Dietary carbohydrates, refined grains, glycemic load, and risk of coronary heart disease in Chinese adults.


Abstract
The potential long-term association between carbohydrate intake and the risk of coronary heart disease (CHD) remains unclear, especially among populations who habitually have high-carbohydrate diets. We prospectively examined intakes of carbohydrates and staple grains as well as glycemic index and glycemic load in relation to CHD among 177,366 Chinese women and men (40-74 years of age) without history of diabetes, CHD, stroke, or cancer at baseline in Shanghai, China. Diet was assessed using validated food frequency questionnaires. Incident CHD cases were ascertained during follow-up (in women, the mean was 9.8 years and in men, the mean was 5.4 years) and confirmed by medical records. Carbohydrate intake accounted for 67.6% of the total energy intake in women and 68.5% in men. Seventy percent of total carbohydrates came from white rice and 17% were from refined wheat products. Positive associations between carbohydrate intake and CHD were found in both sexes (all P for heterogeneity > 0.35). The combined multivariate-adjusted hazard ratios for the lowest to highest quartiles of carbohydrate intake, respectively, were 1.00, 1.38, 2.03, and 2.68 (95% confidence interval: 1.44, 5.08; P for trend = 0.001). The combined hazard ratios comparing the highest quintile with the lowest were 1.40 (95% confidence interval: 1.01, 1.91) for refined grains and 1.67 (95% confidence interval: 1.00, 3.03) for glycemic load (both P for trend = 0.03). High carbohydrate intake, mainly from refined grains, was associated with increased CHD risk in Chinese adults.

KEYWORDS: Chinese; carbohydrates; coronary heart disease; glycemic load; refined grains

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