

OBESITY

Weight-loss programs compared: diet or medication?

Two widely available, potent weight-loss programs—a low-carbohydrate, ketogenic diet or orlistat therapy combined with a low-fat diet—lead to similar beneficial effects on weight, lipids and glycemic parameters, say US researchers.

Some studies have shown that a low-carbohydrate diet is better for weight loss than a low-fat, calorie-restricted diet. The investigators were interested in seeing how a low-carbohydrate diet would compare with weight-loss medication, which has also been shown to be superior to a low-fat, calorie-restricted diet. “We chose orlistat, because it has a better safety profile than other weight-loss medications and is now available over-the-counter,” explains lead author William S. Yancy Jr (Veterans Affairs and Duke University Medical Centers, Durham, NC).

Over 48 weeks, 146 study participants (mean age 52 years) with overweight or obesity were treated with either a low-carbohydrate, ketogenic diet (initially, 20 g of carbohydrate daily) or with orlistat (120 mg oral dose given three times daily)

in combination with a low-fat diet (30% energy from fat, 500–1,000 kcal deficit per day). The primary outcome measures were body weight, blood pressure, fasting serum lipid concentrations and glycemic parameters.

Mean weight loss was substantial but similar for the two groups: 11.4 kg for the low-carbohydrate, ketogenic diet group and 9.6 kg for the group treated with orlistat and a low-fat diet. Both treatment strategies improved certain risk factors, such as levels of cholesterol or glucose, and were well-tolerated. Patients on a low-carbohydrate diet, however, showed greater improvement of systolic and diastolic blood pressure compared with the orlistat therapy group.

Both interventions were effective and safe in patients with chronic illnesses when they were used in a clinical setting with diet counseling and medical supervision, and are now widely available.

Yancy says the team now plan “to investigate strategies to improve long-term adherence to weight-loss counseling, currently the biggest issue in weight



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management research.” They will also attempt to determine the mechanisms underlying the blood-pressure improvement in the low-carbohydrate diet group.

Linda Koch

Original article Yancy, W. S. Jr *et al.* A randomized trial of a low-carbohydrate diet vs orlistat plus a low-fat diet for weight loss. *Arch. Intern. Med.* 170, 136–145 (2010)