

<b>Title</b>	<b>Bariatric treatments for adult obesity</b>
<b>Agency</b>	Provincial Health Technology Assessment Program Institute of Health Economics 1200, 10405 Jasper Avenue Edmonton, Alberta T5J 3N4, Canada Tel: +1 780 448 4881, Fax: +1 780 448 0018; <a href="http://www.ihe.ca/">http://www.ihe.ca/</a>
<b>Reference</b>	March 2012 (English); ISBN 978-1-926929-02-6 (online): <a href="http://www.ihe.ca/documents/Bariatric%20Treatments%20-%20March%202012.pdf">http://www.ihe.ca/documents/Bariatric%20Treatments%20-%20March%202012.pdf</a>

**Aim**

- To assess the evidence on the safety, efficacy/effectiveness, and cost-effectiveness of various bariatric treatment strategies for overweight (body mass index (BMI) between 25 and 29.9 kg/m<sup>2</sup>) and obese (BMI ≥ 30 kg/m<sup>2</sup>) adults (18 years or older).
- To estimate the direct health services cost associated with bariatric surgery and the economic burden of obesity in Alberta.

A social and system demographic analysis was also conducted.

**Conclusions and results***Safety and efficacy/effectiveness*

Fourteen systematic reviews/health technology assessments of average to good quality were identified. Their results are summarized below.

- Dietary therapy, physical exercise, behavioural therapy, drug therapy, and bariatric surgery were effective, to varying degrees, in reducing weight, in the short term, in people who are overweight or obese.
- Dietary therapy was more effective than standard care in overweight and obese people. There appeared to be no differences between different types of diets.
- Physical exercise was effective in weight loss, particularly when combined with dietary interventions.
- Overweight or obese adults benefited from behavioural and cognitive behavioural therapies intended to enhance weight reduction.
- Three antiobesity drugs—orlistat, sibutramine, and rimonabant—were modestly effective in reducing weight. However, the superiority of one drug over another was unclear.
- Bariatric surgery was more effective than dietary therapy, with or without physical exercise, in severely obese adults. Among the three bariatric surgeries currently provided in Alberta, Roux-en-Y gastric bypass resulted in greater weight loss than adjustable gastric banding, while the evidence base was limited for sleeve gastrectomy.

*Economic outcomes*

Twenty-nine cost-effectiveness studies of acceptable quality were identified. Bariatric surgery was a cost-effective option for patients with a BMI ≥ 40 kg/m<sup>2</sup> or a BMI

≥ 35 kg/m<sup>2</sup> with obesity-related morbidity, compared with lifestyle modification. Medication was cost effective for obese patients with obesity-related comorbidities, but the evidence was less consistent for medication in obese patients without comorbidities. Overall, bariatric interventions were associated with improved health outcomes, but at additional costs. Since bariatric interventions do not result in cost savings to the health system, their value must be assessed in terms of the amount of health outcome gained for the dollars invested.

In Alberta, the mean total cost of bariatric surgery was estimated to be \$12,176 in 2006, while the economic burden of obesity was estimated to be \$100 million in 2007.

**Recommendations**

Dietary therapy, physical exercise, and behavioural/cognitive behavioural therapies should be the cornerstone of any bariatric treatment program. Pharmacotherapy and bariatric surgery can be provided for appropriate individuals depending on their degree of overweight or obesity, pre-existing diseases, and obesity-related comorbidities. Collaboration among dietitians, physical therapists, psychologists, doctors/nurses, and bariatric surgeons and strategies for enhancing patient adherence to weight management programs are essential for long-term success.

**Methods**

Please refer to the full report for details of the methods.

**Further research/reviews required**

The current evidence was far from clear about the comparative efficacy/effectiveness of different bariatric treatment strategies. The evidence base was biased and of poor quality due to short-term follow up and high attrition rates. There was also a lack of information on how outcomes are measured and analyzed. In addition, the effects of patient characteristics and comorbidities on outcomes have not been fully explored. These issues should be considered in future studies.

**Written by**

Institute of Health Economics, Canada