

# Review: Little evidence supports the efficacy of major commercial and organized self-help weight loss programs

Tsai AG, Wadden TA. Systematic review: an evaluation of major commercial weight loss programs in the United States. *Ann Intern Med.* 2005;142:56-66.

**Clinical impact ratings:** GIM/FP/GP ★★★★★☆

## QUESTION

What is the efficacy of major commercial or organized self-help weight loss programs that provide structured in-person or online counseling?

## METHODS

**Data sources:** MEDLINE (1966 to October 1, 2003), bibliographies of relevant studies, and the publication lists of 2 companies.

**Study selection and assessment:** Randomized controlled trials (RCTs) or prospective case series studies of major commercial or organized self-help weight loss programs in the United States. Included studies provided regular in-person or online counseling for  $\geq 12$  weeks, included only adults, reported number of trial participants, assessed  $\geq 10$  participants, evaluated the program under the same conditions in which it was offered to the public, and had  $\geq 1$ -year follow-up after treatment. Studies of self-help weight-loss approaches based on books, meal-replacement plans, or similar products were excluded. Quality assessment included study design and attrition.

**Outcome:** Weight loss.

## MAIN RESULTS

10 studies ( $n = 1879$ ) met the selection criteria. 3 RCTs ( $n = 551$ ) assessed a nonmedical program (Weight Watchers). Of these, 1 RCT ( $n = 423$ ) reported that participants attending Weight Watchers meetings had a mean loss of 3.2% of initial weight at 2 years compared with 0% in participants assigned to a self-help intervention that included 2 dietitian visits ( $P < 0.001$ ).

5 studies ( $n = 1048$ ) assessed physician-supervised weight loss programs: 3 of Health Management Resources (Boston, Massachusetts) and 2 of OPTIFAST (Novartis Nutrition, Minneapolis, Minnesota). Both programs offered meal-replacement products as part of a low-calorie or very-low-calorie diet with a curriculum of lifestyle modification. 1 of these 5 studies was an RCT. The RCT ( $n = 40$ ) compared meal-replacement products alone with meal-replacement products plus usual table foods in patients with type 2 diabetes and obesity but did not report between-group differences in weight loss at 1 year.

1 RCT ( $n = 46$ ) assessed a commercial Internet-based weight loss program (eDiets.

com). At 1 year, participants in the Internet-based program lost 1.1% of their initial weight compared with 4.0% in participants who used a behavioral weight loss manual ( $P = 0.04$ ).

1 RCT ( $n = 234$ ) assessed an organized self-help program (Take Off Pounds Sensibly [TOPS]). At 1 year, the TOPS program was less effective than a therapist-led behavioral modification program for achieving weight loss ( $P$  value between groups not provided).

## CONCLUSIONS

1 of 5 randomized controlled trials showed that a nonmedical commercial weight loss program (Weight Watchers) was modestly effective in achieving long-term weight loss. Little evidence supports the efficacy of commercial and self-help weight loss programs.

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## COMMENTARY

Weight loss and loss maintenance require permanent behavior modification. Any plan that safely achieves initial calorie deficit (i.e., intake less than output) followed by a state of equilibrium will be effective. Adherence is important in any weight loss plan.

Tsai and Wadden found Weight Watchers to be modestly effective (5.3% weight loss at 1 y and 3.2% at 2 y); however, no improvements were seen in obesity-related conditions. The finding that Internet support was ineffective implies a need for closer involvement or more accountability.

Commercial weight loss plans that do not require medication or very-low-calorie intake have low medical risk with tremendous potential benefits. Cost-effectiveness is another matter: For the individual, it is personal; for the health care system, it is uncertain. How much is saved by weight loss compared with the money spent to achieve that loss? The psychological effect of initial or repeated failure is also not yet known.

Weight loss studies are difficult to design. Most research has not addressed whether those who do not lose weight accomplish weight

maintenance (i.e., if participants were not in the study, would they have become more obese?). Self-selection bias is present but crudely reflects real life: Persons have to be ready to change or able to be brought to that point for change to occur.

Weight loss is multifactorial and complex and requires comprehensive study. In my view, such a study would be open to all who expressed a desire to lose weight. Participants would be stratified by their assessed readiness for change and extent of overweight, then randomized within these strata to assure balance for these features in the 2 study groups. Screening and evaluation of food habits would be used to steer participants into a food plan best suited to their personal eating preferences. Further study along these lines would be beneficial.

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