

Sugary cola drinks linked for first time to higher risk of gestational diabetes

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Researchers from LSU Health Sciences Center New Orleans School of Public Health, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), Harvard School of Public Health, Brigham and Women's Hospital, and Harvard Medical School, have found for the first time that drinking more than 5 servings of sugar-sweetened cola a week prior to pregnancy appears to significantly elevate the risk of developing diabetes during pregnancy.

Liwei Chen, MD, PhD, Assistant Professor of Epidemiology at LSU Health Sciences Center New Orleans School of Public Health, is the lead author of the paper, A Prospective Study of Pre-Gravid Sugar-Sweetened Beverage Consumption and the Risk of Gestational Diabetes Mellitus, that will be published in the December 2009 issue of *Diabetes Care* and is available online now at <http://diabetes.org/diabetescare>.

The research team studied a group of 13,475 women from the Nurses' Health Study II. During 10 years of follow-up, 860 incident GDM cases were identified. After adjustment for known risk factors for GDM including age, family history of diabetes, parity, physical activity, smoking status, sugar-sweetened [beverage intake](#), alcohol intake, prepregnancy BMI, and Western dietary pattern, intake of sugar-sweetened cola was positively associated with the risk of GDM. No significant association was found for other sugar-sweetened beverages or diet beverages.

"Compared with women who consumed less than 1 serving per month,

those who consumed more than 5 servings per week of sugar-sweetened cola had a 22% greater GDM risk," notes Dr. Chen.

[Gestational diabetes](#) mellitus (GDM), defined as [glucose intolerance](#) beginning during pregnancy, is one of the most common [pregnancy complications](#). Women with GDM are at increased risk for complications and illness during pregnancy and delivery, as well as post-pregnancy type 2 diabetes. Children of mothers with GDM are at increased risk for obesity, glucose intolerance, and early onset diabetes.

Although the underlying mechanism remains unclear, available evidence suggests that the main defect in the development of GDM is relatively diminished insulin secretion coupled with pregnancy-induced insulin resistance. The researchers discuss a number of explanations of their findings. Consuming a large amount of sugar-sweetened beverages could contribute to a high glycemic load (GL) by providing a large amount of rapidly absorbable sugars. High-GL foods induce a greater plasma glucose response after eating which can result in insulin resistance and impaired beta cell function. (Pancreatic beta cells make insulin.) In addition, higher sugar intake itself may lead to impaired pancreatic cell function.

"We don't know why significant association was only found in sugar-sweetened cola, but not other types of sugar-sweetened beverages - fruit drinks, other soft drinks, etc.," says Dr. Chen. "One of the explanations could be the tremendous popularity of cola in the US."

Previous studies in children and adults have shown that regular consumption of sugary drinks is associated with excess caloric intake, greater weight gain, and increased risk of obesity. Sugary drinks have also been linked to type 2 [diabetes](#) and other metabolic disorders.

"This is the first study on the impact of sugar-sweetened beverages on

GDM risk," notes Dr. Chen. "This finding is important because sugar-sweetened beverages are the leading source of added sugars in the American diet, particularly in the age group most likely to conceive. Cutting down sugary drinks is clearly an important way to reduce this common pregnancy complication."

According to the National Health and Nutrition Examination Survey 1999-2001, from 1977 to 2001, soft drink intake increased from 4.1% to 9.8% for 19- to 39-year-olds. In percentage terms, soft drink intake was highest among this age group in comparison to other ages.

Source: Louisiana State University ([news](#) : [web](#))

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