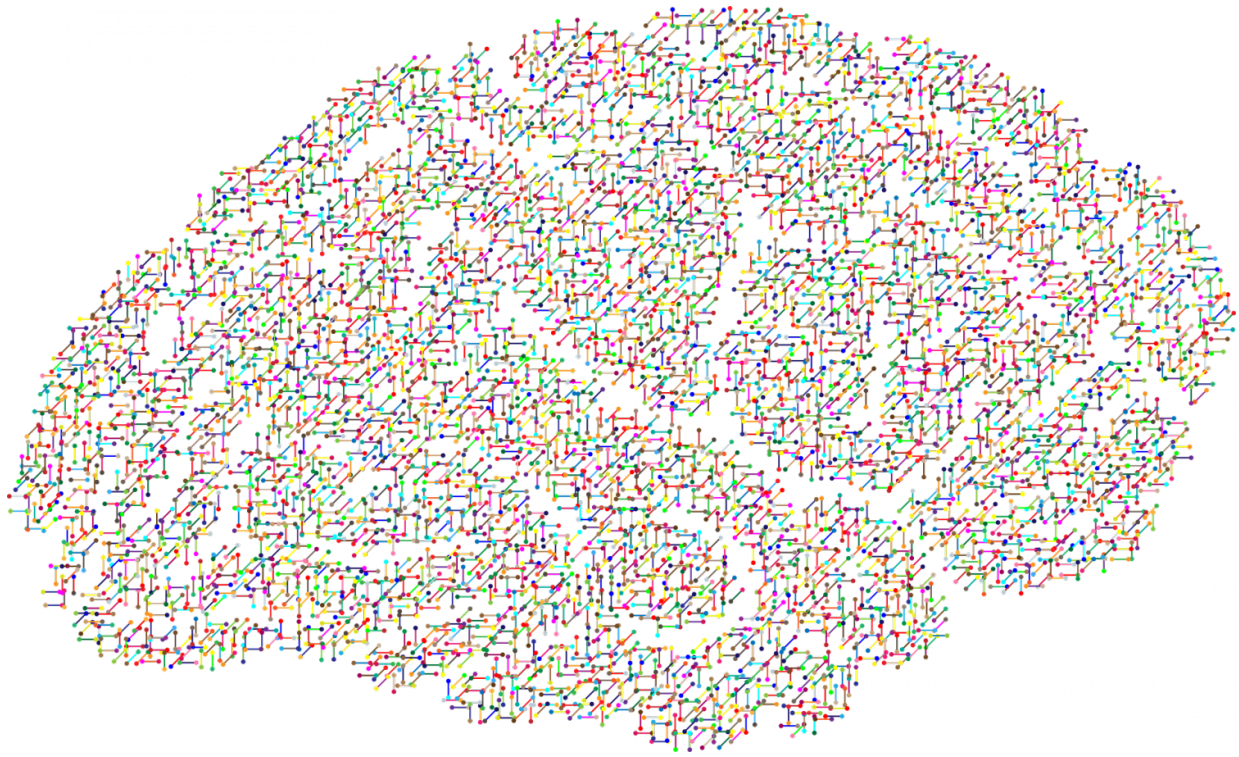

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A new study published in the *American Journal of Preventive Medicine* has determined that poorer childhood cognition occurred, particularly in memory and learning, when pregnant women or their offspring consumed greater quantities of sugar. Substituting diet soda for sugar-sweetened versions during pregnancy also appeared to have negative

effects. However, children's fruit consumption had beneficial effects and was associated with higher cognitive scores.

Research is increasingly focusing on the adverse impact of sugar consumption on health, especially high-fructose corn syrup. Sugar consumption among Americans is above recommended limits, and the Current Dietary Guidelines for Americans emphasize the importance of reducing calories from added sugars. They are incorporated into foods and beverages during preparation or processing, with sugar-sweetened beverages (SSBs) being the greatest contributor in Americans' diets. Evidence is also emerging that sugar consumption may negatively impact children's cognitive development.

"The aim of our study was to examine associations of pregnancy and offspring sugar consumption (sucrose, fructose) with child cognition," explained lead investigator Juliana F.W. Cohen, ScD, School of Health Sciences, Merrimack College, North Andover, MA, and Department of Nutrition, Harvard T.H. Chan School of Public Health, Boston, MA. "Additionally, we examined associations of maternal and child consumption of SSBs, other beverages including diet soda and juice, and fruit with child cognition."

Investigators collected dietary assessment data for more than 1,000 pregnant women from 1999 to 2002 who participated in Project Viva. Their offspring's diets were assessed in early childhood. Child cognition was assessed in early- and mid-childhood (at approximately age 3 and 7, respectively).

The results of this study indicate that consuming more fruits and less sugar, as well as avoiding diet soda during pregnancy, may have a meaningful impact on child cognitive functioning. Key findings include:

- Maternal sugar consumption, especially from SSBs, was

associated with poorer childhood cognition including non-verbal abilities to solve novel problems and poorer verbal memory.
- Maternal SSB consumption was associated with poorer global intelligence associated with both verbal knowledge and non-verbal skills.
- Maternal diet soda consumption was associated with poorer fine motor, visual spatial, and visual motor abilities in early childhood and poorer verbal abilities in mid-childhood.
- Childhood SSB consumption was associated with poorer verbal intelligence at mid-childhood.
- Child consumption of both fructose and fruit in early childhood was associated with higher cognitive scores in several areas and greater receptive vocabulary.
- Fruit was additionally associated with greater visual motor abilities in early childhood and verbal intelligence in mid-childhood.
- Fruit juice intake was not associated improved cognition, which may suggest the benefits are from other aspects of fruits, such as phytochemicals, and not fructose itself.

"This study provides evidence that there should be no further delays in implementing the new Nutrition Facts label. The new label will provide information on added sugars so that pregnant women and parents can make informed choices regarding added sugars and more easily limit their intake. This study also provides additional support for keeping federal nutrition programs strong, such as Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and the National School Lunch Program, because their promotion of diets higher in fruits and lower in added sugars may be associated with improved childhood cognition," said Dr. Cohen.

More information: Juliana F.W. Cohen et al. Associations of Prenatal and Child Sugar Intake With Child Cognition, *American Journal of*

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