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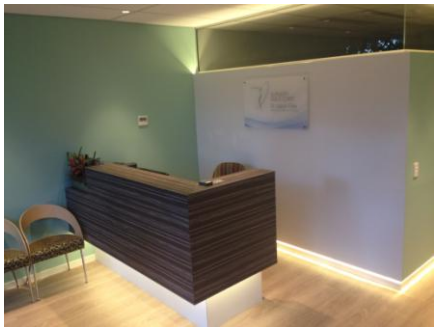
Surgical Options for Weight Loss, who should get what??

by Dr Jason Free

The most commonly asked question by patients seeking bariatric surgery is which procedure is best. There are many types of surgical procedures, each having their own benefits and potential problems, both in the immediate post-operative period and longer term. Some procedures would suit some patients and be inappropriate for others for a variety of reasons. Patients must be aware of all the options before embarking upon surgery.

Currently worldwide the most commonly performed procedure for weight loss is the laparoscopic Roux-en-Y gastric bypass. In Australia however the most common procedure is the laparoscopic sleeve gastrectomy, which has become more popular than the gastric band due to fewer side effects, and it's technical simplicity. There are endoscopic procedures available, however surgery still remains much more effective and reliable. This guide aims to help clarify which patients may benefit from which type of surgery.



Laparoscopic Roux-en-Y Gastric Bypass

Ideal patients:

- **Obese diabetics**
- **Patients with high triglycerides or cholesterol**
- **Patients with reflux disease**

Benefits:

Gastric Bypass provides the most robust long term weight loss and has the greatest effect upon improving diabetes and metabolic syndrome. After a gastric bypass, some diabetic patients are able to eliminate all diabetic medications within days or even hours of the operation. Bypass also has the most dramatic effect on lowering triglycerides and cholesterol.

The bypass procedure is extremely effective at treating gastro-oesophageal reflux disease, in fact it is becoming common to perform a bypass in patients with severe debilitating reflux who have failed medical therapy and even prior operations for reflux. It is also a salvage procedure for those who have had complications with prior bariatric procedures.

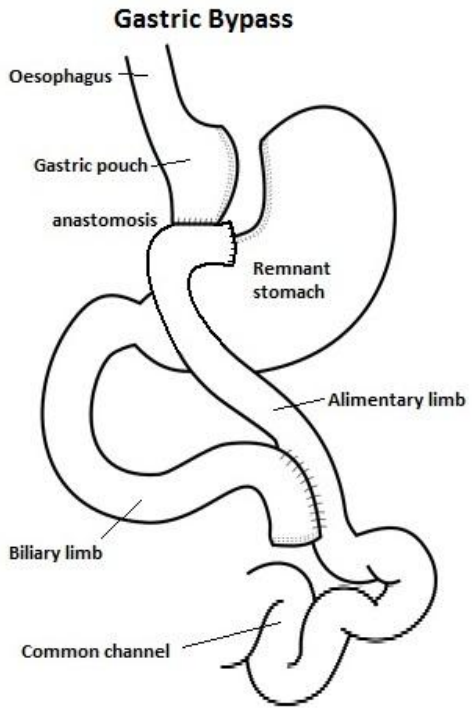
How it works:

The procedure involves dividing the upper portion of the stomach and leaving a small gastric pouch about 7cm long and 2cm wide. The jejunum is divided about 50 cm below the duodenum and a limb (alimentary limb) brought up and anastomosed to the gastric pouch. The remnant stomach, duodenum, and upper jejunum remain in-situ and the jejunum on this limb (biliopancreatic limb) is anastomosed to the alimentary limb about 80cm downstream from the gastric anastomosis, thus forming a common channel. A restricting effect is created at the gastric pouch which dramatically reduces the amount of food able to be eaten. Food bypasses the majority of the stomach, the duodenum, and upper jejunum, having physiological and hormonal effects on insulin secretion. There is slightly decreased absorption of carbohydrates and fat, however there is minimal chance of developing deficiencies. This is in contrast to biliopancreatic diversion procedures done in the past which did have problems with vitamin and mineral deficiencies.

There are various other types of gastric bypass such as the omega loop bypass, fixed ring bypass, and short limb gastric diversion.

- *Omega loop bypass:* A longer thinner gastric pouch with a gastrojejunostomy (no Roux-en-Y limb) bypassing 1.5-2 metres of jejunum. For super-obese patients where the small bowel may not reach the shorter gastric pouch.
- *Fixed ring bypass:* A small ring is placed above the gastroenterostomy which may help prevent dilatation over a long period of time. This ring can also be used on sleeve gastrectomy.
- *Short limb gastric diversion:* Same as a standard bypass however with a larger anastomosis and shorter alimentary and biliary limb. Mainly to relieve incapacitating reflux rather than provide weight loss.

Gastric Bypass takes about 1 ½ hours as a primary procedure, and about 2 ½ hours as a revisional procedure (ie after removing a gastric band). Patients generally stay in hospital for 2 nights.



Laparoscopic Sleeve Gastrectomy

Ideal patients:

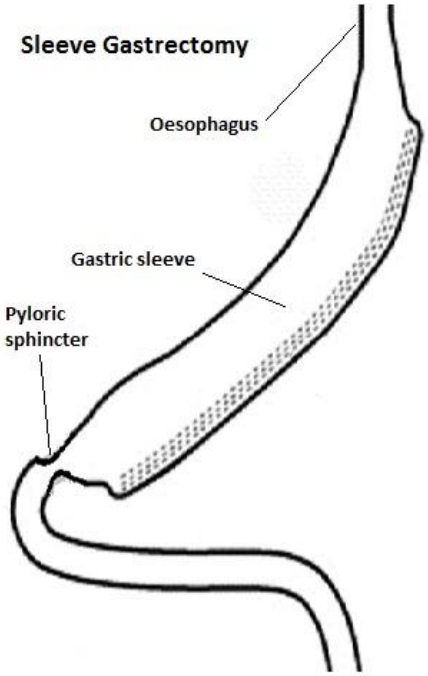
- **Younger obese patients**
- **Super-obese patients as a first step procedure leading to a gastric bypass later**
- **Non-diabetics**
- **No reflux.**

Benefits:

A sleeve gastrectomy provides extremely good rapid weight loss. We expect to see about 70% reduction in excess weight. There are minimal long term problems.

How it works:

The procedure involves resection of about 85-90% of the stomach, leaving only a 15mm tube of stomach left along the lesser curvature. Since a large part of the stomach is permanently removed, this procedure is irreversible.
Good weight loss is provided as the patient is limited in the amount of volume they are able to ingest. There are additional hormonal influences as a result of gastrectomy leading to a reduction in appetite. Sleeve gastrectomy takes about 45 minutes and requires a 2 night stay in hospital.



Laparoscopic Adjustable Gastric Banding.

Ideal patients:

- **Patients at high risk for other procedures.**
- **Patients who understand the commitment to band maintenance and eating habits.**

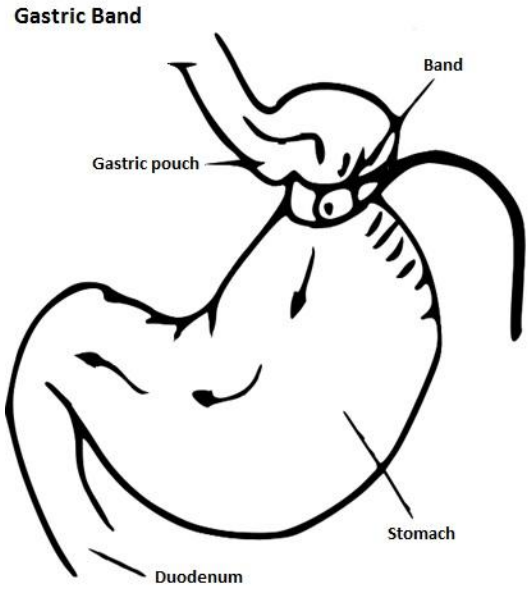
Benefits:

- Least invasive and considered the safest surgical option.
- No stapling or intestinal re-routing is required.
- Fast recovery.

It is critical to understand for patients undergoing this procedure that the gastric band needs regular attention for it to work properly. Achieving the correct amount of restriction is a fine-tuning process to maintain adequate weight loss without causing too much restriction and leading to problems and a poor quality of life. Having a gastric band requires the patient to have to a life-long commitment to its maintenance.

How it works:

A gastric band involves placing an inflatable band around the upper part of the stomach about 2-3cm below the gastro-oesophageal junction. This is attached via a tube to the port which is placed beneath the skin. The band restricts the intake of food to varying degrees depending on how much it is filled. It is intended on providing a feeling of fullness and to slow down emptying from the gastric pouch. The band can be adjusted (increasing or decreasing the volume) to vary the amount of restriction at the band. The patient's eating ability and feeling of restriction is monitored and the band is adjusted accordingly until an acceptable level is obtained. Every person varies on how frequent and for how long the band needs to be adjusted until a perfect level is achieved.



Revisional Weight Loss Surgery

Ideal patients:

- **Patients with gastric band problems affecting quality of life.**
- **Insufficient weight loss following prior gastric band and sleeve gastrectomy.**
- **Severe reflux or strictures associated with sleeve gastrectomy.**

Many people with a gastric band have problematic issues including reflux, regurgitation and dysphagia limiting their quality of life. Often the distortion of the gastro-oesophageal anatomy from the band can produce symptoms that become apparent many years later and necessitate removal of the band. Simply removing the band is likely to lead to weight regain, often to the patient's initial pre-band weight. Many people also just do not achieve the expected weight loss they initially hoped for.

The ideal revisional procedure following a gastric band is conversion to a Roux-en-Y gastric bypass.
There is evidence that a gastric bypass after a band provides better and more sustained weight loss as well as improved food tolerance and quality of life relative to conversion to a sleeve gastrectomy.

It recent years it has also been noticed that many patients experience insufficient weight loss following a sleeve gastrectomy, or even good initial weight loss and then later weight regain. As well as this many patients who've had a sleeve gastrectomy develop severe reflux. This relates to the increased intraluminal pressure of the sleeve being a long, narrow tube as opposed to any weakness of the gastro-oesophageal junction. Conversion to a gastric bypass in these patients provides immediate relief to the reflux and will provide further weight loss.

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