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## INFORMATION SHEET

# LAPAROSCOPIC SLEEVE GASTRECTOMY

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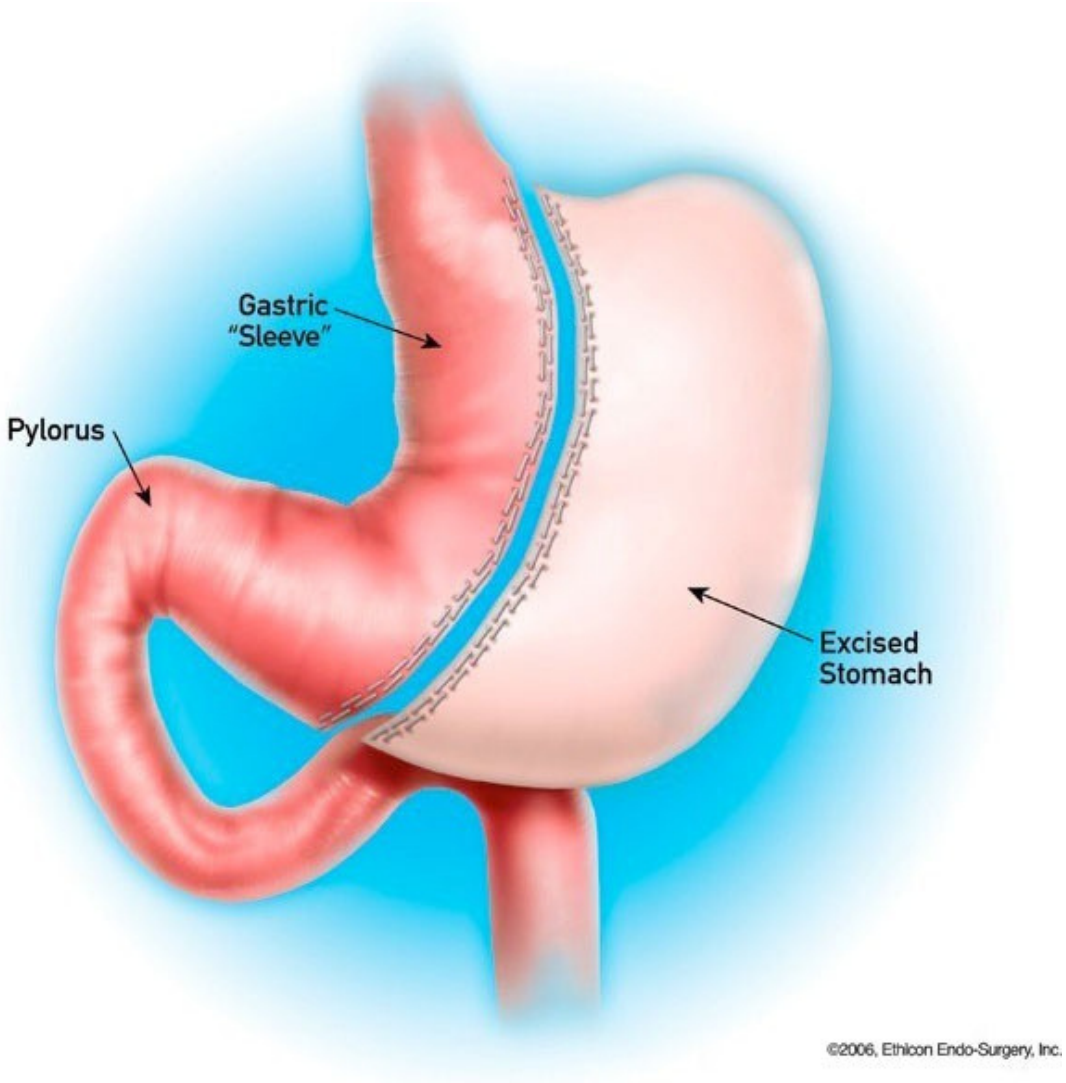
# LAPAROSCOPIC SLEEVE GASTRECTOMY




You are considering undergoing a laparoscopic sleeve gastrectomy for weight loss.

The purpose of this information sheet is to provide you with the necessary information to make an appropriate and informed decision as to whether you wish to proceed with a laparoscopic sleeve gastrectomy.

Please read this information carefully and ask about anything you do not Understand. Morbid obesity is a disease that often has multiple associated medical illnesses and is associated with a significant decrease in life expectancy. Many of these can be reversed with significant long term weight loss. Evidence demonstrates that for the great majority of the morbidly obese, diet/ exercise/medications including medically supervised medications/diets have a high failure rate and that bariatric surgery is the most effective long term way to achieve significant weight loss in these patients. The risks of a non-surgical approach to your morbid obesity is a very high failure rate with increased weight gain in the longer term leading to higher risk of obesity-related medical illness and decreased life expectancy.

The laparoscopic sleeve gastrectomy is performed by making several small incisions through which the surgeon inserts laparoscopic instruments to perform the surgery. Patients usually go home two to three days after surgery. This is a restrictive procedure i.e. it limits the amount of food you can eat at any one time. This is accomplished by cutting away the outer portion of the stomach, leaving a small tube or sleeve of stomach. This reduces the stomach volume by about 80%. The stomach is now a hockey stick shaped organ, which holds less food and produces less acid. In addition, the part of the stomach that produces the hormone implicated in hunger (grehlin) is also removed and therefore there may be a component of appetite suppression.

This procedure was initially developed as a staged procedure for the very morbidly obese patients with severe co-morbidities, who were considered too high risk for a prolonged one stage operation. A number of patients who had this procedure were found to lose significant amounts of weight that they did not require the second procedure. This led to the introduction of the sleeve gastrectomy as a primary weight loss operation. However there is not currently a lot of long term data regarding the sleeve gastrectomy. There is a possibility that out at ten years, the stomach could stretch allowing more calorie intake and weight gain.

Alternative procedures to the sleeve gastrectomy include the laparoscopic gastric bypass and laparoscopic SADI. The laparoscopic gastric bypass is the most common procedure performed in the United States of America. Again, it is a largely restrictive procedure, although there is a small amount of malabsorptive component. Weight loss with this procedure is in the region of approximately 65%. This procedure may have particular benefits to diabetic patients.

The laparoscopic SADI is a newer Malabsorptive procedure. It has the highest weight loss but carries a more significant risk of mineral and vitamin deficiencies. It is beneficial for diabetics and super obese patients.

The sleeve gastrectomy has advantages and disadvantages when compared to other bariatric procedures as described. It carries less risk than the bypass, but more than the adjustable gastric band. It has a faster weight loss and therefore faster correction of associated co-morbidities such as high blood pressure, high cholesterol and to a certain degree, diabetes as compared to the gastric band, but slightly slower than the gastric bypass.

As it does not involve any diverting or bypassing of the intestine, there is less likelihood that patients will require long term vitamin, mineral or protein supplements. You have a normal gut anatomy and therefore can have standard

diagnostic procedures such as gastroscopy carried out postoperatively. There is no "dumping" with the sleeve gastrectomy as seen with the gastric bypass and significant dietary change is not required as compared to the gastric band. However, the stomach is permanently removed.

Please carefully weigh the advantages and disadvantages of each of the available bariatric procedures before you decide which you feel is the one for you. If I feel that a particular procedure has advantages for you, I will recommend that during our consultation.

## EATING HABITS AND EXERCISE

It is important during the initial recovery period you take the appropriate amount of calories, protein and vitamins in order to avoid feeling ill, weak and possible losing some hair. Your goal is to burn fat, not muscle, so taking in protein to maintain muscle bulk is very important. Take full advantage of the early period of lack of appetite to get into the right eating and exercising habits. Patients who fail to develop good dietary habits are more likely to regain weight in the longer term. If you go back to high calorie foods such as chips, cookies, soft drinks and do not stay active, then even the best bypass will fail. Your bariatric procedure should be regarded as a tool to aid your weight loss. The importance of behavioural factors cannot be over emphasised. It is therefore very important
that you participate in our Patient Support Group as much as possible and seek dietary and psychological assistance whenever it is recommended or whenever you feel that you are struggling to achieve your goals. Studies have shown that patients who participate in patient support groups, and have their surgery carried out in the multidisciplinary environment which we have in place at BIOS achieve better results.

## UNREALISTIC EXPECTATIONS

Weight loss with the laparoscopic gastric sleeve can be very rapid. This ongoing weight loss can be psychologically addictive but ultimately it will slow down after six to nine months so it is best that you are prepared for this event. As has been stated previously, the most rapid period of weight loss is in the first few months, so this is the period when we recommend you begin your exercise regime. As you lose weight your exercise capacity will increase, making you feel better and fitter. The best average result from a laparoscopic gastric sleeve is 65% excess body weight over an 18 month period. Bare in mind that the goal of surgery is to make you healthier, improve your life expectancy and decrease the problems suffered by obesity related diseases, it is not to get you down to your ideal weight. The more weight you have to start with, the more weight you will probably lose with surgery and our recommended dietary and exercise regime. Try not to get caught in the trap of comparing your weight loss with others.

If you are a woman you should avoid pregnancy in the first year postoperatively. Periods of rapid weight loss are not the right time to be trying to get pregnant or trying to maintain and existing pregnancy. Also bear in mind that as you lose weight your fertility will increase and you are more

likely to become pregnant. Female gastric sleeve patients can and do get pregnant and with appropriate support from obstetricians, will have an uneventful pregnancy. Obviously it is important should you get pregnant, that you bring to your obstetricians attention as soon as possible the fact that you have had gastric sleeve surgery.

To make your surgery technically as safe as possible we will start you on an

Optifast diet for at least two to three weeks prior to surgery. This is designed to shrink your liver and reduce your risk of surgical complications. It also introduces you to the liquid dietary regime you will have in the postoperative period. If your liver is excessively large at the time of surgery, your procedure may be aborted and rescheduled for a later date.

Smoking is a serious problem for bariatric surgical patients. It increases your risk of

pulmonary complication and blood clots regardless of the procedure you have performed. I strongly recommend that if you are a smoker, that you try and stop smoking prior to surgery. Even stopping smoking a week before surgery can be of benefit.

You will meet our anaesthetists at the time of your gastroscopy prior to your chosen

bariatric procedure. This is done to make sure, as best as possible, that you are an acceptable risk of anaesthesia. Anaesthetists may recommend further medical or cardiac investigations at that time. If this is the case your surgery will have to be postponed until these tests have been completed and evaluated by our anaesthetists. The pre-operative gastroscopy is designed as stated previously to introduce you to our anaesthetists but also to ensure that there are no other physical abnormalities which would preclude you from having surgery.

General risks which apply to all abdominal surgery include but are not limited to

the anaesthetic (greater in the morbidly obese), deep venous thrombosis (DVT), pulmonary embolism, death, infection, bleeding, pneumonia, heart attack, stroke, bowel obstruction, intra-abdominal abscess, damages to intra-abdominal organs, adhesions, wound infections and incisional hernias.

## BLEEDING

It is unusual that you will need a blood transfusion as the risk of significant bleeding is less than1%.

## INFECTION

Any surgery carries a risk of infection. The most common types are wound infections, urinary infections and chest infections. More serious types are blood infections, abscess and peritonitis. Although fortunately rare, some of these infections can progress to death, even if the source of infection is corrected and appropriately treated.

## CLOTS

Blood clots in the veins in the legs or pelvis (DVT) can migrate to the lung (pulmonary embolism – PE) which can be fatal. These can occur after any type of surgery, and the risk persists after surgery for up to three weeks. The risk of this type of complication after bariatric surgery is less than 1%. However as it is such a serious complication and can result in sudden death, we take a number of steps to try and minimise the risks. You will be given injections to thin the blood, stockings to compress your legs and when you are asleep in the operating theatre, machines will be used to squeeze the blood from your legs. These machines are continued to be used on the ward when you are in bed and we encourage you to get up and walk about the ward as soon as possible. The risk of DVT is about 1:200 and the risk of pulmonary embolism about 1:1000. If you are identified as being a high risk candidate, we may discharge you home on blood thinning injections for up to three weeks in an effort to minimise your risk.

## CHEST PROBLEMS

Pulmonary complications such as pneumonia, aspiration and atelectasis (partial collapse of the base of the lungs) can occur after any type of surgery under general anaesthetic. The risk of this complication can be reduced by stopping smoking, early mobilisation after surgery and working with our physiotherapists with chest exercises and incentive spirometry.

## INCISIONAL HERNIAS

Incisional hernias are common after open bariatric surgery but thankfully rarer after laparoscopic bariatric surgery. The risk is approximately 1% and if they do occur they tend to be small and easily repaired at a later date.

## SMALL BOWEL OBSTRUCTION

The small intestine can get blocked by twists around scar tissue (adhesion) inside the abdomen that can occur after surgery. The other less common cause of bowel obstruction is an internal hernia. These types of obstructions can occur at any time and can occur many years after surgery. The rate of bowel obstruction after a laparoscopic sleeve is very low. Most obstructions after laparoscopic surgery can be successfully repaired laparoscopically.

## WOUND INFECTION

These can occur with any type of surgery and even in clean surgery they occur in up to 5% of cases. They may require antibiotics, opening and drainage of the wound with packing. These wounds are then allowed to heal over a longer period of time with dressings as an outpatient. Patients who smoke are at increased risk of wound infection.

## DAMAGE TO SPLEEN OR OTHER ORGANS

The spleen lies close to the upper portion of the stomach and can be injured during surgery. Fortunately it is very rare to injure the spleen during laparoscopic surgery and the rate is under 1%. If this was to happen you may require conversion to an open procedure and removal of the spleen. This will be avoided wherever possible. Pancreatitis is a rare but reported complication as is liver injury. These rarely require any surgical intervention.

## BOWEL INJURY

Rarely the intestines or stomach can be injured at the time of surgery. If this occurs and is recognised, it will be repaired laparoscopically but the operation may be aborted at that point and rescheduled for a later date. If bowel injury was not recognised at the time then there is a risk of developing life-threatening peritonitis requiring further surgery and probable admission to Intensive Care.

## DEATH

The mortality rate in gastric sleeve is 1:1000 . You should recognise that although we do everything possible to minimise the risk, it cannot be reduced to zero. By

undertaking bariatric surgery you are exchanging your risk of decreased life expectancy from weight loss related illnesses, i.e. approximately four years for an Australia women, for a short term
increase in your risk of death during and immediately after the operation. Although the procedure is carried out with keyhole surgery it is still major surgery and you and your family should realise that any complications of this procedure could result in death.

**Particular risks that apply to the laparoscopic sleeve gastrectomy are:**

**STAPLE LINE LEAK**

The stomach is divided with a stapling device leaving two rows of steel staples behind. If this staple line breaks down and leaks, there is a risk of peritonitis, infection or an abscess. The risk of a leak is less than 5% but should it occur, it will require further surgery and the placement of drains.
It is likely you will require a period of time in Intensive Care and if the infection is not controlled, it can become life threatening.

**STAPLE LINE BLEED**

There is a risk of bleeding from the staple line. This is in the order of less than 1%. Should this happen it is usually managed without the need for a further operation and settles by itself. Occasionally it may be necessary to take you back to theatre for a further laparoscopic procedure to wash out any blood in your abdominal cavity.

***IT IS MY POLICY THAT IF I AM UNHAPPY WITH YOUR POST OPERATIVE RECOVERY, I WILL TAKE YOU BACK TO THEATRE FOR A LAPAROSCOPY. THIS MAY MEAN THAT YOU HAVE A 2nd PROCEDURE WHICH SHOWS NO ABNORMALITY. HOWEVER STUDIES HAVE SHOWN THAT EARLY INTERVENTION FOR COMPLICATIONS PRODUCES THE BEST OUTCOMES.***

***FOR UNINSURED PATIENTS THIS WILL RESULT IN ADDITIONAL THEATRE AND ANAESTHETIC FEES.***

**VITAMIN MINERAL DEFICIENCIES**

As the laparoscopic sleeve gastrectomy does not involve any alteration in the normal gut anatomy there is no particular risk of vitamin or mineral deficiency as seen in the gastric bypass. Vitamin D deficiency is common in overweight patients and it is common to be placed on multivitamins for this reason. Although vitamin

deficiencies are rare following sleeve gastrectomy I still recommend that your have regular blood tests as part of the post operative regimen.

**HAIR LOSS**

It is not uncommon to have some thinning or loss of hair in the first few months after bariatric surgery. This is mainly temporary and is related to inadequate protein intake.

**HIATUS HERNIA**

A hiatus hernia occurs when part of the stomach slips up through the diaphragm into the chest. It is very common in the obese patient and will probably have been noted at your gastroscopy. At the time of your gastric sleeve surgery your hiatus hernia may be repaired with simple sutures to the hiatus. Generally the symptoms associated with a hiatus hernia of heartburn and reflux respond best to weight loss rather than anti-reflux surgery.

**FAILURE TO LOSE WEIGHT**

As has been discussed previously, as this is a restrictive procedure it is possible to cheat the operation and not lose weight.

**LARGE FOLDS OF SKIN**

This is always a possibility with significant weight loss. There is no reliable way to determine before surgery how much or any this will occur in your case. Age, exercise, speed of weight loss, elasticity of skin all play a role. Plastic surgery procedures are available to correct excess skin problems and you can be referred to an appropriate plastic surgeon and the plastic surgeon also presents at our Patient Support Group.

**CONVERSION**

Although it is always the intention to complete these operations laparoscopically, it is occasionally necessary to convert to an open operation for safety reasons. I have not yet been required to convert a sleeve gastrectomy to an open operation, but you should be aware that this may be necessary. Should this happen you will have a prolonged stay in hospital and have increased risks of complication such as wound infection and incisional hernias.

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