Systematic review: an evaluation of major commercial weight loss programs in the United States

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CRD summary
This review set out to determine the efficacy and cost-effectiveness of commercial and organised self-help weight loss programmes in the USA. The authors concluded that the evidence to support the use of major commercial and self-help weight loss programmes is suboptimal. Despite the limitations of the review, this conclusion seems appropriate.

Authors' objectives
To determine the efficacy and costs of commercial and organised self-help weight loss programmes that provide structured in-person or online counselling available in the USA.

Searching
MEDLINE was searched between 1966 and October 2003; the search terms were reported. The bibliographies of retrieved articles, a book and a review, and a summary of the industry data were also searched. Only the published data were included in the review. Websites of commercial weight loss programmes were searched for programme components and costs, and companies were contacted via telephone if information was not available online.

Study selection
Study designs of evaluations included in the review
Inclusion criteria relating to the study design were not specific. Studies that did not state the duration of treatment, or if the duration was less than 12 weeks, were excluded. Case series had to have a follow-up period of at least 12 months to be included. Retrospective case series, and case series that did not report the number of participants initially included in the study, were excluded.

Specific interventions included in the review
Studies of commercial weight loss programmes that were assessed under the same conditions as would be expected in practice were eligible for inclusion. The programmes varied in terms of staff qualifications, diet, physical activity, behaviour modification and support.

Participants included in the review
Studies conducted in the USA on an adult population of at least 10 participants were eligible for inclusion. The number of participants in the included studies ranged from 40 to 517, with the majority of the participants being women (from 48 to 100%; 3 trials were comprised exclusively of women).

Outcomes assessed in the review
Inclusion criteria relating to the outcomes were not specified. The outcomes reported were maximum and long-term weight change.

How were decisions on the relevance of primary studies made?
Two reviewers independently selected studies for the review.

Assessment of study quality
Some aspects of study quality were used during the study selection and considered during the synthesis, such as duration of treatment or follow-up, sample size and attrition. However, the quality of the included studies did not seem to have been systematically assessed. The authors did not state how quality was assessed, or how many reviewers performed the quality assessment.
Data extraction
[Both reviewers independently extracted data from each study]. The studies were classified by intervention as non-medical, medically supervised, self-help or internet-based. The percentage weight change was extracted for each study.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative, organised by intervention classification.

How were differences between studies investigated?
Differences between the studies were discussed in the text, and study details were tabulated to assist comparison.

Results of the review
Ten studies (n=1,879) were included: 6 randomised controlled trials (RCTs; n=871) and 4 case series (n=1,008). The duration of the studies ranged from 12 weeks to 2 years.

Non-medical.
Weight Watchers was the only non-medical weight loss programme for which studies were located, and the participants were predominantly women (3 RCTs). Participants attending Weight Watchers regularly lost approximately 5% of their initial weight over 3 to 6 months.

Medically supervised.
Two case-series evaluated the OPTIFAST programme and one RCT and 2 case series evaluated the Health Management Resources programme. Evidence suggested that participants that complete OPTIFAST or Health Management Resources programmes lose approximately 15 to 25% of their initial weight in 3 to 6 months, and maintain a loss of 8 to 9% one year after treatment, 7% at three years and 5% at four years.

Self-help.
One RCT evaluating the self-help programme TOPS was located. This study reported a loss of an average of 2.6 kg per participant. However, it was unclear over what period of time this weight loss was achieved.

Internet-based.
One RCT evaluating the internet-based eDiets was located. This study reported a loss of 1.1% of initial weight at one year, with this rising to 4% in those that used the weight loss manual.

Cost information
The estimated costs for a 3-month programme ranged from $167 to $1,249 for non-medical weight loss programmes, from $840 to $2,100 for medically supervised programmes, and were $65 for the internet programme eDiets and $26 for the self-help programme TOPS.

Authors' conclusions
The evidence to support the use of major commercial and self-help weight loss programmes is suboptimal.

CRD commentary
The review question was clear in terms of the intervention and participants, but there were no clear criteria relating to the study design or outcomes. The only electronic database searched was MEDLINE, however, as the review was restricted to studies conducted in the USA, this may not imply publication bias. The review was, however, restricted to published data, even though companies were contacted, which means that some data might have been omitted. There
seemed to be no systematic assessment of study quality. Attempts were made to reduce error and bias during the data extraction, but it was unclear whether this was the case during the study selection process; selection bias cannot, therefore, be ruled out.

The decision to combine the studies in a narrative was appropriate given the nature of the evidence. Despite the limited methodological information provided and potential for selection and publication bias, the authors’ conclusion, that there is a lack of evidence to support the use of these programmes and there is a need for further research, seems appropriate.

**Implications of the review for practice and research**

**Practice:** The authors state that there is insufficient evidence to recommend internet-based commercial programmes, and that medically supervised programmes may be appropriate in selected cases, such as those with a body mass index of 30 kg/m2 or greater.

**Research:** The authors recommend controlled trials to assess the efficacy and cost-effectiveness of commercial and self-help weight loss programmes.

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