

Roux-en-Y gastric bypass (RYGB) surgery

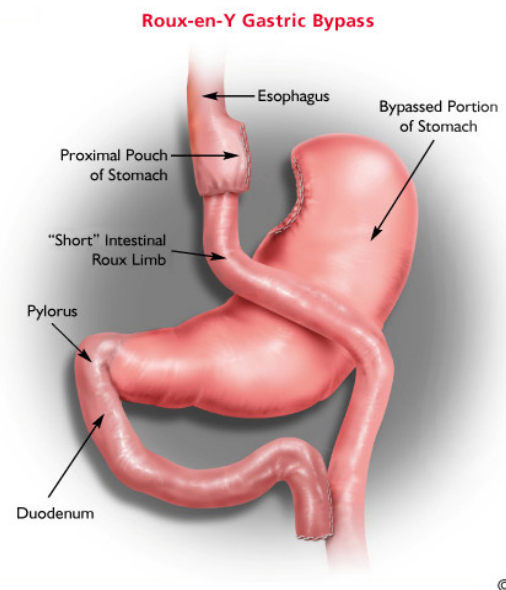
Gastric bypass surgery is a weight loss procedure which is considered when diet and exercise have not worked or when you have serious health problems because of your weight. It works by decreasing the amount of food you can eat at one sitting and by changing the hormones released in the gastro-intestinal tract. The surgeon staples across the top of your stomach, sealing it off from the rest of your stomach. The resulting pouch is about the size of a large egg and can hold only about an ounce of food. Normally, your stomach can hold about 3 pints of food. Then the surgeon divides the small intestine and sews part of it directly onto the new stomach pouch. Food then goes into this small pouch of stomach and then directly into the small intestine..

The food has therefore 'bypassed' most of your stomach and the first section of your small intestine which alters the production of specialised gut hormones that control appetite and satiety. This leads to a decrease in appetite and often also reduces cravings and thoughts about food. Sometimes, people experience taste changes meaning that certain foods may taste different or become unappealing.

The operation is done under general anaesthesia. This means you will be asleep during the procedure. Gastric bypass is usually done using keyhole (laparoscopic) surgery. The operation usually takes two to three hours. You will usually be able to go home one to two days after your operation but it usually takes between four and six weeks to make a full recovery from a gastric bypass operation.

Advantages

- Weight loss starts from the time of surgery.
- It is unusual for a patient not to lose a significant amount of weight.
- You can expect to lose roughly 65-75% of your excess weight over 2 years.
- The average excess weight loss over the first 3 years after a gastric bypass procedure is generally higher than with a gastric band
- It has the highest and fastest remission rate for type 2 diabetes. Many patients can come off or significantly reduce their medication straight after the operation.



©

Disadvantages

- The gastric bypass operation is more difficult to perform and carries a higher risk of death and early complications requiring a reoperation compared with a gastric band.
- The surgery, the hospital stay and the recovery time are all longer than with a gastric band.
- It will be necessary to take long-term regular iron, calcium, multivitamin and B12 supplements after the surgery
- If you eat sugary foods it can make you feel faint and sweaty. This is called "dumping" syndrome.
- 10% of people will fail to lose significant amount of weight following the bypass operation.

Side effects and risks

As with any major surgery, gastric bypass is associated with potential health risks, both in the short term and long term. For most people, the benefits in terms of losing excess weight are much greater than any disadvantages. In order to make an informed decision and give your consent, you need to be aware of the possible side-effects and the risk of complications.

Side effects

Side-effects are the unwanted but mostly temporary effects of a successful treatment, for example, feeling sick as a result of the general anaesthetic.

- Afterwards, you are likely to have some bruising, pain and swelling of the skin around the healing wound(s) for a few days.
- You may feel or be sick after eating, especially if you try to eat too much.
- A condition known as dumping syndrome can occur from eating too much sugar. While it isn't considered a serious health risk, the results can be very unpleasant. Symptoms can include vomiting, nausea, weakness, sweating, faintness, and, on occasion, diarrhoea. This acts as a deterrent from eating the wrong types of food.
- After the operation you will need to take tablets daily containing iron, calcium and certain vitamins, as well as, have 3-monthly vitamin B12 injections.

Risks of the operation

Complications are when problems occur during or after the operation. Most people aren't affected. Being very overweight increases the risk of complications following any operation.

Possible risks include:

- Chest or other infection. You will be given antibiotics during the operation to reduce the chance of getting an infection.

- Blood clots in the legs (DVT) with the risk of a clot passing into the lung. Compression stockings and blood-thinning injections are used to help prevent DVT.
- Reaction to the anaesthetic or medication.
- Complications with your heart, breathing or blood circulation.
- In fewer than 1 in 200 patients, the surgery may need to be converted from the keyhole approach to the traditional open surgical approach. This means making a bigger cut on your abdomen. This is only done if it's impossible to complete the operation safely using the keyhole technique.

The table below summarises the risks specific to having a RYGB procedure:

Risk	What does this mean?	How is it treated?
Death	The risk of death as a result of a gastric bypass operation is about one in 1000. The most common cause of death is a blood clot in the lung (pulmonary embolism) or problems arising from a leak in one of the joins made during the surgery.	
Gastrointestinal tract leak	Leak from where the stomach and the small intestine are connected or stapled. The risk of this is about one in 100.	In case of small leaks, a drain may be placed by x-ray. However, with larger leaks patients require emergency surgery (laparoscopic or open) to wash out the area of the leak and place drains.
Bowel obstruction	Bowel blockages can be caused by scar tissue in the abdomen or kinking of the bowel. This can happen early after surgery but also late (months to years) after surgery. This occurs in 2% to 4% of patients.	An emergency operation may be necessary.
Stricture	Excessive scar tissue formation can occur where the stomach pouch is connected to the bowel. This occurs in about 2% of patients.	A stricture may be treated by endoscopy and balloon dilatation. This procedure involves inserting a tube (endoscope) through the mouth into the stomach, passing a balloon down the tube to the area of stricture, and inflating the balloon to dilate (stretch) the scar tissue.
Ulcer	An ulcer may develop in the area where the new stomach pouch is connected to the small bowel. An ulcer occurs in about 2% of patients.	Ulcers are typically diagnosed by an upper endoscopy examination. They are treated by long-term use of an anti-ulcer medication.

RYGB risks (continued).

Risk	What does this mean?	How is it treated?
Gallstones	Up to a third of all patients will develop gallstones during rapid weight loss.	Patients with symptomatic gallstones may require an operation to have the gall bladder removed (cholecystectomy).
Chronic abdominal pain	About 1 in 200 patients develop chronic abdominal pain or nausea after surgery.	Very rarely, patients may require reversal of the surgery.
Bleeding at operation or damage to other organs in the abdomen	Bleeding occurs in about 2% of patients.	In rare cases, either endoscopic or further surgery may be needed to stop the bleeding.
Failure to lose weight	10% of patients do not lose the desired amount of weight or regain some weight. This may typically occur 2-3 years after surgery.	Most of weight regain is due to failure to follow the prescribed diet or lack of exercise. Patients who “graze” on food all day or constantly eat to the point of stretching their stomach pouch may re-gain weight. Also, patients who do not exercise regularly may not achieve their goal weight.

For more information about the Trust, visit our website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

Centre for Diabetes and Endocrinology, June 2018
Review due: June 2020