

Bariatric Surgery for Weight Loss & Disease Free Living



With the growing awareness of obesity and its negative impact on healthy living, the bariatric surgery has emerged as a blessing for the mankind. Due to the rapid modernization and changing lifestyle, bariatric surgery has got tremendous potential particularly in the urban India. Gone are the days when people would go for crash dieting and fuming into strenuous exercises and would manage to lose merely a few kilograms. **Dr. Ramen Goel**, a renowned Consultant Bariatric and Metabolic Surgeon from Bombay Hospital share his views about this surgery.

— As we know that you are an experienced advanced laparoscopy surgeon, can you kindly brief us your journey of becoming a successful bariatric surgeon?

Now, looking back it seems a dream run. First time I heard about laparoscopy was in 1990, when first laparoscopy workshop was held in Delhi and I was fortunate to attend the same. Despite skepticism amongst colleagues, I was convinced that this will become an acceptable treatment modality. From 1992, I started laparoscopy surgery and then every year 1-2 new procedures could be performed

laparoscopically. It had been a process of continuous learning and fine-tuning laparoscopy skills for last 17 years. I am really thankful to each one of my patient who agreed to get this done.

— Being the pioneer bariatric surgeon in India, do you wish to share your experiences while performing the first lap gastric band surgery and the first banded gastric bypass surgeries in India?

The preparation for a new major surgery starts weeks in advance. It is a major responsibility and involves listing of equipment, manpower and steps. This also

includes running through this list with the team repeatedly to ensure everyone knows what is involved and what can be required in an emergency situation. This is very much like a reccae/drill to familiarize the team.

Though in hindsight it may appear to be something pioneering, but believe me this was the last thought in mind. On the day, the real issue was to ensure safe completion of procedure.

— Please highlight the different surgical procedures involved in bariatric surgery?

Bariatric surgery denotes a group of weight loss surgeries. These are being performed for over 50-70 years. Various initial surgeries have been discontinued but gradually procedures with acceptable safety have been identified and accepted by medical professionals.

The common bariatric procedures performed worldwide include gastric bypass, sleeve gastrectomy and gastric band surgeries. These are performed laparoscopically or through key hole route. Lap Gastric bypass involves reduction of stomach size and then bypassing major part of rest of stomach and proximal intestine. This leads to reduced food intake and also part of consumed food is not absorbed by the body.

Over 50% of our patients prefer to undergo gastric bypass probably because of its predictable outcome of over 100 lbs weight loss.

Over 30% of our patients prefer Lap sleeve gastrectomy, a procedure introduced less than 10 years back. Major part of stomach is removed surgically thus patient is less hungry and feels full with small meal. This surgery is preferred due to its simplicity and reduced requirement of lifelong supplement intake.

Selected 20% of patients do well after lap gastric band surgery. Usually patients with good diet discipline and habit of regular exercise lose adequate weight even after gastric band surgery. Comparable safety

and reversibility makes this a comparatively attractive surgery for this group.

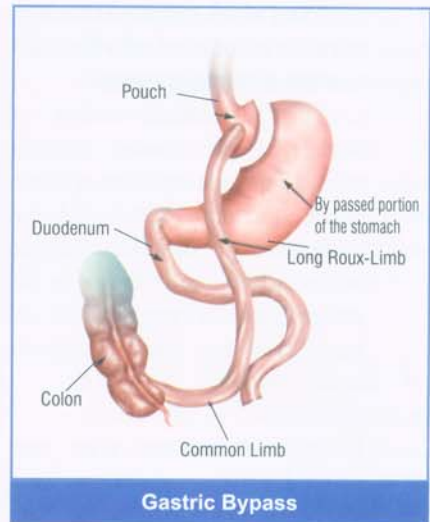
We are aware that you are dedicated to provide a wide range of surgeries through advanced laparoscopic techniques, kindly do brief us about the advanced laparoscopic techniques used by you.

Advancing frontiers of surgical intervention through keyhole or laparoscopic route had always been a challenge. It is important that the surgical procedures are simplified in a way that average surgeon can safely perform an advanced surgery. My effort had been to improvise these techniques so that even surgical postgraduates can learn and start these surgeries at district level places.

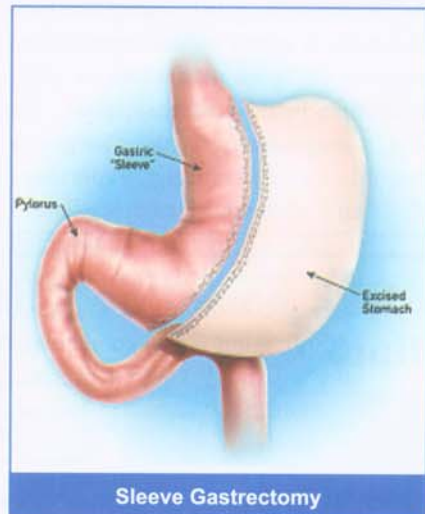
Use of technology has made this easier for us. I extensively use technological modifications if it provides safer and easier surgical environment. This includes use of newer energy sources like Harmonic scalpel, Ligasure or use of staplers of intestinal division or suturing devices like Endostitch or staple re-inforcement materials like Seam Guard etc. This does add to the cost of treatment but makes surgery that much safer.

Procedures which were considered advanced laparoscopically few years back like hernia, fundoplication, spleen or kidney removal etc are routinely performed and thus bariatric and diabetes surgeries are at the frontier of advanced laparoscopy at the moment.

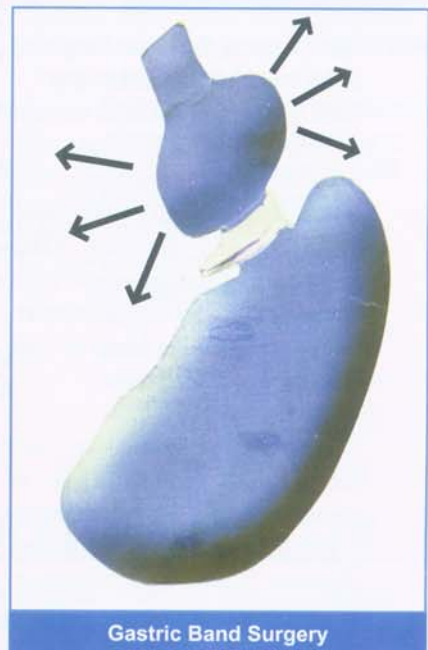
What are the different types of bariatric surgeries performed by



Gastric Bypass



Sleeve Gastrectomy



Gastric Band Surgery

you? And which surgery according to you is associated with the least number of complications?

I have performed variety of bariatric procedures which include gastric balloon, gastric band, gastric bypass, sleeve gastrectomy, banded gastric bypass besides many re-do procedures of conversion of band to sleeve, band to bypass etc.

I do not believe that any procedure has more or less risk/complications on its own. Surgical complications are a result of multiple issues – (a) patient factors – pre-op health status, post op compliance, (b) Surgeon's factors – training, experience and philosophy and (c) Fate – usually a surgery is conducted in a controlled environment with pre-determined steps. A complication is like an accident and is usually an end product of multiple systematic failure. In carefully selected scenario complication possibilities can be completely reduced.

What type of bariatric surgeries is the most advantageous one?

Each procedure leads to certain degree of weight loss. We have learnt by experience that even gastric band works well in disciplined patients. After gastric band patients lose upto 50% of excess weight. However, sleeve gastrectomy leads to 65% - 70% excess weight loss.

Gastric bypass results in upto 85% excess weight loss in some patients. The resolution / improvement of associated diseases is also a determinant of surgical selection. Each patient has different weight

loss expectation and thus procedure selection has to be individualized.

You are the third surgeon in the world to perform the "neuro-endocrine brake surgery", kindly do explain us in brief regarding the same.

Ileal Interposition or Neuro-endocrine brake surgery is relatively new intervention for treatment of Type 2 Diabetes Mellitus. Few surgeons have taken upon themselves to conduct a human trial, after its benefits have been documented in animal model.

Once its safety and efficacy is established, this surgery will prove to be a boon to large population suffering from diabetes and its related complications like blindness, kidney failure, heart diseases, stroke and amputations.

This surgery is based on a hypothesis that in response to food stimulus, a hormone GLP-1 is secreted from the gut lining. This hormone helps control raised blood sugar levels in diabetics. After surgery, this GLP-1 secreting gut is shifted closer to stomach so that food comes in contact faster. This results in raised GLP-1 levels immediately after food consumption.

If this hypothesis is correct, then the blood sugar control is related to food consumption. These diabetics will not have to time their medicines to their food intake any more and will be at liberty to eat without any medicine requirement in majority of patients.



Division of GLP – 1 Secreting Terminal Ileum for Interposition in Jejunum




Completed Ileal Interposition Surgery

What have you so far observed or concluded regarding your research on 'Impact of bariatric surgery on diabetes and metabolic syndrome'? Which are the other researches conducted by you?


Published literature has shown that post surgery > 60% diabetic patients maintain their HbA1C below 6, another 14% maintain <7 without any medication

while the remaining maintain > 7 with significantly reduced medicine requirement.


Our early observation also reinforces these results. Almost 75% of our patients are off diabetic medication within 1-2 months of surgery.

 **You are known to conduct the new minimally invasive technique, Laparoscopic Adjustable Gastric Band Surgery, can you kindly enlighten us about this surgery?**

Gastric band surgery is performed extensively in Australia, Europe and now also in USA. We have been doing it for over 9 years now and believe it to be a effective treatment modality in selected patients.

 **Where do you see India in the field of bariatric surgery, ten years from today?**

With the spread of bariatric surgery awareness amongst masses and available surgical skills, I can foresee a rapid increase in acceptance of bariatric surgery for healthy living. India has large population of morbidly obese individuals and I believe India will become next to USA in numbers of bariatric surgery within 5 years.

 **What is your message to the people regarding bariatric surgery?**

Bariatric surgery provides an important tool for weight loss and disease free living for an otherwise help less situation.

Following non-surgical measures > 90% patient regain weight after successful weight loss attempts. This incidence increases to over 98% in morbidly obese. However after bariatric surgery a almost 80% patients are not only able to lose weight, but are able to maintain weight even after 10 years.

Bariatric surgery should be considered as a primary method of weight loss in morbidly obese population and in obese with associated diseases. The concept of surgery as a measure of last resort should not be encouraged as most end up with multiple complications associated with yo-yo phenomenon and obesity related disease complications. 