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[Ann Intern Med.](#) 2014 Sep 2;161(5):309-18. doi: 10.7326/M14-0180.**Effects of low-carbohydrate and low-fat diets: a randomized trial.**[Bazzano LA](#), [Hu T](#), [Reynolds K](#), [Yao L](#), [Bunol C](#), [Liu Y](#), [Chen CS](#), [Klag MJ](#), [Whelton PK](#), [He J](#).**Abstract**

BACKGROUND: Low-carbohydrate diets are popular for weight loss, but their cardiovascular effects have not been well-studied, particularly in diverse populations.

OBJECTIVE: To examine the effects of a low-carbohydrate diet compared with a low-fat diet on body weight and cardiovascular risk factors.

DESIGN: A randomized, parallel-group trial. (ClinicalTrials.gov: NCT00609271).

SETTING: A large academic medical center.

PARTICIPANTS: 148 men and women without clinical cardiovascular disease and diabetes.

INTERVENTION: A low-carbohydrate (<40 g/d) or low-fat (<30% of daily energy intake from total fat [<7% saturated fat]) diet. Both groups received dietary counseling at regular intervals throughout the trial.

MEASUREMENTS: Data on weight, cardiovascular risk factors, and dietary composition were collected at 0, 3, 6, and 12 months.

RESULTS: Sixty participants (82%) in the low-fat group and 59 (79%) in the low-carbohydrate group completed the intervention. At 12 months, participants on the low-carbohydrate diet had greater decreases in weight (mean difference in change, -3.5 kg [95% CI, -5.6 to -1.4 kg]; P = 0.002), fat mass (mean difference in change, -1.5% [CI, -2.6% to -0.4%]; P = 0.011), ratio of total-high-density lipoprotein (HDL) cholesterol (mean difference in change, -0.44 [CI, -0.71 to -0.16]; P = 0.002), and triglyceride level (mean difference in change, -0.16 mmol/L [-14.1 mg/dL] [CI, -0.31 to -0.01 mmol/L {-27.4 to -0.8 mg/dL}]; P = 0.038) and greater increases in HDL cholesterol level (mean difference in change, 0.18 mmol/L [7.0 mg/dL] [CI, 0.08 to 0.28 mmol/L {3.0 to 11.0 mg/dL}]; P < 0.001) than those on the low-fat diet.

LIMITATION: Lack of clinical cardiovascular disease end points.

CONCLUSION: The low-carbohydrate diet was more effective for weight loss and cardiovascular risk factor reduction than the low-fat diet. Restricting carbohydrate may be an option for persons seeking to lose weight and reduce cardiovascular risk factors.