

# The effect of bariatric surgery on the lifestyle of patients

## Introduction

Over the last few decades, the world has seen an unprecedented obesity crisis. According to one estimate, 25% of the world's adult population is overweight, and by 2030, this figure will have increased to 50%.<sup>1</sup> Obesity is undesirable because it causes lifestyle diseases, such as hypertension, heart disease, cancer, and type 2 diabetes.<sup>2</sup> It also significantly increase health care costs.<sup>3</sup> This is why there has been a dramatic increase in bariatric operations over the last few decades. The two most common bariatric procedures are the roux-en-Y and gastric banding.<sup>4</sup> The operations cause weight loss via malabsorption and volume restriction. One aspect of bariatric surgery that often goes unreported is its effect on the lifestyle of patients. This editorial discusses the effect of bariatric surgery on diet, exercise and mental health.

## Diet

Firstly, bariatric surgery has a positive effect on diet. This is because surgery forces patients to eat less food and to eat healthier foods. The ability of surgery to decrease patients' food intakes was shown in a Swedish study in 2004. The researchers found that patients without surgery ate 2,882kcal per day on average, whereas surgically-treated patients ate just 2,565kcal a day.<sup>5</sup> This means the surgically-treated patients had a significantly lower energy intake than their peers. The study covered a 10year period, and the findings were consistent throughout these ten years.

Bariatric surgery also has a positive effect on eating disturbances, at least in the short term. Studies show that surgery decreases the occurrences of overeating and binge-eating in patients.<sup>6</sup> However, studies also show that eating disturbances begin to reappear after about two years. One study found that 46% of patients had bulimic episodes during a period of 2 to 7years after bariatric surgery.<sup>7</sup> The patients who were most at risk of binge-eating after bariatric surgery were binge-eaters before surgery.<sup>8</sup> These patient reported feeling loss of control even after bariatric surgery. Unsurprisingly, these patients had greater weight regain than other patients.

The method by which bariatric surgery decreases energy intake depends on the type of bariatric surgery. Gastric banding, for example, decreases energy intake by reducing the stomach's capacity for food.<sup>9</sup> This in turn induces early satiety and satiation.<sup>10</sup> If patients still try to overeat, then they may experience nausea and vomiting. Indeed, more than 50% of patients experience nausea and vomiting after bariatric surgery.<sup>11</sup> Patients may need to avoid sugar in particular. This is because a lot of sugar can trigger 'dumping syndrome', which causes symptoms such as fatigue, diarrhoea, and fainting.<sup>12</sup> About 70% experience dumping syndrome after a Roux-en-Y gastric bypass.<sup>11</sup> Dumping syndrome can actually be beneficial because it discourages patients from eating foods containing concentrated sugar.

Bariatric surgery reduces the body's absorption of essential nutrients, so most patients have to take a multivitamin every day to avoid nutrient deficiencies. Some patients also eat a high-protein and low-fat diet to compensate for their inability to eat large quantities of food.<sup>13</sup>

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## Self-harm and suicide

According to a study, bariatric surgery dramatically improves quality of life (and particularly health-related quality of life).<sup>14</sup> The peak for quality of life was 6 to 12months after surgery. The increase in quality of life was correlated with weight loss, so that when the patient lost weight, their quality of life increased also. So therefore it seems that weight loss increases quality of life.

However, it also seems that bariatric surgery increases risk of self-harm and suicide. This was shown recently by a Canadian study last year. The study found that patients are more likely to self-harm and attempt suicide after surgery than before surgery. More precisely, the figures showed that post-surgery patients had 3.6 self-harm emergencies per 1000 patient-years, whereas pre-surgery patients only had 2.33 self-harm emergencies per 1000 patient-years. Perhaps the cause was adverse physical side-effects of surgery, or disappointment about failed weight loss. The most common method of self-harm was an intentional overdose, and most self-harm emergencies happened 2-3years post-surgery. It should be noted that however that most patients did not self-harm, and the patients who did already had a history of depression. So surgery intensified existing depression in some patients, whereas patients without a history of depression were mostly unaffected.

## Exercise

A final additional lifestyle benefit of bariatric surgery is that it increases the likelihood of exercise. This is true even ten years after surgery.<sup>5</sup> This is a rather unsurprising finding, because bariatric surgery causes weight loss, and weight loss makes exercise easier to perform. Exercise also brings benefits such as improved cardiovascular health. We also know that bariatric surgery itself also reduces the risk of various lifestyle diseases, including type 2 diabetes, hyperuricemia and hypertriglyceridemia.<sup>5</sup>

## Conclusion

In conclusion, bariatric surgery has several effects on a patient's lifestyle. The positive effects include a decreased calorie intake, decrease occurrences of overeating, an improved diet, improved

quality of life, a reduced risk of lifestyle disease, and increased ease of exercise. The negative effects are an increased risk of self-harm and suicide, the necessity of taking multivitamins every day, physical side-effects, and a forced change of diet.

## Acknowledgements

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## Conflict of interest

The author declares no conflict of interest.

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