



Dietary Fiber and Body Weight

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Abstract

Objective: This review provides an update of recent studies of dietary fiber and weight and includes a discussion of potential mechanisms of how dietary fiber can aid weight loss and weight maintenance.

Methods: Human studies published on dietary fiber and body weight were reviewed and summarized. Dietary fiber content of popular low-carbohydrate diets were calculated and are presented.

Results: Epidemiologic support that dietary fiber intake prevents obesity is strong. Fiber intake is inversely associated with body weight and body fat. In addition, fiber intake is inversely associated with body mass index at all levels of fat intake after adjusting for confounding factors. Results from intervention studies are more mixed, although the addition of dietary fiber generally decreases food intake and, hence, body weight. Many mechanisms have been suggested for how dietary fiber aids in weight management, including promoting satiation, decreasing absorption of macronutrients, and altering secretion of gut hormones.

Conclusion: The average fiber intake of adults in the United States is less than half recommended levels and is lower still among those who follow currently popular low-carbohydrate diets, such as Atkins and South Beach. Increasing consumption of dietary fiber with fruits, vegetables, whole grains, and legumes across the life cycle is a critical step in stemming the epidemic of obesity found in developed countries. The addition of functional fiber to weight-loss diets should also be considered as a tool to improve success.