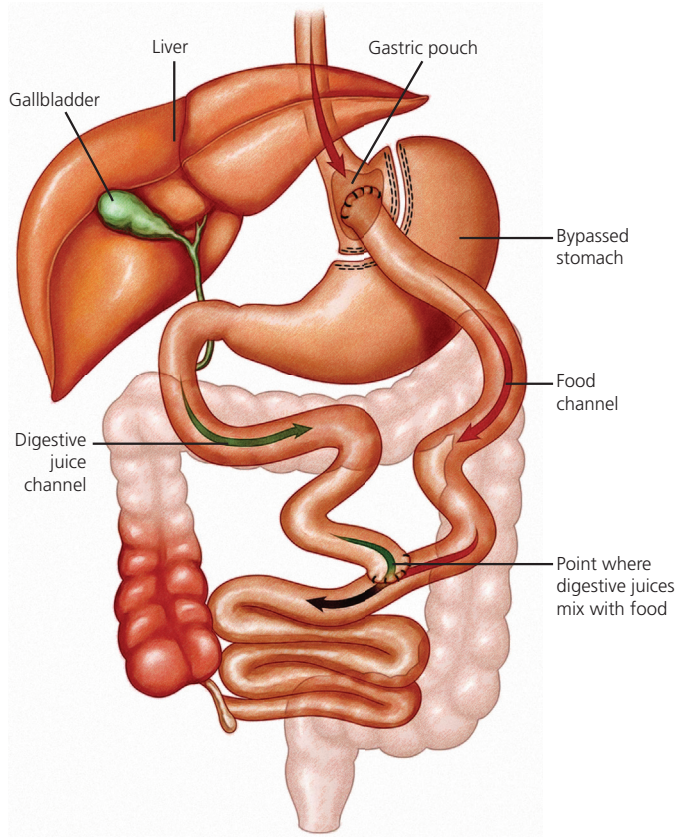




Understanding Bariatric Surgery

What is bariatric surgery?

Gastric sleeve resection, gastric bypass and other types of weight-loss surgery, collectively known as bariatric surgery, make surgical changes to your stomach and digestive system that limit how much food you can eat and how many nutrients you absorb, leading to weight loss.










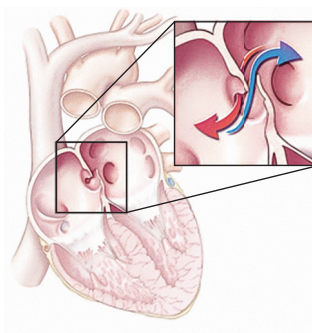
What are the indications for undergoing bariatric surgery?

Excess weight affects health and hence the quality of life. Bariatric surgery, also called surgery for obesity, can help one reach a healthier weight by altering the digestive system surgically. To make the surgery a success, one needs to change their diet and lifestyle. This is an irreversible surgical process, and should be

considered only after knowing the pros and cons of the same.

Obesity brings along a lot of other health problems. For example:

-  Decreases life span
-  Type 2 diabetes or certain types of cancers
-  Heart and circulation problems like heart disease, high BP and stroke
-  Sleep apnoea and breathing problems
-  Back or joint problems
-  Skin, urinary and menstrual problems
-  Depression and mental health problems



Without keeping a control on weight, it becomes difficult to achieve the desired results for the medical problems with the help of medical treatments. Hence, these can account for the indications for bariatric surgery.



How is obesity measured?

Obesity is measured by the Body Mass Index (BMI). The BMI reflects a person's weight in comparison to their height (weight [kg] ÷ height² [m²]). For instance, a woman who is 1.67m in height and weighs 65kg would have a BMI of 23.3, which is considered to be within the healthy weight range. A BMI of 30+ is considered obese.

BMI	Classification
18.50 and below	Underweight
18.50 - 24.99	Normal range
25.00 - 29.99	Overweight
30.00 - 34.99	Obese class 1
35.00 - 39.99	Obese class 2
40.00 +	Obese class 3

What is your role in making the surgery a success?

Surgery can help you lose weight and also keep it off. But surgery alone won't work. You need to change your diet and lifestyle in a such way that you eat healthy and have an active life. You will need to:

- ❏ Commit to improving your health
- ❏ Discuss your health history with the surgeon
- ❏ Get all answers and have all information on the procedure
- ❏ Follow all the instructions given prior to the surgery
- ❏ Follow all the instructions regarding nutrition, activity and exercise after the surgery



What is the surgeon's role in making the surgery a success?

Your surgeon will help to protect your health before; during and after surgery. He/she will:




- ❏ Evaluate you as a possible surgery patient
- ❏ Describe the surgery's risks and benefits, and answer your questions
- ❏ Perform the best procedure for you
- ❏ Prescribe regular follow-up
- ❏ A registered dietician will provide you with a diet chart and plan your meals according to your needs



Do you qualify for the surgery?

Bariatric surgery is a major surgery which is irreversible, so deciding for it can be difficult. You need to be well-versed with the risks and complications of the procedure and fully prepared to bring a change in your lifestyle for the rest of your life.



You qualify for the procedure when you meet any one or more of the following conditions:

-  A BMI of 30 or more
-  You have to be healthy enough to undergo a major surgery
-  You may be asked for a psychological evaluation and your doctor will need to make sure that you have tried all the other means to lose weight



What are the realistic expectations out of the surgery?

The goal of bariatric surgery is to help you lose over half of your excess weight. This can improve or prevent health problems. This surgery is not done for cosmetic reasons. Keep in mind that:

-  Surgery is an option only when other means of losing weight have been tried and failed
-  Surgery is meant to be permanent and will work only when you change your diet and lifestyle for the rest of your life

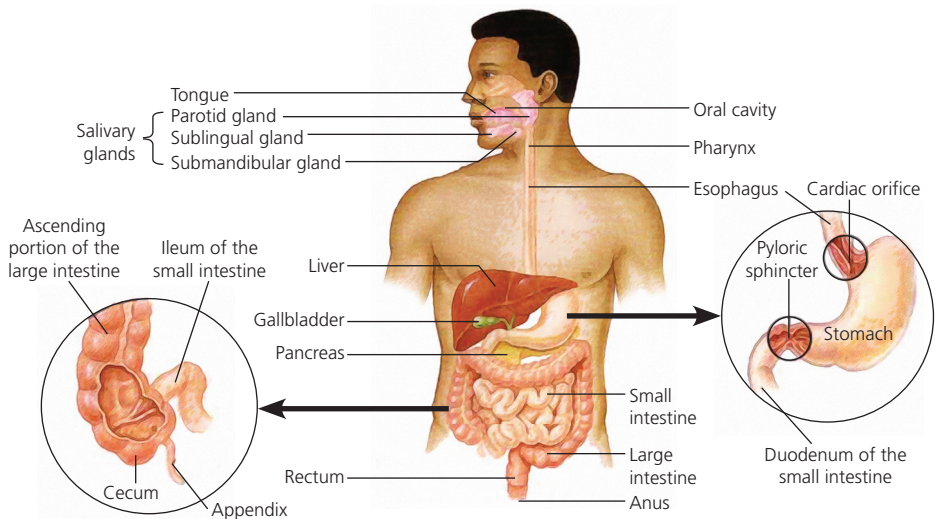
- ❏ You won't shed weight right away. Most of it is lost during the first year and a half of the surgery
- ❏ Most likely you won't lose all your excess weight, but you will get into a better weight for sure after the surgery

Know your digestive system

During digestion your digestive system breaks down and absorbs the food you eat. The body turns this food into energy. The energy that your body does not use is stored as fat. As fat builds up, it can cause serious health problems. Bariatric surgery is a tool to help the body lose its excess fat and stay at a healthier weight.

After you chew food, muscle action brings it from your mouth down your esophagus (food pipe). Then food passes through these organs:

- ❏ **The stomach** - This organ stores food and sends it slowly to the small intestine. Food is partially digested in the stomach. The stomach also produces chemicals that help you absorb certain vitamins
- ❏ **The small intestine** - Food is mostly digested and absorbed in the small intestine. Enzymes and chemicals help to break the food down. Some fluids are also absorbed. The small intestine has three sections: the duodenum, the jejunum, and the ileum



- ❏ **The large intestine** - Most fluids are absorbed in the large intestine. Waste products are also concentrated and passed through the rectum as stool
- ❏ The liver, gall bladder and pancreas provide enzymes and chemicals that are essential for digestion

What are the types of bariatric surgery?

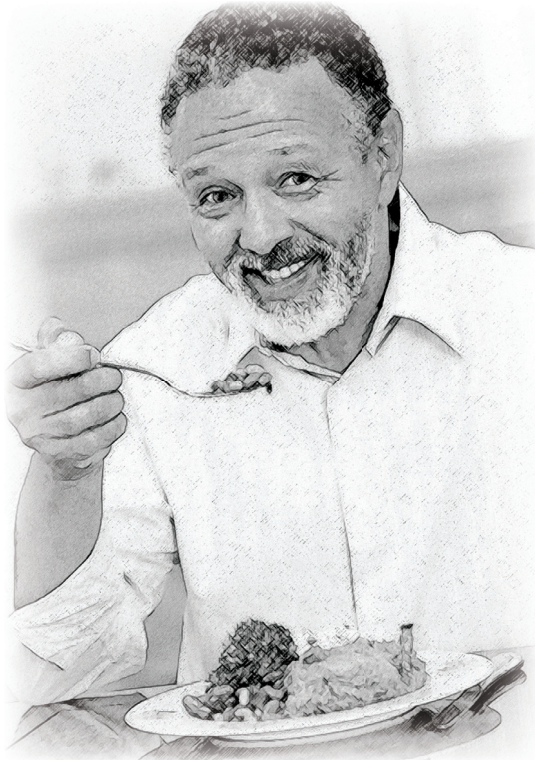
Bariatric surgery changes the size of your stomach, the length of your small intestine or both. The goal is to limit how much food can be eaten and/or absorbed at one time. There are many types of bariatric surgery procedures. Your surgeon can tell you more about the procedure that is best for you.

All bariatric procedures cause weight loss using one or both of these methods:

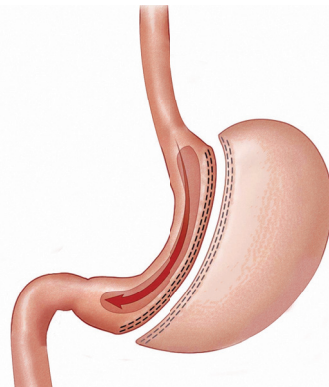
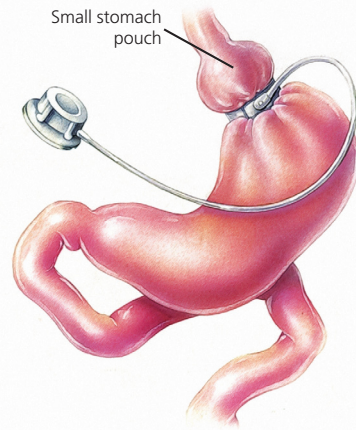
- ❏ **Restriction** - Limits how much food you can eat at one time. The part of the stomach that holds food is made much smaller. You feel full after eating a small amount of food
- ❏ **Malabsorption** - Limits how much food the body absorbs. The small intestine is rearranged so food travels through only a short section. As a result, most of the food that is eaten is expelled as waste and not absorbed as energy

Restrictive procedures -

During a restrictive procedure, a portion of stomach is closed-off to create a very small pouch. This pouch holds a few tablespoons of food. Food passes slowly through a narrow opening at the bottom of the pouch. So you feel full longer.



- a) **Laparoscopic adjustable gastric banding** – A band is placed around the top of the stomach to create a small pouch. Food leaves the new pouch slowly, so you feel full longer. Using a port placed under the skin, the size of the band and speed that the food passes can be adjusted.
- b) **Vertical banded gastroplasty (VBG)** – Staples and a non-adjustable band are used to create a small pouch. Food leaves the new pouch slowly so you feel full for a longer time.
- c) **Vertical sleeve gastrectomy (VSG)** – This restricts the amount of food you can eat at one time. Sleeve gastrectomy is a surgical weight-loss procedure in which the stomach is reduced to about 25% of its original size. The open edges are then attached together (often with surgical staples) to form a sleeve or tube with a banana shape. The procedure permanently reduces the size of the stomach. The procedure is performed laparoscopically and is not reversible.
- d) **Laparoscopic gastric bypass** – Gastric bypass operations combine the creation of a small stomach pouch to restrict food intake and construction of bypasses of the duodenum and other segments of the small intestine to cause malabsorption.



- e) **Endoscopic gastric balloon insertion** – The gastric balloon is a soft, silicon balloon that is inserted into the stomach and filled with sterile saline. It is designed to partially fill your stomach, giving you the feeling of fullness and make you feel less hungry. This type of weight loss treatment can help you lose weight without invasive surgery. This procedure is a temporary measure and is useful only for short-term benefits

Your surgical experience

It is normal to be nervous about surgery. Knowing what to expect can help. Your healthcare team will guide you through preparing for and having the surgery. You will be kept as comfortable as possible throughout the process. After surgery, you may go home the same day or you may stay in the hospital for up to 5 days. Either way, you will be monitored to be sure that your recovery is going smoothly.

Your pre-operation exam and tests

Your doctor may see you about a week before surgery. He or she may request blood tests. These tests help confirm that you are well enough for the surgery. Chest X-rays may be ordered to check your lungs. An ECG may be done to check your heart rhythm. Other exams and tests may also be done, if needed.



Before surgery

To prepare for surgery you may be asked to:

- ❏ Stop smoking
- ❏ Lose weight by following a special diet
- ❏ Stop taking certain medications, including aspirin and anti-inflammatories. Ask your surgeon what medications you can continue taking
- ❏ Be sure to mention any herbs or supplements you take
- ❏ Do not binge on food before surgery
- ❏ Stop eating and drinking after midnight on the night before surgery, or as instructed



On the day of surgery

Be sure to arrive on time on the day of surgery. After you arrive, you will sign the required consent forms. On or before the day of surgery, an anaesthesiologist may talk with you. This is a doctor trained to care for you before, during, and just after surgery. You will be told about your anaesthetics (medications to block pain), which will let you sleep through surgery.



During surgery

Your surgeon begins the surgery by making one or more incisions in your abdomen. For a laparoscopic procedure, several small incisions are made. During the procedure, surgical instruments are inserted through these small incisions, and the surgeon operates by looking at the organs on a video monitor.

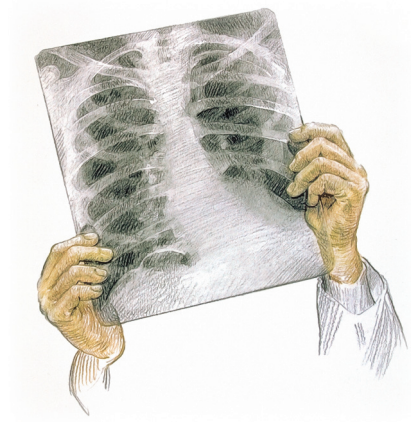


After the surgery

You may wake up in a recovery room or you may be in an ICU (Intensive Care Unit). One or more IV (Intra-Venous) lines may be in place. IV lines deliver fluids and medications. One IV line may be attached to a PCA (Patient-Controlled Analgesia) pump.

At the hospital

As you recover from surgery, you may be moved to a hospital room. You will be asked to be active as soon as you can. This helps speed up your recovery. You will also be asked to do breathing exercises. These help keep your lungs healthy. X-ray tests may be done to check your progress. As you gain strength, you will start a liquid diet. Your team will tell you when you are ready to go home.



Six weeks after the surgery

Your body needs time to adjust after surgery. Once you're ready, you will be given nutrition and activity programmes. Follow these programmes as directed. The success of the surgery depends on the choices you make and be sure to ask any questions that you have.

At home

When you get home, follow your doctor's instructions. At first, you may have stomach or bowel cramping, shoulder pain, or nausea. Tell your doctor if pain or nausea is severe or does not improve with time. Take pain medications as prescribed for one to two weeks.



To ease back into your daily life, you may be given guidelines like those listed below:

- You may shower within 18 to 72 hours
- You may return to driving once you no longer need pain medications. This is often two to three weeks after surgery
- You may resume sex in two to four weeks
- You may return to work in three to four weeks, or as instructed
- Avoid lifting anything over 10 pounds for 4 to 6 weeks

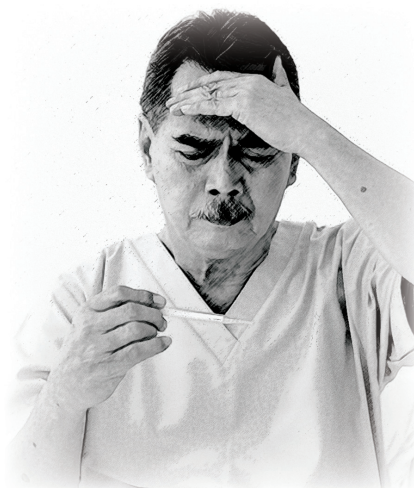


Becoming more active

Activity helps you lose weight after surgery. Your healthcare provider can help you begin. Start easy, but try to be a little more active each day. You might try walking. Other options include chair aerobics or using a stationary bike.





Call your doctor if you have –

- A fever over 101°F (38.3°C) or chills
- A red, bleeding, or draining incision
- Frequent or persistent vomiting
- Increased pain at an incision
- Pain in your legs or chest
- Trouble breathing



Keep in mind

Certain problems may occur after surgery, depending on the type of surgery you have had. Hence, a person needs to keep a constant vigil.

-  **Malnutrition** – Your body may not be able to absorb all the vitamins it needs. Symptoms include fatigue, swollen ankles, or excessive hair loss. Take vitamin supplements as prescribed, for life, to help prevent this
-  **Dehydration** – A smaller stomach means that liquids must be consumed in smaller amounts. Not getting enough liquids can lead to dehydration. Symptoms include feeling “dried out” or having dark urine. Ask your healthcare team for guidelines on getting enough liquids
-  **Dumping syndrome** – This can occur after procedures that bypass part of the small intestine. After eating high-sugar foods, you may have weakness, cramps, nausea, diarrhea, excessive sweating, or fainting spells. Avoid foods that cause these symptoms.
-  **Lactose intolerance** – You may lose the ability to digest lactose (a sugar found in dairy products). Symptoms include cramps, bloating, and diarrhea. Avoid dairy foods (such as milk and cheese) if this happens.



Change your eating habits

What and how you eat will change after surgery. And you will need to eat this way for life. Follow your meal plan and any instructions that you are given. To stay healthy, you may be given guidelines such as:

- ❏ Choose high-protein foods to help prevent nutritional problems
- ❏ Eat slowly. Take small bites. Chew each bite well before swallowing it
- ❏ Stop eating as soon as you feel full
- ❏ Do not snack between scheduled meals
- ❏ Drink sugar-free liquids, such as water. Drink them between (not with) meals. Wait 1 hour after meals before drinking liquids
- ❏ Take vitamins as directed
- ❏ Avoid fibrous foods, such as celery, string beans, and unprocessed meat
- ❏ Avoid alcohol and carbonated drinks



Having an active lifestyle

To lose weight, you need to be active for life. Exercise is an important part of your weight-loss plan. It can also help reduce stress. The goal is 30 minutes of exercise a day, most days of the week. These tips can help you succeed:

- ❏ Choose a form of exercise you enjoy
- ❏ Exercise at your own pace
- ❏ Ask a friend to join you
- ❏ Keep a record of your exercise activity in a calendar or notebook. Some people find this a good way to track their progress and stay motivated



Finding support

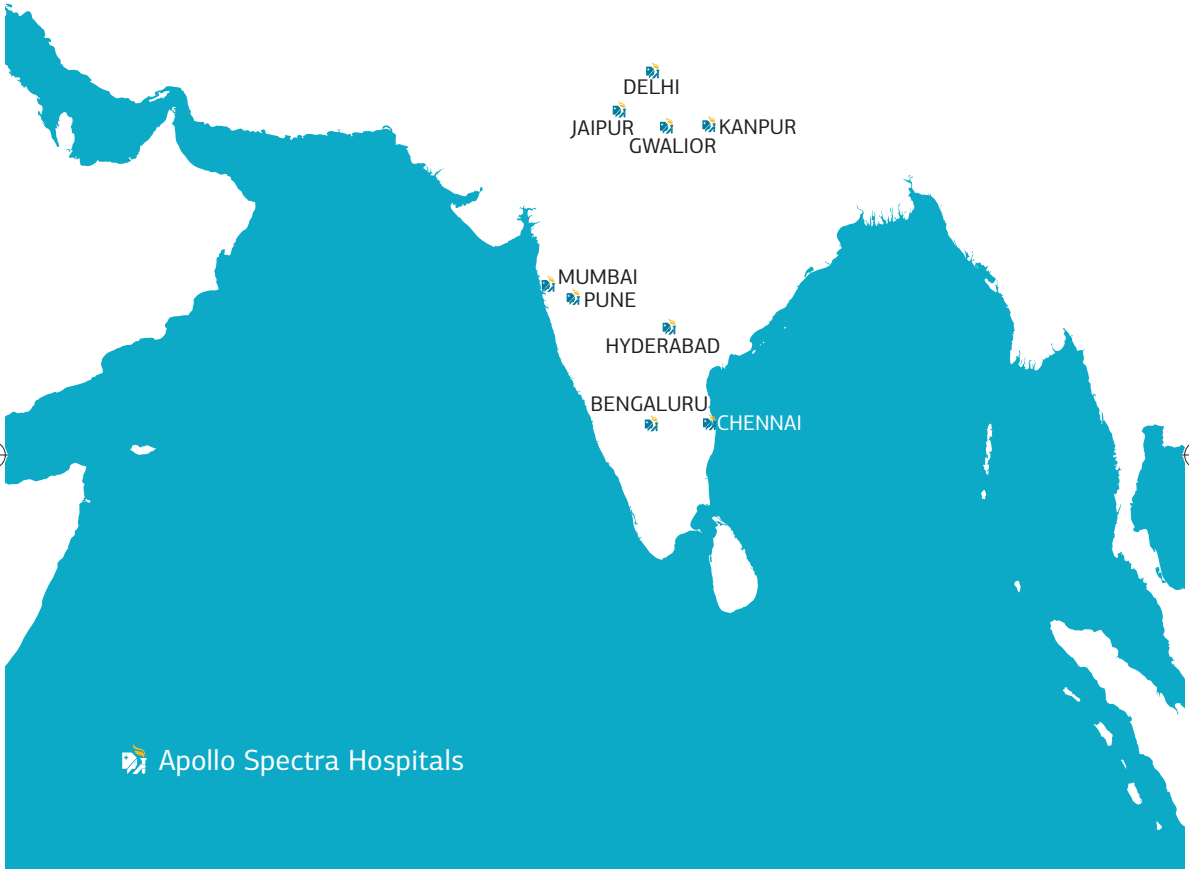
After surgery, you may miss eating certain foods. And your image of yourself may also change. As you lose weight, you will be able to do more. So you may have new tasks at work or home. Some changes can be stressful. But asking for help can ease the stress. You might talk to:

- 👤 Friends and family members
- 👤 Other bariatric surgery patients. Often they know just what you are going through. You may find other patients through a support group at your bariatric surgery programme or there may be a group in your local community
- 👤 A mental health professional. If you spoke before surgery, you might seek him or her out again. Special counseling or classes may be suggested



Follow up with your doctor

After surgery, be sure to see your doctor as instructed. At first, you may see a member of your healthcare team weekly or monthly. In time, as you adjust to the changes, your visits will be less frequent. Be sure to also involve your primary care doctor and any specialists, as needed, in your progress. This will help you stay healthy.



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