

Women who eat foods with high glycemic index may be at greater risk for heart disease

April 12 2010

an indicator of how quickly a food affects blood glucose levels—appears to be associated with the risk of coronary heart disease in women but not men, according to a report in the April 12 issue of *Archives of Internal Medicine*.

High-carbohydrate diets increase the levels of blood glucose and of harmful blood fats known as triglycerides while reducing levels of protective HDL or "good" cholesterol, thereby increasing heart disease risk, according to background information in the article. However, not all carbohydrates have the same effect on blood glucose levels. The glycemic index is a measure of how much a food raises blood glucose levels compared with the same amount of glucose or white bread. A related measure, the glycemic load, is calculated based on the glycemic index of a given food and also on the total amount of carbohydrates it contains.

Sabina Sieri, Ph.D., of Fondazione IRCCS Istituto Nazionale dei Tumori, Milan, Italy, and colleagues studied 47,749 Italian adults—15,171 men and 32,578 [women](#)—who completed dietary questionnaires. Based on their responses, the researchers calculated their overall carbohydrate intakes as well as the average glycemic index of the foods they consumed and the glycemic loads of their diets. During a median (midpoint) of 7.9 years of follow-up, 463 participants (158 women and 305 men) developed coronary heart disease.

The one-fourth of women who consumed the most carbohydrates overall

had approximately twice the risk of heart disease as the one-fourth who consumed the least. When these carbohydrates were separated into high- and low-glycemic index categories, increased intake from high-glycemic index foods was significantly associated with greater risk of coronary heart disease, whereas low-glycemic index carbohydrates were not.

"Thus, a high consumption of carbohydrates from high-glycemic index foods, rather than the overall quantity of carbohydrates consumed, appears to influence the risk of developing [coronary heart disease](#)," the authors write.

The one-fourth of women whose diet had the highest glycemic load had 2.24 times the risk of heart disease compared with the one-fourth of women with the lowest glycemic load.

Overall carbohydrate intake, glycemic index and glycemic load were not associated with heart disease risk in men. This could be because the adverse changes associated with [carbohydrate](#) intake, including triglyceride levels, are stronger risk factors for [heart disease](#) in women than in men, the authors note.

"We tentatively suggest that the adverse effects of a high glycemic diet in women are mediated by sex-related differences in lipoprotein and glucose metabolism, but further prospective studies are required to verify a lack of association of a high dietary glycemic load with cardiovascular disease in men," they conclude.

More information: Arch Intern Med. 2010;170[7]:640-647

Provided by JAMA and Archives Journals

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(2010, April 12) retrieved 23 April 2024 from <https://medicalxpress.com/news/2010-04-women-foods-high-glycemic-index.html>

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