

Obesity 1

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Systematic review of the effectiveness of interventions used in the management of obesity.</p> <p>Authors: S O'Meara, A-M Glenny, T Sheldon, A Meville and C Wilson</p> <p>Date: 1998</p> <p>Type of review: Qualitative systematic review.</p> <p>Number of studies included: 99 in total (4 primary prevention, 46 behavioural programs, 13 drug trials, 15 surgery, 21 maintenance programs)</p> <p>Publication details: Journal of Human Nutrition and Dietetics 1998; 11: 203-206. Also see: 'The prevention and treatment of obesity', Effective health care: Bulletin on the effectiveness of health service interventions for decision makers, 1997, 3 (2) <http://www.york.ac.uk/inst/crd/ehc32.pdf> Accessed 18 August 2003.</p>	<p>Review question: To assess the effectiveness of interventions used in the prevention and treatment of obesity and the maintenance of weight loss.</p> <p>Intervention(s): Community intervention programs, with or without a financial incentive to maintain a healthy weight (3 studies focusing on adults). Activities included combinations of: monthly newsletter including information relevant to weight control, participants recorded weight each month, financial incentive, extensive education program using mass media, direct media, classes, seminars and school curricula.</p> <p>Inclusion criteria (relevance): Treating adult obesity with dietary, exercise and behavioural interventions (46 studies). Weight loss maintenance programs (21 studies). Evaluation of the effectiveness of interventions to prevent or treat obesity or maintain weight loss.</p> <p>Inclusion criteria (quality): RCTs plus non-RCTs with a concurrent control group. Minimum of one year observation Baseline and post- intervention</p>	<p>Outcomes measured: Weight, fat content or fat distribution.</p> <p>Effect size: Treating adult obesity with dietary, exercise and behavioural regimens: 'limited effectiveness' in terms of amount of weight loss and length of time the loss is sustained (46 studies).</p> <p>Community education programs for prevention of obesity: described as 'effective', benefits diminish during long term follow up (6-10 years).</p> <p>Effect sustainability: Many people are able to successfully lose weight, only to regain it later. The most effective maintenance programs involve some form of continued contact, either with a health professional or within a self-help peer group (based on review of 21 studies of maintenance programs).</p> <p>Applicability:</p> <ul style="list-style-type: none"> ▪ Context – Most studies carried out in the U.S.A. ▪ Populations – Not reported. ▪ Comments on transferability – Studies involving volunteers may not be generalisable to less 	<p>Disadvantaged groups: Not reported.</p> <p>Economic evaluation: There is very little literature on cost effectiveness in connection with obesity.</p> <p>Criteria for evaluating evidence: Not used.</p> <p>Research gaps identified: UK intervention studies. No studies of policy interventions meeting review criteria for study design. Cost effectiveness. Qualitative research to help understand reasons for individual differences.</p> <p>Comments: The methodological quality of many of the studies was said to be poor.</p> <p>In the 46 evaluations of dietary, behavioural and exercise regimens, it appears that these approaches are most useful when at least two are used in combination.</p> <p>Monitoring alone can result in weight loss (Hawthorne effect).</p>

	measures of weight change, fat content or fat contribution Exclusion: Commercial slimming programs, alternative therapies, policy interventions (no studies identified that met inclusion criteria).	motivated people. Other effects: Benefits- Even modest weight loss is associated with health benefits. Harms- Not reported.	
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Obesity 2

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Successful weight loss maintenance</p> <p>Authors: RW Wing, JO Hill</p> <p>Date: 2001</p> <p>Type of review: Narrative</p> <p>Number of studies included:</p> <p>Publication details: Annual Reviews of Nutrition 2001, 21:323-41.</p>	<p>Review question: Objectives: to summarise the information available on successful weight loss <i>maintenance</i>. How many achieve this goal? How do they do it? What are the consequences?</p> <p>Intervention(s): Self help, various weight loss programs.</p> <p>Inclusion criteria (relevance): Not applicable – this is not a systematic review. However, success in weight loss maintenance was defined as achieving an intentional weight loss of at least 10% of initial body weight and maintaining this weight loss for at least one year.</p> <p>Inclusion criteria (quality): Not</p>	<p>Outcomes measured: Weight</p> <p>Effect size: Drawing on files from the (US) National Weight Control Registry ¹ and with supportive research evidence from other studies, successful weight loss maintainers share common behavioural strategies, including eating a diet low in fat (average 24% of calories from fat), frequent self monitoring of body weight (75% reported weighing themselves at least once a week or more frequently) and food intake, and high levels of regular activity (89% average of 1 h moderate intensity physical activity such as walking, per day.)</p> <p>Effect sustainability: Average duration of weight maintenance among NWCR participants is 5.5y.</p>	<p>Disadvantaged groups: Not reported</p> <p>Economic evaluation: Not reported</p> <p>Criteria for evaluating evidence: N/A</p> <p>Research gaps identified: development of a good database on which to develop specific physical activity guidelines to prevent weight gain.</p> <p>Comments: the body of literature in obese-reduced subjects suggests that physical activity goals for weight management programs may need to be substantially higher than the physical activity recommendations for the general population.</p>

¹ A registry founded in 1994 to study weight loss and weight maintenance strategies of successful weight loss maintainers. Currently has over 3000 subjects (average 45 years of age, 80% women, 97% Caucasian, 67% married, (average weight loss 30kg, average duration of weight maintenance 5.5 years.) Participants complete questionnaires on an annual basis.

	<p>applicable – this is not a systematic review. However review drew extensively on observational data – in particular cross sectional surveys of adults attempting to lose weight and/or maintain weight loss.</p> <p>Exclusion: Not applicable</p>	<p>Applicability:</p> <ul style="list-style-type: none"> ▪ Context – USA ▪ Populations - 80% women, 97% Caucasian, 67% married, 45 years ▪ Comments on transferability – A self-selected group of successful weight loss maintainer’s - generalisability may be low. ▪ Program – Self help <p>Other effects:</p> <p>Benefits - cited a review by the (US) National Task Force on the Prevention and Treatment of Obesity (2000) which found that participants in weight loss programs typically experience improvements in symptoms of depression or anxiety with weight loss regardless of weight loss method. Rather than precipitating binge eating, such programs appear to ameliorate this problem.</p> <p>Over 90% of a NWCR sample reported improvement in their overall quality of life, level of energy, mobility, general mood and self confidence.</p>	
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Obesity 3

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Is the prevalence of successful weight loss and maintenance higher in the general community than the research clinic?</p> <p>Authors: SJ Bartlett, MS Faith, KR Fontaine, LJ Cheskin, DB Allison</p> <p>Date: 1999</p> <p>Type of review: Narrative (a planned meta-analysis was abandoned due to study heterogeneity)</p> <p>Number of studies included in review: 8</p> <p>Publication details: Obesity Research 1999; 7: 407-413.</p>	<p>Review question: Is the prevalence of successful weight loss and maintenance higher in the general community than the research clinic? The review aimed to assess the effectiveness of self-initiated weight loss attempts among community members, testing the assumption that weight loss is more effective in the general community than among people who seek help from health professionals.</p> <p>Intervention(s): Self-initiated weight loss in the general population. 'Self-cure' methods varied and no details were given.</p> <p>Inclusion criteria (relevance): All studies aimed at measuring obesity 'self-cure' rates in the general population.</p> <p>Inclusion criteria (quality): All studies meeting relevance criteria. All comprised population surveys, with considerable heterogeneity in terms of whether sample was representative, weight loss was intentional/unintentional, extent of weight loss, maintenance of weight loss and number of weight loss attempts.</p> <p>Exclusion: Evaluations of formal weight loss programs.</p>	<p>Outcomes measured: Successful weight loss - in most studies defined as 10% less than pre-dieting weight.</p> <p>Effect size: The 8 studies reported a 'self-cure' rate ranging from 9% to 43%.</p> <p>Effect sustainability: Studies varied from no maintenance time required to 15 years.</p> <p>Applicability:</p> <ul style="list-style-type: none"> ▪ Context - most studies conducted in USA ▪ Populations - not noted ▪ Program - 'self-cure' methods varied - no details ▪ Comments on transferability - none <p>Other effects: None mentioned.</p> <p>Conclusion: The authors reported that the current literature cannot support any strong conclusions about the rate of successful weight loss and maintenance among the general population.</p>	<p>Disadvantaged groups: Not reported.</p> <p>Economic evaluation: Not included.</p> <p>Criteria for evaluating evidence: Not used</p> <p>Research gaps identified: The need to conduct a study with the following characteristics: (I) use of a nationally representative sample; (ii) among the sample, a subset of individuals could be clearly identified as having been obese at one time point; (iii) weight loss would have been intentional and clinically significant; and (iv) follow-up would assess long-term weight maintenance.</p>

Obesity 4: This review is of clinical rather than community-based dietary interventions for the treatment of overweight and obesity. It is included because it is a recent, first of its kind review of the controversial issue of the efficacy (for weight loss) and safety of low-carbohydrate diets.

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Conclusions	Additional information
<p>Title: Efficacy and safety of low-carbohydrate diets</p> <p>Authors: DM Bravata, L Sanders, J Huang, HM Krumholz, I Olkin, CD Gardner, DM Bravata</p> <p>Type of review: Quantitative systematic review.</p> <p>Number of studies included in review: 107 articles reporting on 94 independent dietary interventions.</p> <p>Publication details: Journal of the American Medical Association 2003; 289: 1837-1850.</p>	<p>Review question: The aim of the review was to synthesise the literature on low-carbohydrate diets, to evaluate changes in weight, serum lipid, fasting serum glucose, and fasting serum insulin levels, and blood pressure among adults using low-carbohydrate diets in the outpatient setting.</p> <p>Intervention(s): Low-carbohydrate, ketogenic, higher-protein, or higher-fat diets for adults who were not pregnant.</p> <p>Inclusion criteria (relevance): English-language studies of low-carbohydrate, ketogenic, higher-protein, or higher-fat diets for adults who were not pregnant. Diets able to be followed by outpatient adults. Sufficient data to calculate both carbohydrate content (grams per day) and total calories (kcal per day).</p> <p>Inclusion criteria (quality): Randomised designs (controlled</p>	<p>Outcomes measured: Weight loss among lower carbohydrate (60g/day or less) and higher-carbohydrate (more than 60 g/day) participants.</p> <p>Effect size: When all studies were combined, lower carbohydrate diets resulted in greater weight losses (-16.9kg [95% CI: -16.6, -17.3]) than higher carbohydrate diets (-1.9 kg [95% CI: -1.6, -2.2]). Due to the highly heterogeneous nature of the diets (eg calorie level, duration, participants' initial weight) little can be concluded about this summary mean change in weight loss. When only randomised designs were included, the studies were more homogeneous, and the mean decrease in weight was not statistically significant (lower-carb - 3.6kg, higher carb - 2.1 kg). Analysis of 22 diets with the greatest mean weight loss indicated that restricted caloric intake, longer duration and participants' initial weight</p>	<p>Conclusion: The authors concluded that there is insufficient evidence to conclude that lower-carbohydrate content is independently associated with greater weight loss compared with higher-carbohydrate content.</p> <p>There is insufficient evidence to make recommendations for or against the use of low-carbohydrate diets. In particular, these diets have not been adequately evaluated for use longer than 90 days, for individuals aged 53 years or older, or for use by participants with hyperlipidemia, hypertension or diabetes.</p> <p>If participants without diabetes tolerate a lower-carbohydrate diet better than a higher-carbohydrate alternative, this diet may be an effective means of achieving short-term weight loss without significant adverse effects on serum lipid levels,</p>	<p>Disadvantaged groups: None specifically referred to.</p> <p>Economic evaluation: Not included.</p> <p>Criteria for evaluating evidence: Not applicable</p> <p>Research gaps identified: There is a need for additional studies of isocaloric diets with different carbohydrate contents in which participants are specifically assessed for symptoms of hunger and on the tolerability of the diet. There is an urgent need for studies that examine the long-term effects and consequences of low-carbohydrate diets among both older and younger participants with and without diabetes, hyperlipidemia, and hyperkalemia.</p> <p>Comments: There is an abundance of lay literature on the topic of low carbohydrate diets. The results of this study</p>

	<p>and cross-over), quasi-experimental designs, and single group pre-post studies.</p> <p>Exclusion: Diets requiring hospitalisation or confinement to a research or diet centre.</p>	<p>(high) may be more important predictors of weight loss than carbohydrate content. However, it may be that obese participants are better able to tolerate the restriction of calorie intake while using lower carbohydrate diets than while using higher carbohydrate diets (see Research gaps)</p> <p>Effect sustainability: Low carbohydrate diets have not been adequately evaluated for use longer than 90 days.</p> <p>Applicability: The absence of data regarding the efficacy and safety of lower-carbohydrate diets by race/ethnicity limits the ability to make participant-specific recommendations about these diets.</p> <p>Other effects: Lower carbohydrate diets were not associated with adverse effects on serum lipid levels, fasting serum glucose levels or blood pressure, however, the review lacked statistical power to detect small changes in these measures.</p>	<p>glycemic control or blood pressure.</p>	<p>demonstrated the “marked discordance between the knowledge needed to guide dietary choices and the information that is available in the medical literature”.</p>
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Obesity 5

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Interventions to prevent weight gain: a systematic review of psychological models and behaviour change methods.</p> <p>Authors: W Hardeman, S Griffin, M Johnston, AL Kinmonth, NJ Wareham.</p> <p>Date: 2000.</p> <p>Type of review: Qualitative systematic review.</p> <p>Number of studies included in review: 11 publications: 5 interventions in schools and 4 in the wider community.</p> <p>Publication details: International Journal of Obesity 2000; 24: 131-143.</p>	<p>Review question: The aim of the review was to identify and review published interventions aimed at the prevention of weight gain among people not selected by weight.</p> <p>Intervention(s): Prevention of weight gain by diet and exercise, monthly newsletter including lottery incentive, and options to participate in: weight control short course, aerobics classes, group walks, exercise seminars, one-month membership of exercise facilities with free childcare, and correspondence weight control course. Obesity prevention for mothers and daughters by dietary and physical activity change involving a range of educational and skills acquisition activities.</p> <p>Inclusion criteria (relevance): Interventions of any duration with the primary aim of preventing weight gain and in which participants were selected regardless of weight or age.</p> <p>Inclusion criteria (quality): Studies of any design. Five studies were randomised controlled trials and four were non-randomised trials.</p> <p>Exclusion: Interventions targeting a</p>	<p>Outcomes measured: Outcomes related to body weight (body weight, BMI, skinfold thickness), self-reported diet and physical activity, blood pressure, fitness levels, physical activity level, peak aerobic capacity, smoking and blood chemistry..</p> <p>Results/Effect size: The initial 'Pound of Prevention' program resulted in a small weight loss (1kg) in intervention adults compared with 0.1kg in the control adults (P=0.03). Weight maintenance or loss was more frequent in the intervention group (82% of participants) than in the control group (56%). In a later 'Pound of Prevention' study, no differences were found in diet, physical activity or weight change. A trend of less weight gain was observed in intervention men and high income women, but among low income intervention women, there was more weight gain.</p> <p>The African -American mother and daughter dyads program found improvements in saturated fat intake and percentage of calories from fat among mothers and daughters in the intervention group compared to controls at 12 months but no differences in BMI were found</p>	<p>Disadvantaged groups: Dropout rates were higher among low income individuals.</p> <p>Economic evaluation: Not reported.</p> <p>Criteria for evaluating evidence: Not reported.</p> <p>Research gaps identified: Comparison of the effectiveness of individualised approaches derived from social learning theory and behavioural theory on one hand, with health education approaches and persuasive communication, designed for larger target groups, on the other.</p> <p>Longer follow-up periods of about 5 years.</p> <p>Comments: The correspondence course on weight control had the highest participation rate, and participation in the exercise options was very low.</p>

	<p>specific sub-group, multifactorial interventions primarily aimed at a specific disease, interventions aimed at weight loss, and those with an ambiguous aim (eg 'weight control').</p>	<p>between intervention and control mothers.</p> <p>Effect sustainability: Results were reported at 12 month follow-up.</p> <p>Applicability: Effectiveness seemed to be greater among older, male and high-income participants, but more rigorous evaluations are required to confirm these tentative findings.</p> <p>Conclusions: The authors reported that interventions to prevent weight gain exhibited various degrees of effectiveness.</p>	
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Obesity 6

Bibliographic information	Review strategy	Summary of findings	Additional information
<p>Title: Does physical activity prevent weight gain – a systematic review.</p> <p>Authors: M Fogelholm, K Kukkonen-Harjula</p> <p>Date: 2000</p> <p>Type of review: Systematic review</p> <p>Number of studies included:</p> <ol style="list-style-type: none"> 1. 16 prospective observational studies (no intervention) 2. 19 non-randomised (for exercise) weight reduction interventions with observational follow-up 3. 8 randomised weight reduction interventions with a passive follow-up 4. 3 non-randomised weight reduction interventions with a randomised weight maintenance phase <p>Publication details: Obesity Reviews 2000; 1: 95-111.</p>	<p>Review question: The aim of the study was to review research data on associations between physical activity and weight gain, with or without prior weight reduction.</p> <p>Intervention(s): Structured training prescription involving walking, jogging or ergometer cycling.</p> <p>Inclusion criteria (relevance): Weight reduction >5% of initial body weight. Duration of follow-up > 1 year after the end of weight reduction for intervention studies, >2 years for observational studies.</p> <p>Inclusion criteria (quality): Prospective observational studies and randomised clinical trials.</p>	<p>Outcomes measured: Weight (or BMI) gain or regain.</p> <p>Effects/effect size:</p> <ol style="list-style-type: none"> 1 Prospective observational studies (no intervention) - most studies found that, after adjustment for potential confounders, an increase in physical activity was associated with less weight gain. 2 Non-randomised (for exercise) weight reduction interventions with observational follow-up - studies consistently found that physical activity at follow-up or increased physical activity from baseline (immediately after weight reduction) to follow-up was associated with less weight regain after weight reduction. 3 Randomised weight reduction interventions with a passive follow-up - only one study (out of 8) found that exercise training during weight reduction lead to less weight gain at follow-up compared with non-exercising groups. 4 Non-randomised weight reduction interventions with a randomised weight maintenance phase - according to the results of the 3 studies included, exercise training 	<p>Disadvantaged groups: Not reported.</p> <p>Economic evaluation: Not reported.</p> <p>Criteria for evaluating evidence: Not reported.</p> <p>Research gaps identified:</p> <ul style="list-style-type: none"> ▪ Controlled trials ▪ Follow-up studies of adequate duration (>2 years) ▪ Studies with objective measures of physical activity ▪ Studies with data on body composition ▪ Comparison of the effects of physical activity on weight change in men and women ▪ Comparison of the effects of physical activity on weight change after VLED (very low energy diet) versus conventional weight reduction diet ▪ Studies on the effects of physical activity and weight maintenance during and after long-term weight-reducing drug treatment ▪ Studies on adherence to increased physical activity. <p>Comments: Program results are highly dependent on</p>

		<p>as a component of the maintenance intervention may have a positive, negative or neutral effect on weight maintenance.</p> <p>Quantitative assessment: The difference between exercise and control groups' mean weight regain in weight reduction trials was 1.8kg (90g/month) favouring a slightly better weight maintenance in the exercise groups.</p> <p>In summary, in observational studies a large volume of physical activity was associated with less weight gain, but the preventive effect of prescribed exercise training in intervention trials was at best modest. Inadequate amount of physical activity may be one reason why it has been difficult to find an effect of physical activity on weight maintenance in clinical trials.</p> <p>Effect sustainability: Intervention studies had a follow-up of >1 year post weight loss (mean 20 months).</p> <p>Applicability:</p> <ul style="list-style-type: none"> ▪ Context - intervention studies were principally conducted in clinical settings ▪ Populations: Caucasian (white) adults; female: male ratio approximately 2:1. ▪ Comments on transferability: May not be applicable among people outside a Western social and 	<p>study design, intervention adherence and data analysis methods.</p>
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		<p>cultural background.</p> <p>Other effects: Not reported.</p> <p>Conclusion: The authors concluded that high physical activity is associated with improved maintenance of body weight, but the effects of a prescribed exercise program remain very limited. This may be due to inadequate target levels for physical activity and/or poor adherence to the exercise protocol in intervention trials.</p>	
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Obesity 7

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Long-term maintenance of weight loss: current status.</p> <p>Authors: RW Jeffery, LH Epstein, GT Wilson, A Drewnowski, AJ Stunkard, RR Wing, DR Hill.</p> <p>Date: 2000</p> <p>Type of review: Narrative review.</p> <p>Number of studies included: Not applicable.</p> <p>Publication details: Health Psychology 2000; 19 (1)(Suppl): 5-16.</p>	<p>Review question: To review evidence for the effectiveness of strategies for the long-term maintenance of weight loss.</p> <p>Intervention(s):</p> <p>The following 5 strategies were reviewed separately:</p> <ul style="list-style-type: none"> ▪ Increasing intensity of initial treatment (eg very low calorie diets - VLCD) ▪ Extending the length of treatment ▪ Modifying behavioural approaches to energy balance (eg fat restricted diets, inclusion of an exercise program) ▪ Enhancing motivation (eg personal and group incentives, spouse support) ▪ Teaching maintenance-specific skills (eg relapse prevention skills) <p>Inclusion criteria (relevance): Not applicable.</p> <p>Inclusion criteria (quality): Not applicable.</p> <p>Exclusion: Not applicable.</p>	<p>Outcomes measured: Percent body weight change over time.</p> <p>Results/Effect size:</p> <ul style="list-style-type: none"> ▪ Increasing intensity of initial treatment (eg very low calorie diets - VLCD) - produces larger initial weight losses, but has little effect on long-term weight maintenance. ▪ Extending the length of treatment - longer periods of treatment (up to 40 weeks) result in greater weight loss than shorter treatments (eg 20 weeks), but rate of regain was comparable in both groups. ▪ Modifying behavioural approaches to energy balance (eg fat restricted diets, inclusion of an exercise program) - both short and long-term weight losses associated with a fat-restricted diet are no better than those associated with an energy restricted diet. Putting greater emphasis on exercise as a component of obesity treatment appears to enhance weight loss at all time points and may help slow weight regain. ▪ Enhancing motivation (eg personal and group incentives, spouse support) - individual financial 	<p>Disadvantaged groups: Not reported.</p> <p>Economic evaluation: Not reported.</p> <p>Criteria for evaluating evidence: Not applicable.</p> <p>Research gaps identified: Several specific suggestions for future research were listed. These included studies of the role of behavioural preferences in obesity treatment and maintenance. In conclusion the authors stated that a careful study of differences, behaviourally and psychologically, between the processes of weight loss and maintenance is a high priority for research.</p> <p>Comments:</p> <p>While longer periods of treatment can delay weight regain, attendance rates decline dramatically over time. Whether declining attendance at sessions contributes to weight regain, or whether failure to maintain weight losses causes lack of attendance is unclear.</p> <p>This review focused only on behavioural (and pharmaceutical) strategies. Environmental strategies were not included.</p>

		<p>incentives have not been effective in supporting weight loss maintenance. Social support via spouse involvement demonstrated small but significant short and long-term benefit in a meta-analysis. Financial incentives based on group weight loss performance showed some promise in a small number of studies, as did participation in a weight loss program with a group of friends.</p> <p>Teaching maintenance-specific skills (eg relapse prevention skills) - few studies have explicitly tested the efficacy of relapse prevention training.</p> <p>Effect sustainability: Most studies included follow-up of at least 18 to 24 months.</p> <p>Conclusion: The authors concluded that interventions tested so far have shown that extending length of treatment and placing greater emphasis on exercise can at least delay weight regain.</p>	
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Obesity 8

Bibliographic information	Review strategy	Summary of evidence of effectiveness	Additional information
<p>Title: Advice on low fat diets for obesity</p> <p>Authors: S Pirozzo, C Summerbell, C Cameron, P Glasziou</p> <p>Date: 2002 (most recent substantive amendment)</p> <p>Type of review: Meta-analysis.</p> <p>Number of studies included:</p> <ul style="list-style-type: none"> ▪ 4 at 6-month follow-up ▪ 5 at 12-month follow-up ▪ 3 at 18-month follow-up <p>Publication details: The Cochrane Library, Issue 2, 2003. Oxford.</p>	<p>Review question: To assess the effects of advice on low-fat diets as a means of achieving sustained weight loss.</p> <p>Intervention(s): Dietary advice provided to 'free living', overweight or obese men and women dieting for the purpose of weight reduction. Advice about how to achieve a diet with less than or equal to 30% of calories coming from total fat, or advice which would lead to an eating pattern that would achieve this, provided by dietitians, health professionals, or investigators in verbal or written form.</p> <p>The comparison intervention could be any type of weight reducing diet apart from a low-fat diet.</p> <p>Inclusion criteria (relevance):</p> <ul style="list-style-type: none"> ▪ The primary purpose of the study was weight loss ▪ Participants followed for at least 6 months ▪ Adults who were overweight or obese at baseline (BMI>25kg/m²) <p>Inclusion criteria (quality): Randomised controlled clinical trials</p> <p>Exclusion: Studies including pregnant</p>	<p>Outcomes measured: Indicators of body mass (eg weight, BMI).</p> <p>Effect size/results: At 6 months, there was no significant difference in weight loss between the two groups (fat-restricted diet compared with calorie restricted diet). Low fat group: -5.08kg (95% CI: -5.9, -4.3), calorie restricted group: -6.5kg (95% CI -7.3, -5.7). At 12months, there was no significant difference in weight loss between the two groups (fat-restricted diet compared with calorie restricted diet). Low fat group: -2.3kg (95% CI: -3.2, -1.4), calorie restricted group: -3.4kg (95% CI -4.2, -2.6). At 18months, there was no significant difference in weight loss between the two groups (fat-restricted diet compared with calorie restricted diet). Low fat group: +0.1kg (95% CI: -0.8, 1) calorie restricted group: -2.3kg (95% CI -0.8, -1).</p> <p>Effect sustainability: Up to 18 months.</p> <p>Applicability:</p> <ul style="list-style-type: none"> ▪ Populations: men and women 	<p>Other effects: Apart from one study that showed a small, statistically significant difference in total cholesterol in the low fat group at one year follow-up, there were no significant differences between the dietary groups for other outcome measures such as serum lipids, blood pressure and fasting plasma glucose. Studies measuring other factors such as perceived wellness and quality of life reported conflicting results.</p> <p>Conclusions: The authors concluded that fat restricted diets are no better than calorie restricted diets in achieving long term weight loss in overweight and obese men and women.</p> <p>Disadvantaged groups: Not reported.</p> <p>Economic evaluation: Not included.</p>

	<p>women or patients with serious medical conditions. Either intervention or comparison diet provided either free of charge or for payment, or commercially produced or consisting of whole diet substitutes.</p>		
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Obesity 9: This individual trial has been included because it represents a rigorous evaluation of a potentially cost-effective Internet-based weight loss program.

Bibliographic information	Design & Methods	Findings
<p>Title: Effects of internet behavioural counselling on weight loss in adults at risk for type 2 diabetes.</p> <p>Authors: DF Tate, EH Jackvony, RR Wing.</p> <p>Date: 2003</p> <p>Publications details: Journal of the American Medical Association 2003; 289: 1833-1836.</p>	<p>Research objective: To compare the effects of an Internet weight loss program alone with the addition of behavioural counselling via email provided for 1 year to individuals at risk of type 2 diabetes.</p> <p>Design and setting: A single centre randomised controlled trial conducted from September 2001 to September 2002 in Providence, RI.</p> <p>Participants: 92 overweight adults (82 women, 10 men) whose mean age was 48.5 years and BMI 33.1. 84% retention rate. Predominantly white, female, college educated with computer access. Recruited through advertising and drawn from a waiting list at the research centre.</p> <p>Intervention(s): Random assignment to either a basic Internet (n=46) or to an Internet plus behavioural e-counselling program (n=46). Both groups received one face-to-face counselling session and the same core Internet programs and were instructed to submit weekly weights. Participants in e-counselling submitted calorie and exercise information and received regular e-mail behavioural counselling and feedback from a counsellor (5 times each week during the first month, weekly for the remaining 11 months). Participants who did not report were sent a personal follow-up email.</p>	<p>Outcome measures: Measured weight and waist circumference at 0 and 12 months.</p> <p>Results: Intention to treat analysis showed that an Internet weight loss program with weekly email counselling produced an average weight loss of 4.4 kg after one year among adults at risk of type 2 diabetes. The addition of email behavioural counselling doubled the percentage of initial weight loss compared with an Internet intervention without individualised therapist guidance. Weight losses of this magnitude (4.1kg in DPS and 6.4kg in DPP) are known to reduce risk for diabetes.</p> <p>Conclusion: The authors concluded that adding e-mail counselling to a basic Internet weight loss intervention program significantly improved weight loss in adults at risk of diabetes.</p>

Obesity 10: This individual trial has been included because it represents one of the first rigorous evaluations of a commercial weight loss program.

Bibliographic information	Design & Methods	Findings
<p>Title: Weight loss with self-help compared with structured commercial program.</p> <p>Authors: S Heshka, JW Anderson, RL Atkinson, FL Greenway, JO Hill, SD Phinney, RL Kolotkin, K Miller-Kovach, FX Pi-Sunyer</p> <p>Date: 2003</p> <p>Publications details: Journal of the American Medical Association 2003; 289: 1792-1798.</p>	<p>Research objective: To compare weight loss and health benefits achieved and maintained through self-help weight-loss with a structured commercial program.</p> <p>Design and setting: A 2-year, multi-centre randomised clinical trial conducted at 6 academic research centres in the United States between January 1998 and January 2001.</p> <p>Participants: Overweight and obese men (n=65) and women (n=358), BMI, 27-40, aged 18-65.</p> <p>Intervention(s): Random assignment to either a self-help program (n=212) consisting of two 20-minute counselling sessions with a nutritionist (at week 0 and week 12) and provision of self-help resources or to a commercial weight loss program (n=211) consisting of a food plan, an activity plan, and a cognitive restructuring behaviour modification plan, delivered at weekly meetings of approximately 1 hour duration. Participants assigned to the self-help program reported using a range of strategies to lose weight - including pharmaceuticals, structured commercial programs, herbal products and alternative diet plans (eg Atkins). Participants assigned to the commercial program were given vouchers, valued to \$9 per voucher, entitling them to attendance at sessions of Weight Watchers.</p>	<p>Outcome measures: weight change, waist circumference, BMI, blood pressure, serum lipids, glucose and insulin levels.</p> <p>Results: Range in both groups, mean changes, time, health outcomes.</p> <p>Conclusion: The authors concluded that an on-going commercial weight loss program provided modest weight loss, and was more effective than brief counselling and self-help for overweight and obese adults.</p>