

D3358R**Does Step Count Feedback Enhance Counseling for Weight Loss?**

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Abstract

Objective: This proposal was developed at the request of, and with input from, the Research Council of the VA's National Advisory Board for Nutrition and Food Services, in an effort to address obesity, a major health problem for VA patients. The prevalence of obesity in the United States has been increasing at an alarming rate. As a result, obesity related chronic diseases such as diabetes are also increasing in prevalence. While interventions that focus only on dietary changes can result in significant weight loss, the lost weight is often rapidly regained. Physical activity, when added to a dietary weight loss program, not only increases the initial weight loss but it also can play a critical role in preventing weight regain. The primary objective of the proposed study is to test the efficacy of and adherence to a low-cost, innovative weight loss program targeting lifestyle physical activity and diet in individuals with cardiovascular risk factors or disease.

Study Design and Methods: In this 3 year multi-site randomized controlled trial, we will recruit overweight and obese veterans with cardiovascular disease risk factors or known cardiovascular disease who have been referred for nutritional counseling or who have responded to advertisements for the study. Research participants will be randomized to one of three study groups: (1) nutritional counseling alone; (2) nutritional counseling with simple pedometer feedback; and (3) nutritional counseling, with both simple pedometer and enhanced pedometer (web-based) feedback. Each participant will have 5 visits with a dietitian in the course of 6 months. Participants randomized to receive pedometer feedback will review objectively monitored step-count data during their nutritional counseling sessions and will use the data to set new step-count goals. The primary outcome, weight loss, will be assessed at the sixth and final session. Adherence to the walking program will also be assessed for participants in all three arms of the study using accelerometers to objectively measure activity levels without providing feedback to the participants.

Results: We randomized 255 participants with mean age of 56.3 ± 10.0 years, mean BMI 36.2 ± 5.0 and a mean of 5.2 ± 2.3 medical co-morbidities. Forty-three percent had diabetes and 30% had known CVD. A total of 183 participants completed the intervention for a dropout rate of 28%. Dropouts were distributed evenly across the three groups. At six months, participants in the SportBrain group lost significantly more weight (4.6 ± 14.1 lbs) than those in the time-based group (1.9 ± 12.1 lbs, $p = 0.002$) and Digiwalker group (1.3 ± 11.1 lbs, $p = 0.022$).

Conclusion: Incorporating Internet-mediated pedometers with automatic uploading, online tracking and tailored feedback into a traditional nutritional weight-loss program results in greater weight loss in sedentary high-risk veterans than walking programs that use time-based walking goals or simple pedometers that require manual logging.