

2 clinical trials demonstrate effective weight loss strategies for obese and overweight adults

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Lifestyle interventions, including physical activity and structured weight loss programs, can result in significant weight loss for overweight, obese and severely obese adults, according to two reports that were posted online October 9 by *JAMA*. The studies and accompanying editorials were made available early online to coincide with the presentation of these papers at the 28th Annual Scientific Meeting of the Obesity Society. The articles appear in the October 27 print issue of *JAMA*.

According to background information in the papers, obesity is among the most significant public health problems of the 21st century and the prevalence of obesity has been rapidly rising for the past three decades, especially among African American women. National statistics indicate that the prevalence for overweight and obesity combined (having a [body mass index](#) of 25 or greater) is 68 percent of the population. Both papers note the increased risk of numerous other medical problems for people who are overweight or obese, including diabetes and [high blood pressure](#). The authors also point out the lack of scientific evidence for most weight loss programs or evidence-based treatment guidelines, particularly for severe obesity.

In a one-year intensive [lifestyle intervention](#) study of diet and [physical activity](#), Bret H. Goodpaster, Ph.D., from the University of Pittsburgh School of Medicine and colleagues, randomized a group of 130 severely obese adult individuals without diabetes in two groups to assess weight

loss for a period of one year. One group was randomized to diet and physical activity for the entire 12 months, while the other group had the identical dietary intervention, but with physical activity delayed for six months. The study was conducted from February 2007 with follow-up through April 2010.

"To facilitate dietary compliance and improve weight loss, liquid and pre-packaged meal replacements were provided at no cost for all but one meal per day during months one through three and for only one meal replacement per day during months four through six of the intervention," the authors report. The physical activity component included brisk walking up to 60 minutes, five days a week. Participants were provided with a pedometer and encouraged to walk at least 10,000 steps a day. Small financial incentives for adherence to the behavioral goals of the intervention were also provided. The participants received a combination of group, individual and telephone contacts as part of the lifestyle intervention.

"Of 130 participants randomized, 101 (78 percent) completed the 12-month follow-up assessments," the authors state. The group that started with the diet and physical activity lost more weight in the first six months than the delayed-activity group (about 24 pounds as compared to 18 pounds). However, the authors report that weight loss at 12 months was about the same in the two groups (almost 27 pounds versus about 22 pounds). "Waist circumference, visceral abdominal fat, hepatic (liver) fat content, blood pressure and insulin resistance were all reduced in both groups," according to the authors.

"In conclusion, intensive lifestyle interventions using a behavior-based approach can result in clinically significant and meaningful weight loss and improvements in cardiometabolic risk factors in severely obese persons. It is also clear that physical activity should be incorporated early in any dietary restriction approach to induce weight loss and to reduce

hepatic steatosis [fatty liver] and abdominal fat. Our data make a strong case that serious consideration should be given by health care systems to incorporating more intensive lifestyle interventions similar to those used in our study. Additional studies are clearly needed to determine long-term efficacy and cost-effectiveness of such approaches."

Prepared Meals and Incentivized Weight Loss Program for Obese and Overweight Women

In another article being released early online, Cheryl L. Rock, Ph.D., R.D., from Moores UCSD Cancer Center, La Jolla, Calif., and colleagues, conducted a randomized controlled trial of weight loss and weight maintenance in 442 overweight or obese women (BMI, 25 - 40), ages 18 to 69, over a two year period with follow-up between November 2007 and April 2010.

The women were randomized into three intervention groups: in-person, center-based (167 women) or telephone based (164 women) weekly one-to-one weight loss counseling, including free-of-charge prepackaged prepared foods (from Jenny Craig, Inc.) and increased physical activity for 30 minutes a day, five days a week. The participants were eventually transitioned to a meal plan that was not based mainly on the commercial program. The third group was the usual care group (111 women) who received two individualized weight loss counseling sessions with a dietetics professional and monthly contacts. All participants were provided a small monetary compensation (\$25) for each completed clinic visit.

At 24 months, weight data were available for 407 of the 442 women (92.1 percent of the study sample). The average weight loss for the women participating in the center-based group was about 16 pounds or 7.9 percent of their initial weight, about 14 pounds or 6.8 percent for the telephone-based group, and about 4.5 pounds for the usual care control

group. "By study end, more than half in either intervention group (62 percent of center-based [n=103] and 56 percent [n=91] of telephone-based participants) had a weight loss of at least 5 percent compared with 29 percent (n=32) of usual care participants," the authors report.

"Findings from this study suggest that this incentivized structured weight loss program with free prepared meals can effectively promote weight loss compared with usual care group," the authors comment.

"Importantly, weight loss was largely maintained at two-year follow-up." They note that even small percentage weight changes can result in a reduction of risk for cardiovascular disease and diabetes.

In conclusion the authors write: "For clinical practitioners, the evidence suggests that the structured program as applied in this study provides another route for their overweight and obese patients to achieve and maintain [weight loss](#) through behavioral changes for at least a two-year period."

More information: *JAMA*. 2010;304[16]:1795-1802.
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