High Blood Sugar Raises Heart Disease Risk

Lowering blood sugar may reduce coronary heart disease risk in both diabetic and non-diabetic individuals, according to Johns Hopkins researchers.* The investigators found that hemoglobin A1c (HbA1c), a marker of long-term blood glucose level, is an independent predictor of heart disease risk in both diabetics and non-diabetics.

Diabetes, a condition marked by elevated blood sugar, is associated with an elevated risk of cardiovascular disease. Until now, however, it has been unclear whether elevated blood glucose independently contributes to an increased risk of heart disease.

In a prospective case-cohort study of 1,321 adults without diabetes and a cohort study of 1,626 adults with diabetes, researchers investigated the relationship between HbA1c levels and incident coronary heart disease over eight to ten years of follow up.

In participants with diabetes, each percentage-point increase in HbA1c was associated with a 14% jump in coronary heart disease risk. Although the American Diabetes Association has identified an HbA1c level of 7% as a target indicating healthy blood sugar control, these recent findings suggest that in diabetics, heart disease risk begins to increase even at HbA1c values below 7%.

The researchers found that non-diabetic individuals with HbA1c levels in the "high-normal" range of 5-6% saw an elevated risk for heart disease, even after accounting for other factors such as age, cholesterol, blood pressure, smoking, and body mass index. In fact, non-diabetic individuals with an HbA1c level of 6% or higher had almost double the heart disease risk of people with an HbA1c level below 4.6%.

Long-term elevation of blood sugar is an independent risk factor for cardiovascular disease, the investigators concluded, adding that, “For non-diabetics, lifestyle modifications, such as increased physical activity, weight loss, and eating a healthful, low-glycemic-index diet rich in fiber, fruit, and vegetables, may not only help prevent diabetes, but also reduce the risk of heart disease.”

—Elizabeth Wagner, ND
