The reasons why weight loss should be a goal for all patients who have, or are at risk of, Type 2 diabetes are compelling. Each kilogram of weight gained annually over 10 years is associated with a 49 per cent increased risk of developing the condition over the subsequent 10 years. Furthermore, the amount of excess weight that patients with Type 2 carry affects their risk of dying, while a 10 per cent weight loss often puts diabetes into remission.

Bariatric surgery is the most effective therapy for inducing significant weight loss. The Swedish Obese Subjects study showed 15–25 per cent weight loss, dependent on the type of surgery, with accompanying improvements in glucose tolerance, hypertension, lipid profile, cardiovascular risk factors and mortality compared with obese individuals who elected for medical treatment alone1.

This, and other studies, have led the National Institute for Health and Care Excellence to state that bariatric surgery should be offered to patients with a body mass index (BMI) of 35–40 kg/m² who have obesity-related conditions, such as Type 2 diabetes or obstructive sleep apnoea, or in those with a BMI of 40 kg/m² or greater, regardless of weight-related co-morbidities. More recently the International Diabetes Federation has recommended surgery for patients with a BMI < 35 kg/m² whose Type 2 is poorly controlled, despite best medical care.

Before offering surgery, the procedures need to be discussed with the patient and surgery only offered if both the diabetes specialist team and the patient feel that the benefits outweigh the risks.

Types of surgery

The three most commonly performed bariatric surgeries on the NHS are the laparoscopic adjustable gastric band (LAGB), Roux-en-Y gastric bypass (RYGB) and laparoscopic sleeve gastrectomy (LSG).

For the LAGB, a silastic band is applied around the stomach just below the gastro-oesophageal junction. Tightening of the band by saline injection ▲ usu
leads to less hunger and early and prolonged fullness after eating. Regular band adjustment allows for adequate weight loss while maintaining optimal intraluminal pressure to ensure continuous weight reduction. In the RYGB, the stomach is divided into an upper gastric pouch of 15–30ml and a lower gastric remnant. The pouch is anastomosed to the duodenum, leaving a excluded biliary limb, including the biliary system, connected to the small bowel. After this surgery, patients report reduced appetite and early and prolonged fullness after eating. Whether these changes are brought about by the rise in gut hormone concentrations, a rise in bile acid concentrations or the change in gut flora, all of which are induced by the surgery, is unknown. Finally, in LSG the stomach is transected vertically, creating a high-pressure gastric tube and leaving a pouch of up to 200ml. Initially, the LSG was thought to have its effect by delaying gastric emptying, but it is now recognised to have metabolic effects comparable to the RYGB.

Risks

Increased rates of bariatric surgery and the evolution of laparoscopic techniques mean that risks of this kind of surgery are relatively low, comparing favorably with those for gastric banding (gastric banding: laparoscopic gastric banding, or gastric banding). The LAGB is the safest of the three operations, having a mortality rate of one in 2,000, compared with around one in 1,000 for LSG and one in 500 for RYGB. Surgical morbidity is also relatively low for these procedures, but over the 10 years following surgery, one in five LAGB patients will need an additional operation to replace their band, tubing or port. For these procedures, but over the 10 years following surgery, one in five LAGB patients will need an additional operation to replace their band, tubing or port. For these procedures, but over the 10 years following surgery, one in five LAGB patients will need an additional operation to replace their band, tubing or port.

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