Do Commercial Weight Loss Programs Work?

Truby H, Baic S, deLooy A, et al. Randomised controlled trial of four commercial weight loss programmes in the UK: initial findings from the BBC "diet trials." BMJ 2006;332;1309–14.

Study Overview

Objective. To compare the effects of 4 commercial weight loss programs on change in weight and body fat.

Design. Unblinded, randomized controlled trial.

Setting and participants. Participants were recruited from 5 regional medical centers in the United Kingdom and were included if they were aged 18 to 65 years and had a body mass index between 27 and 40 kg/m^2. Participants were excluded if they had diabetes; coronary heart disease; renal, liver, or respiratory failure; depression; a history of an eating disorder; gout; obesity caused by an endocrine abnormality; alcohol or drug misuse; prior weight reduction surgery; history of any malabsorptive state; or cancer. Additionally, participants were excluded if they used any prescription diet medications, used lipid-lowering or antihypertensive medications, or were pregnant or breastfeeding.

Intervention. Participants were randomized to either the Weight Watchers pure points program, Slim-Fast plan, Dr. Atkins' new diet revolution, Rosemary Conley's eat yourself thin diet and fitness plan, or the control group for 6 months. Participants allocated to the group programs (Weight Watchers and Rosemary Conley) were reimbursed for the cost of joining and attending 1 class per week. Slim-Fast plan participants were reimbursed for the cost of 2 meal replacements per day and additional educational materials associated with the plan, and Atkins diet participants received a copy of *Dr. Atkins' New Diet Revolution*. Patients allocated to the control group were advised to maintain their current diet and exercise pattern. At baseline, 2 months, and 6 months, weight, height, waist circumference, fasting blood glucose, blood pressure, and body fat were measured. Body fat was measured using whole body x-ray absorptiometry. Each participant completed a 7-day diet and activity diaries at baseline, 8 weeks, and 24 weeks. Participants were contacted at 12 months to report weight and dieting behavior.

Main outcome measures. The primary outcome measure was weight and body fat changes after 6 months.

Main results. Of 293 participants, 57 were randomized to the Atkins diet, 58 to Weight Watchers, 59 to Slim-Fast, 58 to Rosemary Conley, and 61 to the control group. Baseline characteristics were similar across the 5 groups. The mean time spent on the diet was 24.3 weeks. During the first 4 weeks, mean weight loss was highest in the Atkins group as compared with Weight Watchers, Slim-Fast, and Rosemary Conley (4.4 kg versus 2.9 kg, 2.7 kg, and 3.2 kg, respectively; $P < 0.001$). After 4 weeks and for the remainder of the trial, mean weight loss was similar across all groups. Between baseline and 6 months, body fat loss was significantly greater in the diet groups compared with the control group, but no differences were found between individual diet groups. The percentage fat loss in the control group at 6 months was 1.6% compared with 3.3% for the Atkins diet, 3.3% for Weight Watchers, 2.9% for Slim-Fast, and 3.5% for Rosemary Conley. At 6 months, there were no significant differences in systolic or diastolic blood pressure between any of the 5 study groups. At 6 months, Weight Watchers participants had a statistically significant reduction in fasting glucose and cholesterol as compared with controls. No differences were found in serum glucose or cholesterol between Atkins, Slim-Fast, Rosemary Conley, and controls. When the analysis was limited to individuals who completed the 6-month trial, the proportion of participants who lost at least 10% of their body weight was 45% for Atkins, 36% for Weight Watchers, 21% for Slim-Fast, and 46% for Rosemary Conley. No difference was found in absolute weight loss between the diets at the 12-month follow-up.

Conclusion. In motivated individuals, commercial diet programs can lead to clinically meaningful weight loss after 6 months. No particular diet appeared more effective based on short-term follow-up, although cholesterol and fasting glucose levels were reduced for individuals enrolled in the Weight Watchers program.

Commentary

Obesity rates continue to climb, making weight loss a public health priority [1]. Patients are barraged with a variety of weight loss options, many of which make dubious claims. The diet and weight loss industry is a multi-billion dollar enterprise, and it is certain that new diet fads will continue to emerge. Unfortunately, very limited evidence exists to

critically evaluate these programs. Truby et al randomized participants to 1 of 4 common commercial weight loss programs. The investigators did not advise participants regarding diet or lifestyle but only covered the entry costs for these programs. After 6 months, 28% of participants withdrew from the study. At 12 months, approximately 15% of Atkins and Slim-Fast participants were still using the programs, whereas 35% of Weight Watchers and Rosemary Conley participants remained active with the programs.

Although the duration of the trial was limited, all 4 diet programs appeared to be more effective for weight loss compared with the control group. Not surprisingly, participants who were more motivated lost more weight, but absolute weight loss varied widely, with some individuals gaining weight. Few participants stayed with their assigned program for 12 months. In a secondary analysis, individuals who remained on their allocated diet for 12 months maintained mean weight losses greater than 10% of their initial body weight.

Applications for Clinical Practice

For individuals motivated to lose weight, commercial weight loss programs can result in significant weight loss at 6 months. Long-term data are unavailable, but it appears that few individuals remain on a structured weight loss program for 12 months. Group programs may have better long-term compliance compared with nongroup programs.

—Review by Harvey J. Murff, MD, MPH

Reference

1. Wyatt SB, Winters KP, Dubbert PM. Overweight and obesity: prevalence, consequences, and causes of a growing public health problem. Am J Med Sci 2006;331:166–74.

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