

# Low-Carbohydrate-Diet Score and the Risk of Coronary Heart Disease in Women

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## ABSTRACT

**Background** Low-carbohydrate diets have been advocated for weight loss and to prevent obesity, but the long-term safety of these diets has not been determined.

**Methods** We evaluated data on 82,802 women in the Nurses' Health Study who had completed a validated food-frequency questionnaire. Data from the questionnaire were used to calculate a low-carbohydrate-diet score, which was based on the percentage of energy as carbohydrate, fat, and protein (a higher score reflects a higher intake of fat and protein and a lower intake of carbohydrate). The association between the low-carbohydrate-diet score and the risk of coronary heart disease was examined.

**Results** During 20 years of follow-up, we documented 1994 new cases of coronary heart disease. After multivariate adjustment, the relative risk of coronary heart disease comparing highest and lowest deciles of the low-carbohydrate-diet score was 0.94 (95% confidence interval [CI], 0.76 to 1.18; P for trend=0.19). The relative risk comparing highest and lowest deciles of a low-carbohydrate-diet score on the basis of the percentage of energy from carbohydrate, animal protein, and animal fat was 0.94 (95% CI, 0.74 to 1.19; P for trend=0.52), whereas the relative risk on the basis of the percentage of energy from intake of carbohydrates, vegetable protein, and vegetable fat was 0.70 (95% CI, 0.56 to 0.88; P for trend=0.002). A higher glycemic load was strongly associated with an increased risk of coronary heart disease (relative risk comparing highest and lowest deciles, 1.90; 95% CI, 1.15 to 3.15; P for trend=0.003).

**Conclusions** Our findings suggest that diets lower in carbohydrate and higher in protein and fat are not associated with increased risk of coronary heart disease in women. When vegetable sources of fat and protein are chosen, these diets may moderately reduce the risk of coronary heart disease.

## Source Information

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