

Plant-based, low-carb diet may promote weight loss and improve cholesterol levels

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Overweight individuals who ate a low-calorie, low-carbohydrate diet high in plant-based proteins for four weeks lost weight and experienced improvements in blood cholesterol levels and other heart disease risk factors, according to a report in the June 8 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals. A high-carbohydrate, low-fat vegetarian diet also resulted in weight loss but without the additional cardiovascular benefits.

"There is a dilemma relating to the proportion and source of fat, protein and carbohydrate that constitutes the optimal [weight loss](#) and cholesterol-lowering diet," the authors write as background information in the article. Newer dietary approaches for the prevention and treatment of chronic disease emphasize increased fruit and vegetable intake and reduced meat consumption.

However, low-carbohydrate diets with increased meat consumption have also been promoted for body weight reduction and the prevention and treatment of diabetes and coronary [heart disease](#). These diets have been shown to be effective in inducing weight loss, reducing insulin resistance, lowering blood fats known as triglycerides and raising high-density lipoprotein cholesterol (HDL-C, or "good" cholesterol) levels, but have tended to increase low-density lipoprotein cholesterol (LDL-C, or "bad" cholesterol) levels. "This lack of a benefit for LDL-C control is a major disadvantage in using this dietary strategy in those already at increased risk of coronary heart disease," the authors write.

David J.A. Jenkins, M.D., of St. Michael's Hospital and the University of Toronto, Ontario, Canada, and colleagues tested the effects of a low-carbohydrate diet high in vegetable proteins from gluten, soy, nuts, fruits, vegetables, cereals and vegetable oils among overweight men and women with high LDL [cholesterol levels](#). A total of 25 participants were randomly assigned to consume

this diet—the "Eco-Atkins" diet—for four weeks, while an additional 25 participants ate a control diet that was high-carbohydrate, lacto-ovo vegetarian and based on low-fat dairy and whole grain products. Study food was provided to participants at 60 percent of their estimated calorie requirements.

Of the 47 participants who began the study, 44 (22 in each group) completed the four-week period. Weight loss was similar—about 4 kilograms or 8.8 pounds—in both groups. However, reductions in LDL-C levels and improvements in the ratios between total cholesterol and HDL-C were greater for the low-carbohydrate diet compared with the high-carbohydrate diet. The low-carbohydrate diet also appeared to produce beneficial changes in levels and ratios of apolipoproteins, proteins that bind to fats. In addition, small but significantly greater reductions were seen in both systolic (top number) and diastolic (bottom number) blood pressure for the low-carbohydrate vs. the high-carbohydrate group.

Pending answers to important questions, including whether further reducing carbohydrate intake would produce additional benefits, "a plant-based low-carbohydrate diet high in vegetable proteins and oils may be an effective option in treating those with dyslipidemia for whom both weight loss and lower LDL-C concentrations are treatment goals," the authors conclude.

Source: JAMA and Archives Journals ([news](#) : [web](#))

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