


Review: counselling, pharmacotherapy, and surgery help obese adults lose weight

McTigue KM, Harris R, Hemphill B, *et al.* Screening and interventions for obesity in adults: summary of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2003;**139**:933–49.


Clinical impact ratings GP/FP/Primary care ★★★★★☆ IM/Ambulatory care ★★★★★☆ Cardiology ★★★★★☆ Endocrine ★★★★★☆ Geriatrics ★★★★★☆

Q In adults, is obesity screening and treatment effective?


METHODS



Data sources: Medline, the *Cochrane Library*, and systematic reviews from the US, Canada, and the UK.



Study selection and assessment: randomised controlled trials (RCTs) or systematic reviews of screening and treatment for obesity. Drug treatment studies had to have ≥6 months of follow up; all other treatments had to have ≥12 months of follow up. Study quality was assessed using the US Preventive Services Task Force criteria.



Outcome: weight loss.

MAIN RESULTS

No RCTs evaluated the efficacy of obesity screening. *Counselling and behavioural interventions.* 3 systematic reviews showed that behavioural interventions promoting exercise and/or dietary change achieved small weight reductions (US: 29 RCTs, mean weight change over controls –3.3 kg, range –8.8 to 1.9 at ≥1 y) (UK: 24 RCTs, mean weight change over controls –3.0, range –10.6 to 1.4 at 12–60 mo) (Canada: 6 RCTs, mean weight change over controls –2.1, range –4.5 to –0.2 at 24–84 mo). Of 11 additional RCTs on high intensity interventions, 6 used a true control group; 4 showed effectiveness (weight loss of 2.5–5.5 kg more than controls at 12–54 mo). In the other 5 RCTs, 1 high intensity intervention was better than another. Moderate intensity interventions showed mixed results (2 RCTs), and 2 of 3 low intensity interventions were ineffective. *Drug treatments.* Sibutramine was moderately effective (7 RCTs, weight loss 2.8–4.2 kg at 8–52 wk) as was orlistat (10 RCTs, mean loss 3.5 kg at 1 to 2 y). 18 additional RCTs were consistent with the systematic review. Sibutramine led to weight loss of 2.8 kg (95% CI 1.6 to 4.0) to 7.8 kg (CI 5.9 to 9.7) more than placebo (6 RCTs). Orlistat (120 mg 3 times/d) led to a weight loss of 2.8 kg (CI 1.8 to 4.5) to 4.5 kg (CI not calculable) more than placebo (6 RCTs). 1 RCT showed a non-significant difference in favour of orlistat. Evidence for metformin was mixed. 1 RCT showed that sibutramine led to greater weight loss (13.4 kg) than orlistat (8 kg) or metformin (9 kg). Long term adverse events were not reported. *Surgical approaches.* 3 systematic reviews compared surgical techniques and did not include non-surgical control groups. 3 additional RCTs compared gastric banding with surgical controls. Groups did not differ in any RCT, but all treatments led to considerable weight loss (17 to >40 kg). The 3 RCTs did not report mortality; the main adverse events were reoperation and wound infection.

For correspondence: Dr K M McTigue, University of Pittsburgh, Pittsburgh, PA, USA. mciguekm@upmc.edu

Source of funding: Agency for Healthcare Research and Quality.

CONCLUSIONS

No studies have evaluated the effectiveness of obesity screening. Counselling and drug treatment lead to modest weight loss. Drug treatment seems safe in the short term, but long term effects have not been studied. Surgery has not been compared with non-surgical treatments; it can lead to large amounts of weight loss, but is associated with a substantial risk of complications.

Commentary

Numerous studies have investigated weight loss methods, and the well conducted review by McTigue *et al* focuses on clinical trials of ≥12 months duration (≥6 mo for drug therapy).

Several key points need emphasis. Firstly, it is debatable whether most of the studies (6–24 mo duration) are adequate to assess the long term benefits and risks of weight loss methods. Like hypertension or diabetes, obesity is a chronic disease,¹ and treatment trials should last ≥4–5 years. Secondly, no study showed that weight loss reduced cardiovascular morbidity or mortality, as this may depend on sustained weight loss. Thirdly, strict enrolment criteria and high losses to follow up limit generalisability to patients typically seen in clinical practice. Finally, the method of outcome reporting, which does not capture weight status in dropouts, may overestimate weight loss.

Despite these limitations, how can the findings be applied to clinical practice? In obese patients with cardiovascular risk factors, weight loss with a structured dietary and counselling programme is reasonable because modest (5–10 kg) weight loss can improve blood pressure and glycaemic and blood lipid control and reduce drug therapy needs. Maintaining weight loss is more challenging but is more likely with continuous counselling or an exercise programme.² Drug therapy can supplement a dietary regimen to enhance weight loss induction and maintenance in such patients, but orlistat and sibutramine, the most widely used agents, are not approved for >2 years' use, and long term safety is not established. In obese patients without cardiovascular risks, perhaps the emphasis should be on maintenance of a stable weight. Surgical therapy should be reserved for patients with severe obesity (BMI >35 kg/m²) or severe comorbidity who do not benefit from non-surgical weight loss.³ Furthermore, its benefits must be balanced against a 0.5–1% mortality and other postoperative complications.

The ultimate lesson from this thorough review is that since non-surgical approaches lead to only modest, difficult to sustain weight loss, efforts from both a public health and individual patient perspective should focus on preventing rather than treating obesity.⁴

James D Douketis, MD, FRCP(C)
St Joseph's Hospital
Hamilton, Ontario, Canada

- 1 Jeffcoate W. Obesity is a disease: food for thought. *Lancet* 1998;**351**:903–4.
- 2 Balsiger BM, Murr MM, Poggio JL, *et al.* Bariatric surgery. Surgery for weight control in patients with morbid obesity. *Med Clin North Am* 2000;**84**:477–89.
- 3 Poirier P, Després JP. Exercise in weight management of obesity. *Cardiol Clin* 2001;**19**:459–70.
- 4 Douketis JD, Feightner JW, Attia J, *et al.* Periodic Health Examination, 1999 update: 1. Detection, prevention, and treatment of obesity. *CMAJ* 1999;**160**:513–25.