

# Gastric Bypass

## What is a gastric bypass?

This is an operation that consists of creating a small pouch from the upper part of the stomach and joining it to a part of mid small intestine in a special “Roux” configuration (see below). The stomach capacity is reduced (this is the “restrictive” component of the operation) and also a part of the upper intestine that absorbs nutrients is bypassed (this is the “malabsorptive” component).

## How does it work?

Gastric bypass works in three ways to induce weight loss.

- As the size of the stomach is reduced, you will feel full after eating even a small quantity of food – usually, about a cupful. Thus, the reduction in the amount of food (and calories) consumed produce a weight loss. This is said
- As a part of the duodenum and upper small intestine are bypassed, the food reaches the middle portion of small intestine sooner. This is said to release certain hormones that promote weight loss.
- Also less food gets assimilated and absorbed in the body as it bypasses the upper part of the small intestine.

There is a big difference between dieting to lose weight and having a bariatric surgery. The more you diet or stay hungry, the more ghrelin hormone the brain produces. This ends up making you feel hungrier and you may end up eating wrong kind of food such as high calorie or sweet stuff that makes you feel satiated quickly. After bariatric surgery, with the effect of hormone ghrelin taken away, even the small quantities of food you consume do not make you feel hungry or starved.

## How does one prepare for the surgery?

There are three parts in the preparation for any bariatric surgery

### Discussion and understanding

- Benefits and risks of the procedure for “you”.
- The dietary changes after surgery
- A realistic expectation of the weight loss

### Investigations and assessment

- Various blood tests, tests to assess functioning of heart and lungs
- Assessment by one or more specialist

### Preoperative diet

- Low calorie diet for around 2 weeks prior to surgery to help the fat stored in the liver to partly “melt away” so that the liver becomes softer and makes surgery easier for the surgeon and safer for you.

## How is the surgery done?

Gastric bypass is performed under general anaesthesia using the laparoscopic or “keyhole” surgery. The surgeon makes a small (about 1.5-cm) incision and places a short tube called a cannula through the abdominal wall. This cannula is connected to a special pump that pumps in carbon dioxide gas. As the abdomen gets filled up with the gas, the abdominal wall is lifted up, thus providing the surgeon a space to work in. To look inside the abdomen, the surgeon passes a rod-like telescope through the cannula. The telescope is connected to a miniature video camera that picks up the picture of the inside of the abdomen and transmits it to a television screen. The operation is carried out with the help of special, long instruments introduced inside the abdomen through other four or five cannulas and by observing the picture of the operative site on the television screen. In this surgery, the surgeon creates a small pouch from the upper part of the stomach by stapling through the upper

part. A new opening is created in this pouch. The upper part of the small intestine is divided into two sections. The lower end is joined to the opening in the stomach pouch to create what is called as the “Roux limb” The upper limb of the small intestine that carries the digestive juices is joined to the lower part of the intestine some 75 – 100cm beyond the point at which the intestine is originally divided. The Roux limb enables the food to bypass the lower stomach, the duodenum and the upper part of the small intestine. The incisions are then closed and dressings are applied.

### **What can I expect after surgery?**

You will not be permitted to eat or drink till the morning after surgery. It is not uncommon to feel nauseous for a day or so after the surgery. This feeling will soon wear off. You should be out of bed, sitting in a chair on the night of surgery and walking by the following day. You will need to participate in breathing exercises. There is some mild pain at the site of the incisions and you will be given pain medication to take care of it. On the morning after the surgery you will be permitted to have 30 – 50 of clear liquids every hour. The volume of liquid you drink will be gradually increased. You will be able to go home on the second or third day after surgery and will remain on a liquid or puree diet for about 3 – 4 weeks. By about the sixth week you should be eating normal food. A dietician will give you detailed instructions about how to progress to the next stage of your diet. You will be prescribed some medication in syrup form as chewable tablets when you go home. Some vitamin, calcium and iron tablets will also be started after about a month, which you will need to take lifelong. Although many people feel better in just a few days, remember that your body needs time to heal. You will probably be able to get back to most of your normal activities in one to two weeks time.

### **How much weight can I expect to lose?**

You can expect to lose between 70% and 80% of your excess weight in the first 18–24 months following surgery. In some people, particularly in those who start exercising once they lose some weight most of their excess weight 100% may be lost over a period of 24 – 48 months.

- A man who weighs 146 kg and is 1.85 m (6' 1'') tall has a BMI of 42 kg/m<sup>2</sup>
- The upper limit of the ideal BMI (25 kg/m<sup>2</sup>) would give him a weight of 85.6 kg
- 70% excess weight loss = 42.3 kg. Total body weight = 103.7 kg BMI 30 kg/m<sup>2</sup>
- A 50% excess weight loss = 30.2 kg, with a weight of 115.8 kg (BMI 34 kg/m<sup>2</sup>)

The amount of weight you are able to lose and keep off after surgery will depend also on the lifestyle changes that you make, such as increasing the amount of exercise you take and eating a healthy diet. It is important to remember that the operation will not stop from you from craving certain foods or eating what you fancy.

### **What are the benefits of the weight loss?**

As you lose weight, you will see an improvement in conditions that you may have suffered from before surgery, e.g. the high blood pressure and diabetes get better controlled and in some patients may be even cured. In other words, you will either require a reduced dose of medication or no medication at all for these conditions. Similarly, high cholesterol, sleep apnoea, gastroesophageal reflux improve dramatically. Also, most people feel better, are able to move around more comfortably, become more confident and are able to enjoy life better than before.

### **What are the risks of a gastric bypass?**

As with all major surgery, gastric bypass has some risks. These risks vary according to your age, degree of obesity and other illnesses you may have. The risk of death within the first 30 days after surgery is estimated to occur in less than 0.5% (or 1 in every 200 patients) having this operation. This number is calculated on national and international averages on the base of large number of operated cases. Other complications, listed below, happen in less than 5% of patients (or 1 of every 20 patients). Complications that can occur soon after surgery

**Blood clots in the legs or the lungs:** To prevent blood clots from forming you will be given special stockings and an injection to thin the blood. During the surgery you will also wear special boots to keep the blood in the legs flowing. You need to continue to wear the stockings for few weeks after your operation. Getting out of bed and walking as soon as is possible after surgery will also reduce the risk of clots in the legs.

**Bleeding:** There is a small risk of internal bleeding from part of the stomach that has been closed with staples. You will be monitored carefully for signs of bleeding. If occurs, it can be often managed with medicines and occasionally it may require transfusions. In a rare situation you may need an endoscopy or even a second operation to stop the bleeding.

**Leaks from staple lines:** A leakage from the staple line occurs rarely because of a failure of the natural healing process. If this happens, your hospital stay will be longer. Sometimes, this may happen after you go home. It is important to report any unusual symptoms after going home to your doctor. If appropriate he may decide to get a CT scan done to assess if there is a leak. Sometimes the leak will heal without further surgery. In the worst-case scenario you may require a second operation to control the leakage.

**Wound infection:** This is rare but may happen at the site of one of the incisions. It can usually be treated with a course of antibiotics and dressings.

**Long-term complications after gastric bypass are uncommon but can include:**

- Hernias at the site of one of the incisions
- Internal hernias that may produce intestinal obstruction requiring a re-operation.
- Narrowing (stricture) at the join between the gastric pouch and the small intestine, which can make eating and drinking more difficult. This will need to be stretched with an endoscopy.
- Hair loss in the first six months. This is a temporary side effect of the rapid weight loss and it will re-grow.
- Gallstones
- Dumping syndrome, which causes vomiting, reflux and diarrhoea soon after eating and is caused by the stomach contents moving too rapidly through the small intestine.

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#### **Disclaimer**

This brochure is for information purpose only and no attempt to provide specific medical advice is intended. It is not intended to infer that surgery is always the best choice for a particular condition. You should always contact a specialist directly for diagnosis and treatment of your specific problem, and consider taking a second opinion if appropriate.