

## **INFORMATION SHEET FOR A LAPAROSCOPIC GASTRIC BAND**

You are considering undergoing a laparoscopic gastric band 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 gastric band. 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 GASTRIC BAND**

The laparoscopic gastric band is performed by making several small incisions through which the surgeon inserts laparoscopic instruments to perform the surgery. The surgery consists of placing a silicone band around the inlet of your stomach to reduce your ability to eat. This silicone band is then connected by tubing to a port that sits underneath the skin, just below your breastbone. The port allows access to the band for adjustments over the weeks and months after the procedure. The adjustments allow the tightness of the band to be tailored to your weight loss. Patients usually go home the day after surgery. A laparoscopic band is purely a restrictive procedure, i.e. it limits the amount of food you can eat at any one time.

The laparoscopic gastric band is the commonest procedure performed for weight loss in Australia and it is the safest. The risk of mortality from the gastric band in Australia is currently 1:1000. The weight loss with the gastric band is gradual, averaging approximately half a kilogram per week, with the aim of losing on average 65% of your excess body weight by two years. The band does require a change in your dietary habits and as it is a purely restrictive procedure, it can be circumvented by eating high calorie liquids or high calorie soft foods. The band does require a number of adjustments post operatively to achieve the optimum setting, or “sweet spot” for each individual patient. The average number of adjustments required to reach this point is approximately five.

After gastric band surgery, some patients experience intolerance to certain types of foods. These are typically breads, nuts and tough fibrous meat. Other food intolerances can occur with high fibre foods and fruit peels. If food becomes stuck, typically patients will vomit and significant discomfort can occur until the food passes, either one way or another. Rarely an endoscopy is required to remove the stuck food.

Alternative procedures for weight loss available in this practice include the laparoscopic sleeve gastrectomy and the laparoscopic Roux-en-Y bypass. All of these procedures are designed as tools to help you to lose your excess weight, making you healthier and hopefully improving your quality of life.

The laparoscopic Roux-en-Y gastric bypass procedure is designed to make a small reservoir or pouch for food at the upper end of your stomach with the capacity of about 30 mL. This pouch is connected to the small intestine by a new anastomosis, or join. The outlet of this join is about 4 cm in diameter. Ingested food therefore bypasses the majority of your stomach which remains alive and undisturbed in the abdominal cavity. The gastric bypass has certain advantages for diabetic patients. The laparoscopic Roux-en-Y gastric bypass has the highest mortality and complication risk of the bariatric procedures performed in this practice.

The laparoscopic sleeve gastrectomy is a restrictive procedure that involves removing the majority of the stomach, turning the stomach into a thin tube-like structure, thus reducing the capacity of your stomach to approximately 50 mL initially and later to approximately 100 mL. The safety profile of the sleeve gastrectomy lies between the gastric band, which is the safest, and the laparoscopic gastric bypass. Like the gastric band, the sleeve gastrectomy works as a restrictive procedure. Your anatomy is not altered and therefore there is less requirement for you to take any vitamin supplements. However there is not as much long term data with the sleeve gastrectomy as the other two procedures and there is some suggestion that there can be some weight gain at ten years.

**Please carefully weigh up the advantages and disadvantages of each bariatric procedure before you decide which one is your procedure of choice. Where appropriate I will make recommendation of which procedure you should consider as being the most appropriate for your medical condition.**

## **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 possibly 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 weight-loss procedure 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 multi-disciplinary environment which we have in place at BIOS achieve better results.

## UNREALISTIC EXPECTATIONS

Weight loss is most rapid in the 2 weeks after a gastric band and it slows after this as your calorie intake increases. At this time exercise becomes increasingly important to maintain steady weight loss, so this is the period when we recommend you begin your exercise regime with the assistance of Dan, our Exercise Physiologist. As you lose weight your exercise capacity will increase, making you feel better and fitter. The best average result from a laparoscopic gastric banding is 65% excess body weight over an 24 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 an 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 banding 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 band surgery.

To make your surgery technically as safe as possible we will start you on an Optifast diet for at least two 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 an-

aesthesia. 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.

## **RISKS AND COMPLICATIONS**

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 than 1%.

### **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.

### **CHESTS 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. These types of obstructions can occur at any time and can occur many years after surgery. 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 banding 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 Australian woman, 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.

## **SPECIFIC RISKS RELATED TO LAPAROSCOPIC GASTRIC BAND SURGERY.**

### **BAND SLIP**

A band slip is a rare complication which the band allows the stomach to slip underneath the band. This is characterised by sudden onset of difficulty in vomiting and associated stomach pain. This complication requires urgent attention because rarely the blood supply to the stomach can be compromised leading to death of part of the stomach and this can be life threatening. In the majority of cases, removing the fluid from the band is sufficient to provide temporary relief of symptoms and then re-operation is necessary to reduce the slip and replace the band. This complication occurs in up to 5% of cases and can occur at any time in the post operative period, from months to years.

### **EROSION**

In this case the band slowly works its way through the stomach wall, with the stomach healing behind it. Eventually after a period of at least two years, the patient is able to eat as much as they wish and has a loss of restriction. When investigated, the band is sitting within the stomach. The band can be removed with the gastroscopy and then a further procedure would be required to maintain weight loss. This complication is rare. It is felt to be due to possible low grade infection related to the band and occurs in less than 1% of cases.

### **INFECTION**

Infection is rare but it can occur in any part of the band and it is possible that this could result in part or all of the band needing to be removed.

### **PORT PROBLEMS**

The port is fixed to the muscle just below the breastbone. Occasionally, particularly in larger patients, the first few band adjustments require the use of x-ray controlled access to the port. Very rarely the port could be damaged or could leak, or the port can also twist or move. In these circumstances it may be necessary to replace the port.

## **SYMMETRICAL POUCH DILATION**

There is some evidence that in a small number of patients, the pouch above the band can dilate over time, leading to patients being able to consume more food. This can result in decreased weight loss or weight regain. The exact cause of symmetrical pouch dilatation is not fully understood. It may be due to the band being overly tight or patients overeating. Symmetrical pouch dilatation may require that all of the fluid be removed from the band and the readjustment process started afresh, or it may be recommended that the band be removed and an alternative bariatric procedure be performed. This is a rare complication.

## **DIFFICULTY IN SWALLOWING**

While the feeling of food being stuck occurs with most band patients at some point, rarely a number of patients find that this is a particular problem and the band needs to be removed.

## **VITAMIN MINERAL DEFICIENCIES**

As the laparoscopic gastric banding 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 gastric banding I still recommend that you 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 can be 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 banding 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**

Whilst we will always attempt to complete your operation laparoscopically, as this is easier on you and certainly easier from a surgical point of view, it is occasionally necessary to convert to an open procedure. This is a rare procedure but obviously if it occurs will lead to prolonged time in hospital and a longer postoperative recovery.

Overall, the long term complication rate from laparoscopic gastric band surgery varies between 5-20%. This includes all complications such as minor port issues to more significant problems of erosion and band slip. This should be borne in mind when deciding which bariatric procedure you wish to have.

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