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INFORMATION BOOKLET

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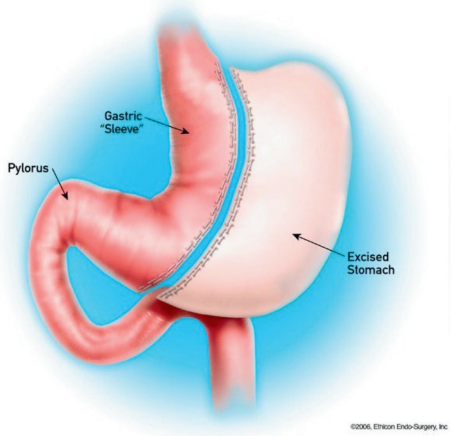
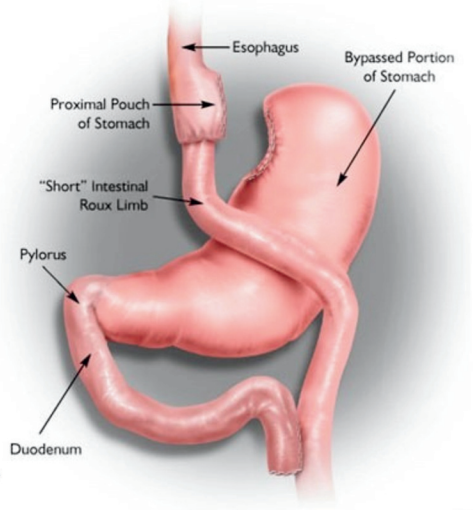
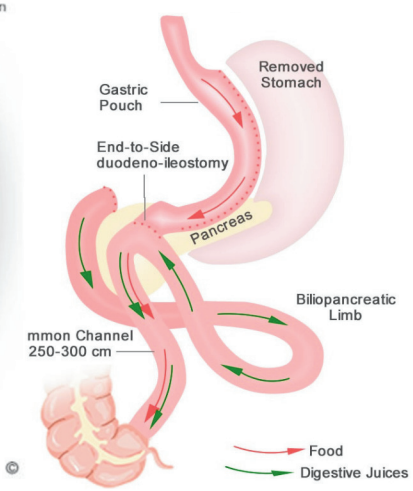


Laparoscopic Sleeve Gastrectomy
(Gastric Sleeve)



Laparoscopic Roux-En-Y
Gastric Bypass



Single Anastomosis Duodeno-Ileal
(SADI)

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Information on Bariatric/Metabolic Procedures Offered at Dr Phil Lockie's Practice

Bariatric Surgery

You are considering undergoing weight loss surgery. 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 weight loss surgery and which operation may be best suited to you. Please read this information carefully and ask about anything you do not understand.

Morbid obesity is a disease that often has multiple weight related medical illnesses and is associated with a significant decrease in life expectancy. Many of these weight related diseases 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 remains the most effective long term way to achieve significant weight loss in these patients. The health problems associated with excess weight and quality of life are improved and these benefits can be achieved well before you have achieved your maximum weight loss.

Currently in the practice I offer 3 different weight loss surgical procedures, each with their pros and cons. All of the procedure are performed laparoscopically or robotically. This involves making several small incisions through which laparoscopic instruments are inserted to perform the surgery. Patients usually go home after 2 nights in hospital. All of the operations produce a reduction in appetite via gut hormone changes and the bypass operations are associated with stronger hormone changes and generally faster improvements in diabetic control. All weight loss patients should take a multivitamin for life.

Some degree of weight regain can occur in the longer term after weight loss surgery. Weight regain is generally less after the bypass procedures and is increasingly managed with medical weight loss therapy.

Laparoscopic Sleeve Gastrectomy

The laparoscopic sleeve gastrectomy is currently the most common procedure worldwide. The sleeve is a good volume reduction operation, and I believe it is best suited to men and lower BMI women.

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. It cannot be reversed This reduces the stomach volume by about 80%. The stomach is now a hockey stick shaped organ, which holds less food and there is a component of appetite suppression.

Long term issues with the sleeve gastrectomy include reflux and weight regain.

Approximately 25-30% of sleeve patients can develop some reflux in the long term. Some may have had reflux prior to their sleeve but some may develop it after their surgery. Whilst the vast majority of patients can manage their reflux with medication a small number may ultimately require further surgical intervention to control their reflux symptoms. Whilst a sleeve gastrectomy will increase in size over the first 6 months, it usually the same size after that and weight regain is usually due to snacking and poor food choices in the long term.

The Bypass Procedures: Roux en Y gastric Bypass and Single Anastomosis Duodenal Ileal Bypass (SADI)

Both of the bypass procedures have been around for a long time, up to 40 years, and have been considered the "Gold Standard" against which other operations are compared. They both involve alterations in the GI anatomy, resulting in both some restriction and some hypo absorption (reduced absorption of food intake). As such they are considered stronger operations than the sleeve gastrectomy with better long term weight loss or alternatively less long-term weight regain.

Roux en Y Gastric Bypass

Weight loss with the Roux-en-Y gastric bypass averages between 65 to 75% of excess weight.

The procedure is designed to make a small reservoir or pouch for food at the upper end of your stomach with the capacity of about 30mL. This pouch is connected to the small intestine by a new anastomosis, or join, which is deliberately made small to provide some restriction. Food therefore bypasses the majority of your stomach, which remains alive and undisturbed in the abdominal cavity. This procedure can be reversed although that is very rarely done.

There is an associated prolonged decrease in appetite and sometimes even a temporary aversion to certain types of food. This procedure is predominantly a restrictive procedure and achieves weight loss by limiting the amount of food or liquid that can be taken at any time. There is some hypo absorption, particularly for the first 2 years post-surgery and you will be expected to take vitamins and supplements for the rest of your life.

The procedure results in rapid weight loss in the first 6 months which stabilises over a 12 to 18 month period. Although this is something you are looking forward to, it is important that you lose weight in a healthy way to avoid side effects such as fatigue and hair loss .In the initial postoperative period it can take some time for you to learn how your new stomach behaves, and it is important you closely follow the recommendation of our dietician. Following gastric bypass, you may experience an intolerance to certain types of food, usually fatty greasy foods, dairy products, and/or sweets (lollies) which may cause unpleasant symptoms similar to sea sickness such as sweating, nausea, shaking, abdominal pain and/or diarrhoea which lasts from a few minutes to an hour. This is known as "dumping" syndrome. Some patients regard this as a useful side effect as it reinforces their

inability to consume high calorie foods. I would prefer that you concentrate on developing a healthy dietary intake post-surgery.

Like any bariatric procedure, there are ways to defeat the surgery and fail to lose weight or fail to achieve your maximum weight loss. If you overeat on a regular basis, you can stretch your pouch or dilate your anastomosis leading to eventual weight gain. It is also possible to consume sufficient amounts of high calorie liquid or food such that you do not lose weight. In general, if you choose a balanced menu, high in protein, eaten at normal times and incorporate regular exercise into your daily routine, the tool that is gastric bypass will allow you to lose weight and keep it off in the longer term.

The Roux-en-Y gastric bypass is a common longstanding procedure performed around the world, particularly in the United States of America.
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.

SADI/S – Single Anastomosis Duodenal- Ileal Bypass with Sleeve Gastrectomy.

The Laparoscopic SADI combines a sleeve gastrectomy and a bypass procedure. It has also been described as a modified duodenal switch, a very long standing weight loss procedure with the best long term results. Weight loss for the SADI averages between 65 – 100% of excess weight depending on the patient's starting BMI. It has the best long term results for diabetics, and it is particularly beneficial for the super obese, that is, patients with a BMI greater than 50. It can also be a suitable revisional procedure particularly for patients who have had a previous Sleeve Gastrectomy. The SADI is the strongest bypass procedure that I perform.

The procedure is designed to reduce the size of your stomach limiting the amount of the food that can be eaten at a meal. This new reduced stomach is then connected to the small intestine by a new anastomosis (join), bypass most of your small intestine. These changes in your anatomy result in a decrease in appetite and sometimes an aversion to certain types of foods. This procedure is a combination of a restricted procedure (the Sleeve) and a hypo absorptive procedure which limits your ability to absorb the food that you eat.

The SADI is the strongest weight loss procedure performed in my practice, and because most of the small bowel is bypassed. The hypo absorptive aspect of this procedure requires you to take vitamins and supplements as directed by the Dietitian for the rest of your life. You will need regular blood tests to check that you are absorbing sufficient minerals and vitamins, particularly in the first 2 years post-surgery. . Failure to take the supplements or attend for regular reviews and blood tests, can result in mineral and vitamins deficiencies which can produce life changing complications. Thus, regular follow up is "ABSOLUTELY ESSENTIAL".

As the SADI is a sleeve based procedure, patients report more consistent restriction than the roux en Y gastric bypass and do not experience the dumping symptoms of a roux en Y bypass. After a SADI, if you eat too much fatty, greasy , dairy or sweet foods, you will

experience looser motions the next day. Generally, you may also notice a change in your bowel habits with the tendency of more frequent looser motions particularly first thing in the morning, although the body adapts to the change in your anatomy and these issues become less noticeable with time.

EATING HABITS AND EXERCISE

Studies have shown that on average weight loss patients lose their appetite for the first five months after surgery. It is important during this period you take the appropriate number 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, and soft drinks and do not stay active, then even the best surgery will fail. Your bariatric procedure should be regarded as a tool to aid your weight loss. The importance of behavioural factors cannot be overemphasised. It is therefore very important that you 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 achieve better results, so please participate in our Patient Support Group as much as you can.

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.

UNREALISTIC EXPECTATIONS

Weight loss after surgery 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. 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. Bear 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. 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, as you lose weight your fertility will increase, and you are more likely to become pregnant. Female patients can and do get pregnant and with appropriate support from obstetricians and the practice Dietitian, will have an uneventful pregnancy. It is important, should you get pregnant, that you bring to your obstetricians attention as soon as possible the fact that you have had weight loss surgery.

To make your surgery technically as safe as possible we will start you on a meal replacement diet, discussed with you at your dietitian appointment. This is 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 contraindication for a Roux en Y Bypass.

For any patient undertaking surgery smoking 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 an anaesthetic assessment in addition to screening for Obstructive Sleep Apnoea, and Cardiac function. This is to reduce the 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 and Surgical team. 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.

DVT/PE

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 for up to three weeks. The risk of this type of complication after bariatric surgery is low. The risk of DVT is about 1:200 and the risk of pulmonary embolism about 1:1000. 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.

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 weight loss surgery is 1:1000. You should recognise that although we do everything possible to minimise the risk, it cannot be reduced to zero. 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.

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 3% but should it occur, it will require further intervention and the placement of drains. It is possible 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

All of the weight loss procedures can effect vitamin and mineral absorption, both in the short term and long term. We aim to correct all deficiencies preoperatively and it is recommended that all patients take a multivitamin postoperatively in the long term and 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. It is common in the first 6 months and is temporary

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. It will be discussed with you preoperatively and repaired as part of your procedure.

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 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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Specialist Bariatric Surgeon

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