

# **Obesity Surgery Handbook**



**SURGICAL  
OBESITY  
SERVICE**

**Obesity Surgery Handbook  
Produced by S.O.S. (Surgical Obesity Service)**

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## INTRODUCTION

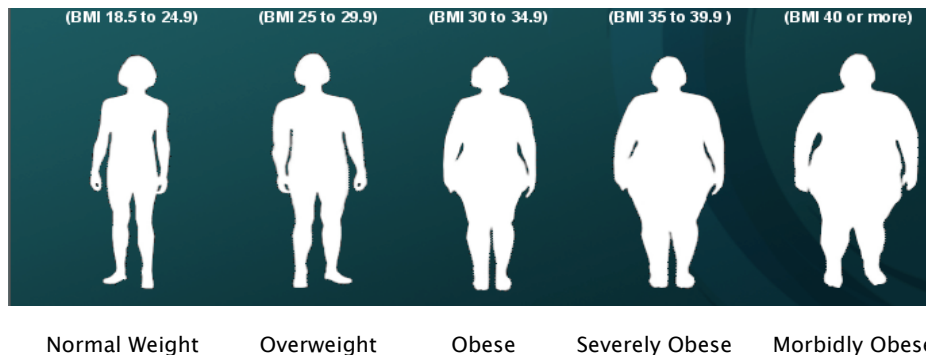
We want to acknowledge your courage in taking the first step in finding out about obesity surgery. Widely held misbeliefs about people with obesity have shrouded obesity surgery with an atmosphere of failure and desperation. Whilst obesity surgery should be seen as the last resort, it is also the most effective treatment for patients with morbid obesity. It is now firmly established in most countries in the world, and there is a vast amount of reliable information available about most of the surgical procedures. As with most operations, there have been many advances over the last 10 years, and obesity surgery is now very safe when performed by experienced surgeons in well-established centres.

## DEFINITION OF OBESITY

To define the different levels of obesity, we use a formula called the Body Mass Index (BMI). The Body Mass Index is calculated by dividing your weight in kilograms by your height in metres squared.

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

The normal body mass index is 20-25. Overweight people have a body mass index of 25-30. People with obesity have a BMI above 30. If the BMI is above 35 you are said to be severely obese, above 40 you are morbidly obese, over 50 you are super obese.



When your BMI is greater than 35, the likelihood of suffering major medical, physical or social problems is much greater because of your weight.

It is for this reason, that you would qualify for surgery if your BMI is greater than 40 kg/m<sup>2</sup> or greater than 35 kg/m<sup>2</sup> but with one of the health problems caused by obesity. However we will consider patients with a BMI greater than 30 in specific situations. These we will mention later in this booklet.

To determine your BMI, please go to our website and enter your values in the BMI calculator.

## **PROBLEMS ASSOCIATED WITH OBESITY**

### ***Shorter Life Expectancy: -***

As your weight increases, so too does the risk of dying. If your BMI is greater than 35 you are in the high-risk group and by the time you reach a BMI of 40, the risk is more than twice that of people who have normal weight. This risk rises greatly as your weight goes above a body mass index of 40.

### ***Major Health Risks: -***

Obesity is associated with numerous medical conditions, some of which are caused by obesity or are just made worse by obesity. These include Diabetes (type II), joint problems (arthritis), high blood pressure, heart disease, asthma, sleep disturbances and even some cancers. People with obesity also have an increased risk for: - gallbladder problems, reflux disease, problems with fertility and psychological problems (i.e. depression)

### ***Difficulties with Day-to-day Living: -***

People with obesity often struggle to do the things that others can do. Movement is more difficult and they tend to tire more quickly, which generally excludes them from sporting and other physical activities. Sometimes housework or even employment is a challenge.

It is also often difficult to maintain personal hygiene, along with difficulties associated with getting into and out of cars, bus/aeroplane seats, telephone booths and turnstiles.

### ***Social Isolation: -***

Most people with significant obesity feel embarrassed in social situations, and even in public and hence prefer to withdraw from these situations. Obesity often produces a negative self-image and a low self-esteem, which can then lead to depression. People with obesity are discriminated against. Their fear of embarrassment and their lower physical activity level deprives them of the chance to work, the chance to join the family in outside activities and to join friends socially. They also face the stigma of living in a world that expects people to be thin.

## **THE CAUSE OF OBESITY**

Obesity develops when the energy taken in food and drink over a long period of time is greater than the energy that is used up in day-to-day activities. We are very interested in why this occurs. None of our patients intend to get big, and they don't enjoy it when they are big.

There are a number of factors that work together to cause this. The main underlying cause is a genetic tendency, but this, together with hormonal, environmental, social and cultural factors, produces a situation where there is a very powerful and irresistible drive to eat. This is made up by two important factors that can be hard to draw apart, but must both be present in the patient with obesity:

### **1. Food addiction:**

Over time, the brain comes to depend on food as the solution to challenging situations, or as a way to make the good times better. This creates the habits that are so hard to beat. Trying to overcome the urge to eat is harder than resisting alcohol and cigarettes because we can't give food up completely. This is what makes dieting so difficult- we are deliberately depriving our brains of something it desperately wants

and “needs”. Initially the joy of the weight loss counteracts this, but all diets reach plateaus, and when the weight loss stops, it is very hard to continue the diet. The slightest stress becomes an excuse to break the diet, and often weight ends up higher than before the diet (yo-yo dieting).

## **2. Insulin resistance:**

The normal fat cell has a job to do: when we eat, it's meant to take up fat and sugar and store them. Two hours later, when we have finished digesting our meal and the blood levels of energy reduce, the fat cell is meant to release its stored energy for use by the brain and body. Patients with obesity have fat cells that don't release their energy properly, and so the brain thinks, two hours after eating, that there is insufficient fuel, and makes them hungry again. The most likely chemical to be causing this blockage is insulin. Insulin has the job of pushing sugar into fat cells to make fat, and prevents breakdown. It also makes us hungry. All people with obesity have higher than normal levels of insulin. The biggest stimulus to insulin secretion is sugar and simple carbohydrates. That is why these foods fail to satisfy, and make us crave something to eat again so soon after eating them. And yet, these are the very substances that our brain becomes addicted to!

The combination of these two things can produce an overwhelming obsession with food that can take over life completely. For this reason, if we see someone who has a BMI of 30 who has no life because of this, and who can't solve the problem with a low carbohydrate diet, we will consider a Lap-Band® to give them their life back.

## **THE SOLUTION TO OBESITY**

The common non-surgical techniques that have been used for controlling weight (gain) include diet, exercise programmes, behaviour modification and drugs (appetite suppressants and/or those which reduce absorption of fat in the gut). These methods of treatment can help you lose a small amount of weight initially but prolonged substantial weight loss usually requires something more than this.

Diets and drugs (such as Xenical, Reductil and Duromine) if used optimally and permanently can provide you with a 10 to 15 kg weight loss, but many people soon regain their weight, or even end up weighing more when the treatment is ceased.

If however, you need to lose much more than 10-15kg in weight, the research shows that you are simply not going to achieve it by following the diet – tablet – exercise regime.

**Surgery** is the only method of consistent and sustainable weight loss for the majority of large people. However, not everyone who has a weight problem should consider surgery. It depends on whether or not you are overweight, obese or morbidly obese. When your BMI is 30 or above, surgery is a very effective form of treatment for long-term weight loss. But, keep in mind; surgery can help you achieve your long-term goal only if you are ready for, and committed to losing weight and keeping it off.

## SURGICAL TREATMENT

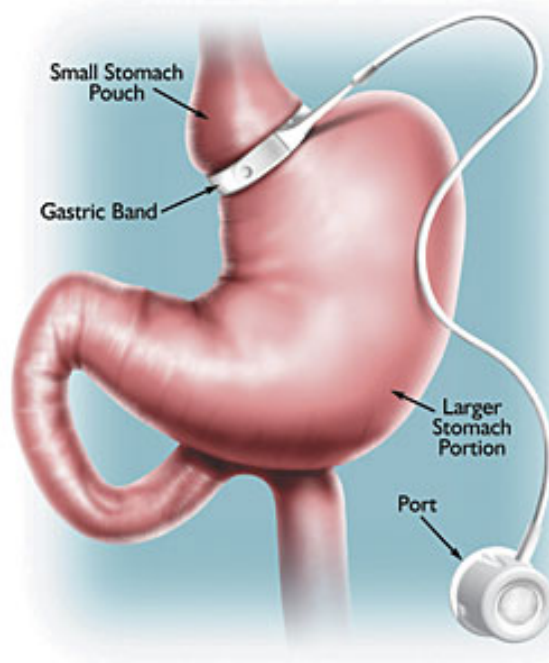
There are two types of surgical treatment available for obesity today, which work in a restrictive or malabsorptive fashion.

Restrictive procedures physically reduce the size of the stomach, initially limiting the amount of food that can enter, resulting in weight loss (e.g. gastric banding, stomach stapling, gastric bypass and sleeve gastrectomy). Longer term, they work by decreasing the drive to eat and giving a feeling of fullness.

Malabsorptive procedures (e.g. biliopancreatic diversion [BPD]), bypass the normal absorptive capacity of the gut. However as significant permanent symptoms generally exist, these are not performed in our centre, and won't be discussed further in this booklet.

When researching obesity surgery, it is important to look at all the options available. We offer three different operations, each of which has advantages and disadvantages. We encourage you to read the information, but to come to your appointments with an open mind and all of your questions. Listen to the experiences of others, both positive and negative, but be aware that they may not apply to you or your situation. The important thing to bear in mind is that any surgery has risks, and we need to weigh up the risks versus the complications in each individual's situation. We are happy to share our knowledge with respect to what we have found to be best for each patient, and will support you fully in whichever decision you make.

### 1. LAPAROSCOPIC GASTRIC BANDING (LAP-BAND®)



Laparoscopic Gastric Banding is the simplest and safest obesity operation; however it generally has the lowest percentage of excess weight loss.

A silicone band that has an inner circumferential inflatable balloon is placed around the upper stomach. When the band works well, the patient feels full after eating only a small amount of food and loses weight because they no longer have a strong need to eat, as explained below.

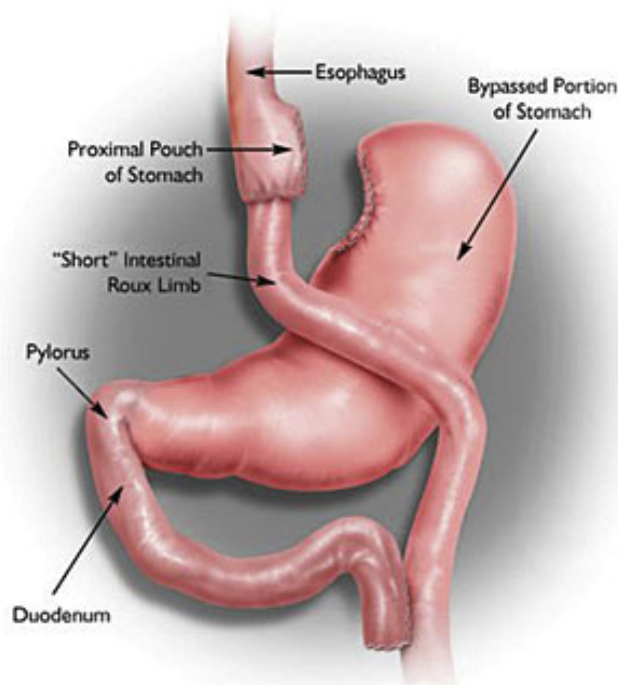
The band can be adjusted by injecting some fluid through the skin into a special reservoir tucked away under the fat, on the abdominal wall. This reservoir is

attached to the balloon of the band, enabling the nurse to modify the degree of restriction, depending on the rate of weight loss and any problems relearning to eat.

The operation requires a significant amount of commitment and compliance on the part of the patient, and this involves following rules that impact on eating patterns, exercise and lifestyle. It also requires a visit to adjust the band on average every second week for the first 6 months. This can be a problem if you live a long distance from someone trained in these adjustments. We are currently trying to increase the number of these people around New Zealand, so enquire to see if there is someone near you.

The successes are great in those that take ownership of their lives and work with the band, but in those who don't, weight loss can be minimal, or even non-existent. The average weight loss with the band has been 50-60% of excess weight.

## 2. LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (REYGB)



The Roux-en-Y gastric bypass procedure is usually performed laparoscopically (i.e. keyhole surgery with a telescope) by our service; however, in some cases, it may be necessary to perform an open procedure through a large cut in the abdomen, usually if you have had an open operation before. This type of bypass operation has proven to be an effective, consistent way of losing weight and keeping it off, but to achieve these results it requires lifelong changes to lifestyle and eating.

In this gastric bypass operation, the stomach is completely divided with a stapler to leave a pouch that initially measures

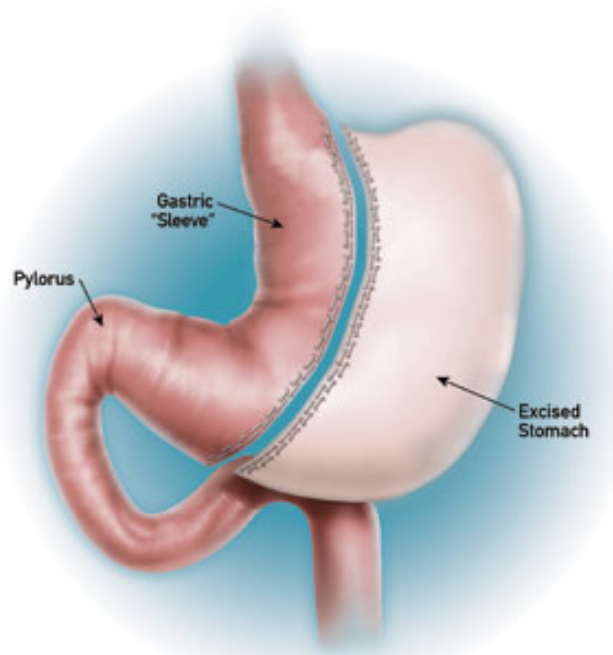
only 15ml. The small bowel is divided and the divided end brought up to the small stomach pouch. The other small bowel end is joined back to the small bowel about a metre down from the stomach. Thus the whole stomach is bypassed apart from a tiny pouch. This operation works in two ways:

Initially the small pouch means that only a small amount of food can be taken in at any sitting, producing an initial rapid weight loss. Longer term, you can eat an entree at a restaurant, and the weight stays off because of the feeling of fullness and the same 'switching off' of the intense need to eat.

When undigested high sugar food passes into the small bowel, it causes significant symptoms, known as "**dumping**" (such as nausea, sweaty, clammy, dizzy feelings), putting people off eating the wrong sort of foods. If people don't dump, they can eat carbohydrates, and get back into the addiction cycle. Only about 30% of people continue to dump long term.

This procedure has a higher complication rate than some of the other operations (i.e. gastric banding), however the weight loss is more consistent and patients can expect to lose more, quickly. The expected average weight loss is more like 70% of excess weight and will still be influenced long-term by exercise and diet. Patients will need to take daily supplements for the rest of their life. The complications that arise from dividing and stapling include bleeding, leaks from joins or staple lines, and bowel obstruction.

### 3. LAPAROSCOPIC SLEEVE GASTRECTOMY



Sleeve Gastrectomy is a relatively new technique that was originally developed as the first stage of a two stage malabsorptive procedure in high-risk patients. Surgeons found that if they removed three-quarters of the stomach, left the patients to lose weight, then came back and finished the operation, the death rate was much lower. However, some patients did quite well even without the second procedure, although the majority did have some weight regain long term.

It is an easier operation to perform than the REYGB as there are no joins, and so is

being used more widely, despite the lack of long term follow up.

The procedure is still performed laparoscopically; a stapler is used to completely divide the stomach, leaving a thin tube down to a normal outlet. The remaining stomach is removed through a slightly enlarged 12mm incision. Weight loss at one year averages 60% of excess weight. The first three months, though, can be plagued with reflux and nausea.

The advantages are that there is less malabsorption, so there is possibly less need for supplements, and there is little risk of bowel obstruction or ulcers. The disadvantages are similar to the REYGB: bleeding and leaks from the staple line.

In our practice, we have had such a low complication rate with the REYGB that we are reluctant to try a new procedure with unproven outcomes, unless there are special circumstances e.g. previous surgery making it impossible to use the small bowel, or extreme distance for follow up. The sleeve gastrectomy is therefore used as a second choice operation. It costs \$1000.00-2000.00 more than a gastric bypass, as we need to use a special instrument to divide and seal all the blood vessels to the stomach that is removed.

## How surgery works- addiction versus habits

Most patients assume that the reason they will lose weight after surgery is that their stomach will not be able to tolerate the large amount of food they used to eat. Whilst this is true in the short term, the main reason for the long-term weight loss is a poorly understood effect on the eating centres in the brain.

After surgery, patients usually lose their overpowering drive to eat. They are no longer thinking about food all the time. They have been given back choice. With the bypass, this loss is usually stable for the first 6 months. With a LAP-BAND®, the hunger switches back on after 1-2 weeks, and stays on until the first adjustment. Until this is done, people are reliant on “won’t-power” again, which can be frustrating. However it is important for the band site to be well healed before starting inflations.

By regaining greater control over the drive to eat, people can then choose the diet that suits their body. You still need to eat a high protein, moderate fat, low simple carbohydrate diet afterwards, for life, as we haven’t changed the abnormal fat cell metabolism. The surgery makes this possible.

However, neither operation will switch off the **habits** that are related to eating, and have been generated over many years. These are like short circuits in the brain- a button is pushed, and you have eaten something you didn’t intend to before you realise it. Changing these sorts of behaviours takes “brain work”, and is what determines the final result that people get after the operation. Those that work with all the tools and strategies we give them can achieve whatever weight they like. They can choose, when the button is pushed, to either respond with the new strategy and win, or do what they always did, and get what they always got- no weight loss and often subsequent weight gain.

**The most common reason for failure of any operation is that patients get back into eating carbohydrates again, either out of habit, addiction, or because it’s easy.** This restarts the cycle of hunger, cravings, and lack of satiety. Fortunately, if we become aware of this, we can help patients reclaim their operation with dietary and psychological tools.

This explains the difference in weight loss at two years between bypass and band- the bypass helps throttle back the habits more effectively than does a band. However, both are highly effective if you approach the surgery understanding that this is the first step of a long learning process, and with a willingness to be honest and seek whatever help you need to overcome the habits.

The final part of the operation that is entirely over to the patient, is to find a replacement for the joy of food. Food gave you a lift and comforted you. You need to find other things that “do it for you” that aren’t “illegal, immoral or that make you fat”! For some people this is easy- they have very full lives that just expand into the previous areas occupied by food. However for those with a life limited by pain, social isolation or low self-esteem, it can be very difficult. Ask for help- we have the experience to help people through these difficult stages. If you don’t find these things, your brain will automatically take you back to food, and you will not get the desired results.

In summary, to get the results you want, we provide:

1. An operation to switch off the food addiction
2. Knowledge of the diet your body needs to get the best out of it (low in sugar and simple carbohydrates)
3. Brain tools to deal with habits and to cope with stress in a healthy adult way
4. Goal setting tools to develop your plan forward and that support you to create different rewards in everyday life to replace the joy of food

## **Which operation is for me?**

As you can see, all the operations work by reducing the drive and capacity to eat, thereby allowing people to eat the diet their body needs. Usually people come to us with a clear idea of which operation they want usually based on what they have seen and heard from friends and acquaintances, or from blogs on the Internet.

We will very rarely dissuade people from their choice unless there is good reason: Generally we need people to live near our centres (Hamilton or Wellington) if they want a LAP-BAND® because of the need for regular adjustments.

If people have had any previous surgery around the top of the stomach that may have damaged the nerves in this area e.g. hiatus hernia repair, we will not offer a band and will only do a bypass or sleeve.

People who have had previous surgery involving the colon and small bowel usually are not suitable for a bypass as there may not be enough small bowel free through previous scarring. We would recommend LAP-BAND®, or sleeve for these people, or they may need an open operation.

Those with Type 2 diabetes who respond to surgery (90%) will get a more rapid reversal of their diabetes with a bypass. They can get the cure with a LAP-BAND®, too, but need to lose the weight first.

Because we are encompassing more and more understanding about the causes of obesity, and new drugs are always coming on the market, we would always prefer to do a reversible operation on teenagers i.e. a LAP-BAND®, so that when we do discover the perfect non-surgical option, the band can simply be deflated, returning the stomach to normal.

Please voice your questions at your initial assessment so that you are making your decision based on facts. There is a popular misconception that results are better with a bypass than a band, but although the weight loss is more rapid with a bypass, after three years the literature shows that results are much the same.

There is also a misbelief that if someone doesn't do well with a band that they can always go to a bypass. Our very limited experience with this is that people who failed to lose weight with a band and who did have a conversion to a bypass, lost very little more with the bypass: they still expected the operation to do it all for them and didn't want to change their lifestyle.

**No operation will work unless you work with it- there is no guaranteed weight loss procedure.**

Whichever operation people choose, we will support them as best we can!

## Effects, risks and complications

### *What can we expect?*

Along with your weight loss, we also expect that there will be improvements in some of the medical problems that you may have. You usually have a much greater capacity for physical activity and you will be socially a lot more comfortable.

Your self-esteem and self-confidence are likely to improve and there is likely to be an overall improvement in the quality of your life. We also hope that your life expectancy will improve.

Primarily, substantial weight loss is our patient's focus. We expect that, on average, people who have the gastric bypass procedure will lose approximately 2/3 of their excess weight. For example, if your current weight is 120kg and your ideal weight is 60kg, then your total excess weight is 60kg. Two thirds of this is 40kg. Therefore you could expect your weight would come down to around 80kg on average. These results may vary widely: some will lose very little weight and others will get down to their ideal body weight.

Our aim is to achieve the weight loss without interfering unnecessarily with the quality of life, or by placing too severe a restriction on your normal living pattern.

We are not just aiming to achieve some ideal weight, but also to solve the problems that obesity causes. Diseases such as diabetes, asthma, high blood pressure, joint pain and heartburn are greatly improved with the weight loss.

### *What are the risks and complications?*

All surgery has risks, especially major surgery. Any stomach operation for obesity is considered major surgery, and therefore has significant risks associated with it.

#### **Risks during surgery:**

People have died from having operations for morbid obesity – it happens rarely, but we can never take away the risk completely. If you are older and if you already have certain problems related to your obesity, your risk will rise.

Heart attacks after the operation, clots that form in the leg veins and then pass to the lungs, or leakage of stomach joins can cause death in people with obesity. The death rate from banding operations is 1 in 2000, but rises to 1 in 1000 for stomach dividing operations.

Precautions are taken during surgery and your hospital stay in order to prevent these risks occurring. To try and prevent clots forming in the leg veins, patients are given blood-thinning injections prior to surgery, wear compression stockings whilst in hospital and have intermittent compression of their calves during the operation. We also mobilize you as soon as possible after surgery, and encourage you to walk as much as possible in the weeks after going home.

As mentioned above, bleeding can occur after any surgery, but is greatest after stapling operations (1% of people will need a blood transfusion). Bleeding may come from damage to the spleen or liver, or from the staple lines. For this reason, we prefer to do banding surgery on patients who refuse blood transfusions for religious reasons.

**Risks immediately after surgery:**

Leaks mean that fluids normally contained in the gut leak out into the abdominal cavity, causing pain and infection. This is a very serious situation and will always require another operation. Although we do our utmost to prevent this, it can occasionally happen, and may result in a very prolonged hospital stay. In the very few cases where this has happened, patients are admitted to the public hospital, so expense is less of an issue than health. However, if we do need to reoperate in the private hospital because of a rare complication, the hospital will charge for a small portion of the costs, usually to a maximum of \$1800.

**Risks after you go home:**

**Sleeve and Gastric bypass:** After a bypass, too much healing can occur at the join between the stomach pouch and the small bowel, causing a narrowing that must be dilated. The patient presents with an inability to progress to solid food, usually around the 6-week mark. Correcting this is very safe and takes very little time to do, but does require a heavy sedation and passing a telescope down into the stomach to use a balloon to stretch the scar tissue. We will cover the cost of this procedure should it be required. Fortunately since we have been sending everyone home on anti ulcer medication, the rate of having to do this has dropped to about 2%.

**Gastric banding:** After banding there are very few immediate concerns. Occasionally patients do get prolonged shoulder tip pain due to inflammation around the surgical site just under the diaphragm. This causes referred pain, felt in the shoulder, and may require pain relief for a longer period than that required for the abdominal incisions.

Infection in the reservoir is a rare (1%) but annoying complication- we have to remove that reservoir, throw it away, wait three months to ensure all the germs are gone, and then implant a new one. During that time the band cannot be adjusted, so there is a frustrating feeling of having something that isn't working until we can get the fluid back in the band.

**Long-term risks:**

**Sleeve and Gastric bypass:** The bypass and sleeve risks can be associated with a failure of the stomach to produce factors that help absorb Vitamin B12. With either of these operations, B12 deficiency can occur even years after the operation, so regular blood tests are needed. The bypass can also cause iron, calcium and other vitamin malabsorption, and supplements **must** be taken for life. Failure to do can lead to brain damage that may not be completely reversible with restarting the supplements. This is a rare but dangerous complication that can be completely avoided by simply following the rules.

With the bypass, rerouting of the small bowel does create potential spaces for the bowel to get twisted in, and can cause life threatening bowel death. This is rare and completely fixable by reoperating to untwist the bowel. Currently we close all potential spaces, so the risk of this should be minimal.

The small bowel is not designed to receive acid. This doesn't matter when there is such a small stomach, but if we add drugs that cause ulcers in ordinary people, we can set people up to get ulcers. The drugs that classically do this are anti-inflammatories such as aspirin and Voltaren, as well as Prednisone. We have had three people perforate ulcers after taking these medications. You can use these, but do need to take anti-ulcer medication at the same time. Smoking has the same effect.

**Gastric banding:** The long term problems with the band relate primarily to over inflation and not changing eating habits, making patients vomit too much. If the band is too tight, the gullet can eventually give up and stop pushing food through the band. Too much vomiting can cause the small amount of stomach above the band to dilate, giving severe night-time reflux and again stopping solid food going down. The worst case is when the tight band erodes into the stomach. All of these situations mean the band may have to be removed. The important thing is that patients get back to us rapidly if they are getting these symptoms. If the band is too tight, it will force you to not eat protein, and go back to carbohydrates, reactivating the insulin problems outlined above, causing weight regain.

Late port problems are rare today, but if the fluid leaks out of the system, all the hunger will rapidly return, with weight regain. If our needles damage the system, we will replace the port free of charge.

With both operations we know that habits can cause weight regain, and so ongoing follow up for as long as possible is very helpful. We know that bad things happen in life, any of which may make you want to return to food for comfort. We will always be available for support in the future. Once you have used up your 2 years, visits are at the normal consultation rates- usually \$100 - 120 for an appointment with your surgeon and \$50 - 60 for the obesity nurse or dietitian/nutritionist.

*What are the side effects?*

#### **Hair Loss**

Due to rapid weight reduction, it is common to notice that some of your hair may thin out. This is due to the body prioritizing the usage of the reduced amount of protein for more important processes in the body during this time. It usually is temporary and stops when the weight loss slows (about six months after the operation) and then will grow back again.

#### **Loose skin**

Some people are left with excessive loose skin after losing their weight. You may need to have further surgery at a later stage if this continues to be a problem. We recommend you wait 2 years before you go ahead with this.

#### **Dietary issues**

During the initial phase of "new" eating patterns, you may have occasional episodes of vomiting if you eat the wrong type of food or if you eat too quickly. With time, you will learn to identify those foods that cause you problems, however if you eat slowly, eat small amounts, chew really well and take your time; you can avoid some of these difficulties. Your eating pattern will steadily improve and 9-12 months after your operation, you will be eating a wide range of high protein, moderate fat, low carbohydrate foods, in socially adequate amounts.

As your food intake will be restricted by your operation, it is important to eat wisely. The success of any obesity operation requires you to take responsibility for your eating and exercise patterns. Therefore, we hope that you will follow the guidelines provided by our nutritionist:

- ✓ Eat three regular nutritious meals each day, with preferably no snacks in between
- ✓ Take your time and chew food really well. Stop when you are comfortable
- ✓ Eat only good foods that help meet all of your nutritional requirements

## **Your exercise guide**

Exercise regularly and be active. Exercise promotes weight loss and improves your general health as well. We recommend 30 minutes a day, 3-4 times per week, starting 1 week after leaving hospital. This will be difficult at first, but as you lose weight it becomes easier.

Start with small achievable exercise goals, choosing activities that you enjoy and will be able to continue with. Walking is ideal to begin with. Take the stairs instead of the elevator, park a few rows further back at the supermarket, walk the dog or play with the kids. These are all activities that can help you increase your daily exercise. When possible, commit to exercise with another person and make it a social, fun experience. Involve a personal trainer, fitness consultant or exercise group if you need extra motivation. Wear loose comfortable clothing and appropriate footwear for the exercise that you are undertaking.

Exercise requires commitment, so make it a priority and set-aside time in your daily schedule.

The more active you are, the fitter and healthier you will feel, and the greater your weight loss will be.

## **Hospital stay**

### **The operation**

You will come into hospital on the day of the procedure, having not had anything to eat or drink from the times given to you on the admission form. The anaesthetist and the surgeon will visit you in the hospital before you have your surgery.

The operation is performed under a General Anaesthetic and takes about 1 hour (gastric banding) or 1.5 hours (sleeve gastrectomy or gastric bypass). It is almost always done laparoscopically (i.e. with a telescope through small cuts) so the recovery is quicker, the complications of wound infections and hernias are less severe, and the cosmetic result is excellent.

After surgery, people usually become 'aware' in the Recovery room, but sometimes back in their hospital room. Any pain and nausea should be reported to the nurses immediately, so you will receive whatever medication you need at this stage.

On return to your ward, the nursing staff will have been instructed to get you up and moving.

Gastric banding patients will be able to take fluids immediately, and have flavoured drinks the night of surgery. Most will be discharged the next morning.

We take things more slowly for gastric bypass and sleeve patients. On the day of the operation you can have crushed ice. Over the next 3 days, you will be gradually increasing your oral intake, starting with water and progressing to low calorie fluids/yoghurt by the time you leave hospital. Most patients leave hospital on the 3<sup>rd</sup> or 4<sup>th</sup> day.

We would expect you to resume your normal activities within 2 weeks after either surgery.

If however, the surgeon found it necessary to change over to an 'open' operation, you will generally have more discomfort after the procedure and you may need to stay in hospital longer. Return to your normal activities will take longer also.

## Post-operative course and follow up

### *Post Operative*

You will be given a diet sheet to follow for the four weeks following the operation. The amount of exercise you should do will also be explained. The first 3 months are a difficult time with eating, as you learn to live with your new stomach. With all operations, this is the time to learn to eat slowly and chew well. Failure to do so will result in painful blockages and eventually vomiting! This should happen infrequently as you learn how to eat.

### *Follow Up*

Regular follow up with members of our team is an essential part of this operation. Our nurse will call you the week after the operation to check that things are progressing normally.

For the bypass and the sleeve, the initial post op visit is 6 weeks after the operation; the next is 6 weeks later and after this at 6 months, 9 months, 1 year, 18 months and 2 years. From then on we need to see you yearly and check that there are no nutritional problems.

For banding patients, the initial follow-up is at 4 weeks, usually for the first adjustment. Thereafter, we need to see you two-weekly until the fluid in the band is stable and the weight loss constant. The visits can then go to two monthly, but we still follow you up for two years, and then yearly, as fluid may very slowly leach from the band in some people.

Regular blood tests are done to check that enough of the right nutrition is being consumed, and to see if other supplementation is needed. Everyone who has had a bypass must take multi-vitamin tablets daily plus iron/folic acid, calcium and B12 as well for the rest of their life (men and women may differ slightly). Alternatively, Vitamin B12 injections can be done 3 monthly instead. At 3 and 6 months a further dietary assessment is done to ensure adequate nutrition. You need to eat sensibly for the rest of your life.

We have put a lot of effort and commitment into achieving the best possible result for you and it is absolutely essential for you to also put in that effort and attend the follow-ups as requested.

## The brain work

As mentioned at the beginning of this information booklet, whilst the operation will give you the ability to choose your food because for the first time you will feel full, and won't have food niggling at your brain the whole time, it doesn't make this happen. We now understand that people with obesity develop a bunch of habits **because** food "does it for them". These habits don't automatically go away after the operation- they are the default pathway still for people in many situations. We know that those who do well after the surgery are the ones who work with us to retrain the brain. This is achieved through a combination of strategies, skills and awareness that all members of the team will bring to you.

We believe that good results with any operation are 50% surgery, 50% brain work. It is easier for people to have something done to them, than to change the way they think. This is why the follow up is so essential: we are constantly trying to help you achieve the goals you had decided on when you embarked on this process.

## NOTES / QUESTIONS YOU MAY WISH TO ASK AT CONSULT

### **Change of Address**

To enable us to contact you and monitor your progress, it is important that we are informed of any changes in your details (address or phone number). Please help us to keep our records up to date.

**If at any time after your operation, you have problems that may be related to your surgery, or start regaining weight, please request a follow up visit.**

*All prices quoted in handbook and Estimates provided are subject to change without notice*

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