

Abstract:**Effects of a Commercially-Available Structured Weight Loss Program on Body Weight and Anthropometric Measures in Overweight and Obese Adults**

Background: In general, provision of meals and use of meal-replacement products promote weight loss. However, each commercial program is unique so data from clinical trials documenting the degree of weight loss and related outcomes achievable with each commercial program are needed.

Objective: The aim of this single-arm study was to examine the effect of a commercially-available structured weight loss program on body weight, anthropometric measures, selected cardiometabolic outcomes, hunger/appetite, energy, and strength in overweight and obese adults.

Methods: 116 overweight/obese adults (n = 81 women, n = 35 men) with a mean (\pm standard error of the mean) age of 49.7 ± 1.0 y and body mass index (BMI) of 34.7 ± 0.4 kg/m² at screening were enrolled into the Nutrisystem Standard program for 12 weeks. During the first week, subjects consumed approximately 1000 kcal/day [\sim 50% kcal from carbohydrate, \geq 25% from protein, \leq 30% from fat, \leq 10% from saturated fat)]. At the beginning of the second week, subjects transitioned to the next phase of the program (Women: \sim 1200-1250 kcal/day; Men: \sim 1450-1500 kcal/day) and remained in this phase for the duration of the study. For each phase, subjects received Nutrisystem pre-packaged, portion-controlled foods and received guidance from Nutrisystem on how to select additional foods that fit within the program guidelines. Changes in body weight, body composition (lean and fat mass measured via dual energy x-ray absorptiometry), and body circumference (chest, waist, hip, thigh, arm) from baseline to week 12 were outcomes of primary interest, in addition to blood glucose, blood pressure, and upper and lower body strength. Results presented were derived from a modified intent-to-treat sample with last-observation carried forward in a repeated measures analysis of covariance model.

Results: Subjects lost an average of (95% CI of the mean) of 12.9 pounds (-14.4, -11.6) at 8 weeks. Subjects lost an average (95% CI of the mean) of 14.9 pounds (-16.7, -13.0) of total body weight, 10.45 pounds (-11.92, -8.98) of total body fat mass, and 7.5 inches (-8.5, -6.5) of total body circumference at 12 weeks. Blood glucose was unaffected, but subjects had lower systolic and diastolic blood pressure and greater upper and lower body strength at 12 weeks.

Conclusion: The Nutrisystem Standard program resulted in favorable changes in body weight, total body circumference, body fat mass, and blood pressure over a 12-week period.