

Bariatric surgery, lifestyle interventions and orlistat for severe obesity: the REBALANCE mixed-methods systematic review and economic evaluation

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Disclaimer: This report contains transcripts of interviews conducted in the course of the research and contains language that may offend some readers.

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Plain English summary

Surgery, lifestyle interventions, orlistat for severe obesity

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Plain English summary

Severe obesity (body mass index of ≥ 35 kg/m²) increases the risk of many illnesses. We reviewed the evidence for the acceptability, effectiveness and value for money of weight-management programmes (WMPs) for adults with severe obesity. We looked at surgery for obesity, diet and exercise WMPs and the drug orlistat.

We examined 131 trials, 26 UK studies, 33 studies of people's views and 46 studies of the value for money of WMPs. We undertook new research on the value for money of different weight-management approaches for the NHS.

Reviewed studies were often selective in who they included and did not follow people up for long enough.

Surgery for obesity had the best weight-loss results and could be a good use of NHS resources, compared with no surgery or WMPs. Of non-surgical approaches, very low-calorie diets (VLCDs) produced the best weight-loss result at 12 months, but it was unclear if this was sustained for longer. Adding a VLCD to an existing WMP was not shown to be a good use of NHS resources. However, most WMPs, including those with VLCDs, appeared to be a good use of NHS resources compared with no WMP.

The best results for long-term non-surgical weight loss over nearly 10 years came from a WMP with a low-fat reducing diet, a calorie goal of 1200–1800 kcal/day, initial meal replacements or meal plans, a tailored exercise programme, cognitive-behavioural therapy, intensive group and individual support, and follow-up by telephone or e-mail. This would be more costly for the NHS than simpler WMPs.

Low-carbohydrate Atkins-type diets, higher protein intakes or the use of meal replacements had small effects on improving weight loss at 12 months but had no longer-term effect. Increasing physical activity helped to prevent long-term weight regain, as did receiving longer-term help with diet or using orlistat.

Adding telephone or internet support, and group support, also helped to keep weight off. Participants in WMPs valued novelty in WMPs, WMPs endorsed by health-care providers and belonging to a group with people who shared similar issues.

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