



“A year post the surgery I am 25 kgs down. I no longer binge. My blood pressure is now normal and the sleep apnea is completely gone. I have never experienced this feeling of control”.

Laparoscopic Bariatric Surgery



Minimal Access, Maximum Care.

You Can Beat Obesity

Weight Loss Surgery or Bariatric Surgery is a combination of surgeries performed to induce long term weight loss in patients with morbid obesity along with treating their health problems like diabetes, blood pressure, arthritis etc. It can be performed through both open and laparoscopic procedures. A Laparoscopic Bariatric Surgery at Beams is a Minimal Access Surgery (MAS) performed through small incisions that result in with less post operative pain, shorter recovery period and less scars.



What is obesity?

Obesity is a chronic disease affecting the health of millions of people worldwide. It is defined as an excessively high amount of body fat in relation to lean body mass resulting from caloric intake that exceeds energy usage.

What are the causes of Obesity?

Obesity is not just a cosmetic problem but is directly harmful to one's health.

The balance between calorie intake and energy expenditure determines a person's weight. If a person eats more calories than he or she burns (metabolizes), the person gains weight (the body will store the excess energy as fat). For patients with a BMI over 40, life expectancy is reduced significantly (as much as 20 years for men and 5 years for women).

Obesity is the result of multiple factors. These include:

- The genes you inherited from your parents or the weight gained during childhood, teenage years, and early adulthood can influence the development of obesity
- Your eating and exercising habits i.e overeating foods that are high in fat and carbohydrates and how well your body turns food into energy

- Women have less muscle and have a slower metabolism than men. They have a tendency to put on more weight than men, thus weight loss is more difficult for women
- People with sedentary lifestyle burn fewer calories than people who are active
- Medicines for diabetes, high blood pressure, certain antidepressants, anti-convulsants, antihistamines, oral contraceptives and most corticosteroids are associated with weight gain
- Emotions such as boredom, sadness, stress or anger tend to make people eat excessively
- Diseases such as hypothyroidism, insulin resistance, polycystic ovary syndrome and Cushing's syndrome
- Hormonal changes in women especially pregnancy and menopause tend to increase weight

Who is Obese?

Obesity is measured by body mass index (BMI). It is calculated as person's weight (in kilograms) divided by the square of his or her height (in meters).

$$\text{BMI} = \frac{\text{Weight (in kilograms)}}{\text{Height (in meters)} \times \text{Height (in meters)}}$$

BMI Chart

Height (feet)	4'6"	4'7"	4'8"	4'9"	4'10"	4'11"	5'0"	5'1"	5'2"	5'3"	5'4"	5'5"
Height (meter ²)	1.88	1.95	2.02	2.09	2.16	2.24	2.31	2.38	2.46	2.58	2.66	2.77

Height (feet)	5'6"	5'7"	5'8"	5'9"	5'10"	5'11"	6'0"	6'1"	6'2"	6'3"	6'4"	6'5"
Height (meter ²)	2.82	2.92	2.99	3.08	3.17	3.26	3.35	3.44	3.53	3.63	3.63	3.82

Classification	Underweight	Normal weight	Overweight	Obese	Severe Obesity	Morbid Obesity
BMI	Below 18.5	18.5–24.9	25.0–29.9	Above 30	35–39.9	→40

A person is considered normal if his/her BMI (body mass index) is between 18.5 – 24.9 kg/m². If the BMI is 30kg/m² or above it is considered that the person is obese. Cut off for obesity is based on waist circumference i.e. 90 cm for Indian men and 80 cm for Indian women.

How common is Obesity?

Obesity is increasing rapidly throughout the world. In India, it has reached epidemic proportions in the 21st century, morbid obesity affecting 5% of the country's population. India is following a trend of other developing countries that are steadily becoming more obese. Around 12 % of male and 16% of females in India are obese. Unhealthy, processed food has become much more accessible following India's continued integration in global food markets. Indians are genetically susceptible to weight accumulation especially around the waist.

What are the risks of being Obese?

An obese person is more susceptible to the risk of developing a number of lifestyle diseases including:

- Increased risk of premature death
- Type 2 (adult-onset) diabetes is associated with central obesity wherein a person has excess fat around his/her waist
 - Insulin resistance
 - High blood pressure (hypertension) is observed in people who are apple shaped (central obesity) than in people who are pear shaped (fat distribution mainly in hips and thighs)
 - High cholesterol (hypercholesterolemia)
 - Stroke (cerebrovascular accident or CVA)
- Heart attack - women with BMI \rightarrow 29 are at a higher risk of developing coronary artery disease. There is a higher chance of a second heart attack in obese patients who have previously suffered an attack
- Congestive heart failure
- Metabolic syndrome
- Certain types of cancer (colon, breast, uterus, gall bladder, prostate, rectum)
- Gallstones
- Gout and gouty arthritis
- Osteoarthritis (degenerative arthritis) of the knees, hips, and the lower back
- Sleep apnea
- Infertility
- Social and psychological issues

What are the advantages of losing weight?

Obesity treatment acknowledges that even a modest weight loss can reduce your chances of developing heart disease or a stroke. For example, a modest weight loss of 10% of the initial weight, and long-term maintenance of that weight loss can bring significant health gains, including:

- Lowering blood pressure to normal or near normal levels
- Reducing levels of cholesterol and triglycerides
- Decreased complications of heart disease
- Reduced risk of type 2 (adult-onset) diabetes
- Significant improvement and relief in patients suffering from stress urinary incontinence, low back pain, osteoarthritis, degenerative disc disease and pain in the weight-bearing joints
- Positive outcomes of conception in infertile patients
- Decreased overall mortality

Do diets and exercise work for severe morbid obesity?

The main treatment for obesity consists of dieting and physical exercise. While diet programs help weight loss over the short term, maintaining this weight loss is difficult and requires exercise and diet lifelong as part of a person's lifestyle. Success rates of long-term weight loss maintenance with lifestyle changes are low ranging from 2 - 20%. The most effective treatment for severe morbid obesity is the Bariatric Surgery. This surgery is associated with long-term weight loss and decreased overall mortality. Beams Bariatric procedures are advised for people who have morbid obesity, i.e. people with BMI more than 40 without any co-morbidities; and with BMI more than 35 with significant co-morbidities, or BMI more than 30 with increased waist circumference (more than 90 cms for men, and more than 80 cms for women) provided there is no underlying medical disorder causing obesity.

At Beams, Bariatric treatment is advised when other methods of treating obesity such as exercise, diet and lifestyle modifications are not successful.

All obese people are not candidates for surgery.

What are MAS procedures performed at Beams for weight reduction?

The Bariatric Procedures that Beams performs are:

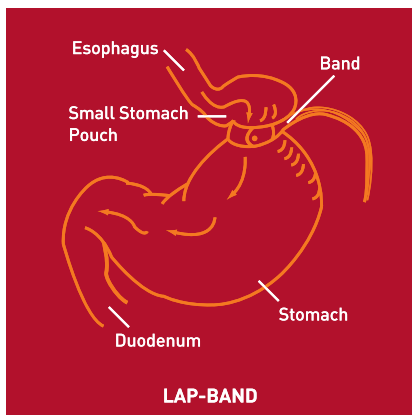
- Laparoscopic Adjustable Gastric Banding (LAGB)
- Laparoscopic Sleeve Gastrectomy (LSG)
- Laparoscopic Roux en Y Gastric Bypass (LGB)

Laparoscopic Adjustable Gastric Banding (LAGB)

Adjustable Gastric Banding is a restrictive type of weight loss surgery.

It involves placing a silicone band with an inflatable inner collar around the

upper stomach to restrict food intake. This creates a



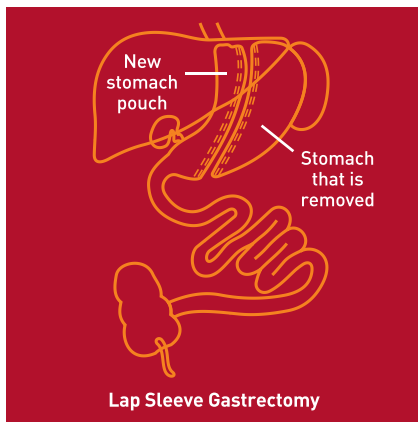
small pouch and a narrow passage to the lower stomach. The silicone band can be tightened or loosened over time to change the size of the passage. This small passage delays the emptying of food from the pouch and causes a feeling of fullness.

This procedure is for young well motivated patients and is a reversible procedure.

Laparoscopic Sleeve Gastrectomy (LSG)

Laparoscopic Sleeve Gastrectomy is an irreversible restrictive procedure. In this procedure about 85% of the stomach is removed laparoscopically. The portion of the stomach that secretes hormones that stimulate hunger is removed, retaining the part where digestion occurs. The person undergoing this operation feels satisfied after eating small quantity of food.

Following the surgery, the patient needs to become re-accustomed to eating solid foods. Normally this starts with two weeks on a liquid-only diet, two weeks of semi-solid foods and then solids. Most people who have gastric sleeve surgery lose 50 to 80 percent of their excess body weight over the first six months to one year after surgery. Studies have shown that after the gastric sleeve resection procedure people show improvement in diabetes, high blood pressure, high cholesterol and sleep apnea within one to two years.



Laparoscopic Roux en Y Gastric Bypass (LGB)

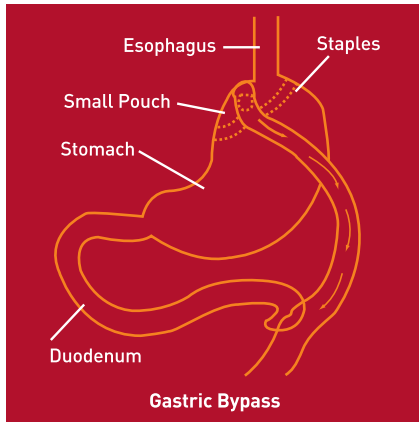
In this operation, the stomach is divided using staplers to reduce its size, creating a gastric pouch of 30 to 50ml.

This is a complex surgical process that involves creating a small gastric pouch 30 to 50ml using staplers to reduce the stomach capacity. Next a "Y" shaped section of the small intestine is attached to the stomach pouch so that the

food can bypass the duodenum. The bypasses of the small intestine

are formed to decrease the absorption of food nutrients. These techniques significantly restrict food intake and reduce hunger to promote healthy weight loss.

Most of the weight loss is evident within one year and is usually completed by the end of the second year. This surgery not only promotes weight loss but also shows significant improvement in sugar levels of diabetic patients. They can reduce the intake of drugs or insulin or can be totally off medications.



What are the advantages of the Bariatric Surgery?

Laparoscopic Bariatric Surgeries require short hospitalization of 24-48 hours in case of sleeve resection and a couple of days more for gastric bypass

- All surgeries allow patient mobilization in few hours after the procedure
- The surgery is performed using tiny incisions therefore they have a low complication rate as compared to any other surgery
- Patients can resume work within a very short period of time
- It improves vitality and the overall quality of life
- It positively impacts mood and self esteem of the patient

How much weight loss can be expected after Bariatric Surgery?

For the first 2 years after the surgery, patient loses weight gradually. Maintaining weight loss depends on diet and exercise. In the long term, most patients lose 60% to 80% of excess weight.

Important considerations for all weight loss surgery

Surgery should not be considered until all other options have been evaluated.

Bariatric surgery is not the end of treatment for obesity but the beginning of a lifelong commitment to healthy lifestyle. It requires following very specific dietary instructions for the rest of their lives, including eating very slowly, consuming only small quantities of food at a time. Regular exercise and learning behavior modification techniques.

Beams Minimal Access Surgery Centre

Beams Hospitals is India's leading chain of surgery centres dedicated to Minimal Access Surgery (MAS) procedures. Backed by expertise spanning over 17 years, Beams Hospitals provide patients with the utmost care and comfort. Beams surgeons have extensive experience, honed over thousands of surgeries performed over the years in minimally invasive surgical procedures for Gynaecology, General Surgery, Urology and Arthroscopy. Beams also offers state-of-the-art maternity services at its centres.

Beams Difference

Beams Hospitals believes in "Patient First". Our hospitals are designed to maximize patients' comfort and convenience.

- Serene surroundings, relaxed homelike atmosphere
- Plush spacious rooms with modern amenities
- In-house diet plan for patient and complimentary meals for patient guests
- Patient friendly care givers
- Team of highly skilled surgeons trained internationally
- Advanced equipment for Minimal Access Surgery

Beams respects its patients' right to know and understand details about his/her ailment.

This brochure is intended to be an aid in understanding an ailment. It is not intended as a substitute for medical advice. Treatment and medical advice of every individual depends on the uniqueness of his/her case and diagnostics. Always consult your doctor about your medical condition.



Mumbai

Plot No. 674, 16th Cross Road, Behind Khar Gymkhana, Khar (W), Mumbai 400 052.
T: +91 22 3941 7700

Amritsar

29 B, Race Course Road, Amritsar 143 001.
T: + 91 183 3941 770

Indore

15/2 South Tukoganj, Near Surya Hotel, Indore 452 001.
T: +91 731 3941 770

Hyderabad

Plot 99, Road No.1, Near Chiranjeevi Blood Bank, Jubilee Hills, Hyderabad 500 033.
T: +91 40 3941 7700

Bengaluru

640, 12th Main, 80 Ft. Road, 4th Block, Koramangala, Bengaluru 560 034.
T: +91 80 3941 7700

www.beamshospitals.com