

# Interventions for treating obesity in children

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## Summary

### Treating obesity in children

Childhood obesity affects both the physical and psychosocial health of children and may put them at risk of ill health as adults. More information is needed about the best way to treat obesity in children and adolescents. In this review, 64 studies were examined including 54 studies on lifestyle treatments (with a focus on diet, physical activity or behaviour change) and 10 studies on drug treatment to help overweight and obese children and their families with weight control. No surgical treatment studies were suitable to include in this review. This review showed that lifestyle programs can reduce the level of overweight in child and adolescent obesity 6 and 12 months after the beginning of the program. In moderate to severely obese adolescents, a reduction in overweight was found when either the drug orlistat, or the drug sibutramine were given in addition to a lifestyle program, although a range of adverse effects was also noted. Information on the long-term outcome of obesity treatment in children and adolescents was limited and needs to be examined in some high quality studies.

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## Abstract

### Background

Child and adolescent obesity is increasingly prevalent, and can be associated with significant short- and long-term health consequences.

### Objectives

To assess the efficacy of lifestyle, drug and surgical interventions for treating obesity in childhood.

### Search strategy

We searched CENTRAL on *The Cochrane Library* Issue 2 2008, MEDLINE, EMBASE, CINAHL, PsycINFO, ISI Web of Science, DARE and NHS EED. Searches were undertaken from 1985 to May 2008. References were checked. No language restrictions were applied.

### Selection criteria

We selected randomised controlled trials (RCTs) of lifestyle (i.e. dietary, physical activity and/or behavioural therapy), drug and surgical interventions for treating obesity in children (mean age under 18 years) with or without the support of family members, with a minimum of six months follow up (three months for actual drug therapy). Interventions that specifically dealt with the treatment of eating disorders or type 2 diabetes, or included participants with a secondary or syndromic cause of obesity were excluded.

### Data collection and analysis

Two reviewers independently assessed trial quality and extracted data following the Cochrane Handbook. Where necessary authors were contacted for additional information.

### Main results

We included 64 RCTs (5230 participants). Lifestyle interventions focused on physical activity and sedentary behaviour in 12 studies, diet in 6 studies, and 36 concentrated on behaviorally orientated treatment programs. Three types of drug interventions (metformin, orlistat and sibutramine) were found in 10 studies. No surgical intervention was eligible for inclusion. The studies included varied greatly in intervention design, outcome measurements and methodological quality.

Meta-analyses indicated a reduction in overweight at 6 and 12 months follow up in: i) lifestyle interventions involving children; and ii) lifestyle interventions in adolescents with or without the addition of orlistat or sibutramine. A range of adverse effects was noted in drug RCTs.

### **Authors' conclusions**

While there is limited quality data to recommend one treatment program to be favoured over another, this review shows that combined behavioural lifestyle interventions compared to standard care or self-help can produce a significant and clinically meaningful reduction in overweight in children and adolescents. In obese adolescents, consideration should be given to the use of either orlistat or sibutramine, as an adjunct to lifestyle interventions, although this approach needs to be carefully weighed up against the potential for adverse effects. Furthermore, high quality research that considers psychosocial determinants for behaviour change, strategies to improve clinician-family interaction, and cost-effective programs for primary and community care is required.