

## High Carbohydrate Diet and Heart Complications

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### Editorial Note

In the human small intestine, dietary carbohydrates with diverse chemical compositions (e.g. sugars, oligosaccharides, starches, and no starch polysaccharides) and physical configurations are metabolized and absorbed at different rates, leading to different blood glucose and insulin responses. High-carbohydrate diets raise blood glucose and harmful blood fats known as triglycerides while minimizing protective HDL or "good" cholesterol levels, raising the risk of developing heart disease. Carbohydrates' capacity to raise postprandial blood glucose levels changes. The Glycemic Index (GI) is a measurement that ranks foods containing carbohydrates according to how much they affect someone's blood sugar. The glycaemic index to help them choose healthful foods and monitor how much sugar and carbohydrates they eat. This approach can help someone manage their weight or a health condition such as diabetes. Glycemic which is a measure of how much a standard amount of food elevates blood glucose levels compared to a standard amount of glucose or white bread. As a result, the GI is a measure of how quickly a carbohydrate can be converted to glucose. The Glycemic Load (GL) parameter is indeed implemented as that carbohydrate content of a food (or overall diet) can fluctuate and have a varying influence on the postprandial glycemic response. Out of the entire study population, the top one-fourth of women who consumed far more carbohydrates had almost double the chance of heart disease as the bottom one-fourth who consumed the lowest.

The results of this study showed that one-fourth of women with the highest glycemic load had 2.24 times the risk of heart disease as one-fourth of women with the lowest glycemic load. When carbohydrate content was classified into high and low glycemic index measurements, a greater intake of high-glycemic index items was strongly associated with a higher chance of diabetes. Overall carbohydrate consumption, glycemic index, and glycemic load were not linked to a higher risk of heart disease in males. Part of the protection that women have from Coronary Heart Disease (CHD) may be related to their high HDL-C levels. Higher glycemic index diets tend to reduce circulating HDL-C concentrations and thus disproportionately increase CHD risk in women, especially when postmenopausal. At the same time, high-GI diets may raise TG levels, which may also carry more risk for CHD in women than in men. This might be because the detrimental consequences of carbohydrate consumption, such as triglyceride levels, are higher risk factors for heart disease in women than in males. GI is a dietary variable that can be manipulated easily and with good patient compliance, thus achieving a reduction in average dietary GI values can be effective. Low-GI diets may reduce plasma fatty acids and may suppress production or release of signaling hormones from adipose tissue, in turn tending to reverse dyslipidemia and insulin resistance. In general, the glycemic index and glycemic load data were in agreement, although the magnitude of the CHD risk was greater based on the difference between the extreme quantiles of glycemic load.