

WAKEFIELD OBESITY SURGERY  
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General & Bariatric Surgery

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# A GUIDE TO GASTRIC BYPASS SURGERY THE FOBI POUCH

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## Surgery for weight control

Having come to the point of reading this booklet you have most probably travelled the difficult and disheartening road of trying many different diets without achieving the desired outcome of permanent weight loss. This is nothing to be ashamed of. We acknowledge the difficulties you face and believe that most people like yourself have a genetic pre-disposition to weight gain.

Over many years a number of different operations have been proposed for achieving weight loss. Most have had variable success and some have resulted in serious technical, nutritional or metabolic problems for people. However most of the procedures offered today are not only more reliable for achieving significant weight reduction but do so with very few accompanying nutritional or metabolic problems.

For the best results it is essential that those having the surgery understand the nature of the procedure being undertaken, and have a realistic expectation of not only the possible benefits but also the potential risks and uncertainties involved.

Furthermore it is important that those having surgery understand and accept their role and responsibilities in respect of the surgery being performed and during the years that follow.

This booklet supplies some of this information.

Although most people who are moderately overweight can expect to control their obesity with alterations in their eating pattern and/or level of physical activity, there is a group of people who are so overweight that this is not a realistic expectation. Such individuals have what is referred to as severe or morbid obesity. They approach or exceed double their ideal body weight and have an increased risk of many serious medical illnesses including cancer, high blood pressure, high cholesterol, diabetes, and heart disease. As a result their life expectancy is reduced, often by many years.

In addition they are likely to develop less serious but often debilitating problems such as asthma, sleep apnoea, polycystic ovary disease and arthritis which all impact adversely on quality of life. Such individuals commonly experience loss of self-esteem and confidence which may lead to a degree of withdrawal from socialising with family and friends and even to a degree of depression.

For such people dieting and exercise programmes very rarely achieve the degree of permanent weight loss that is necessary to reverse these features. It is for this group that obesity surgery (bariatric surgery) was devised. This involves major abdominal surgery which reduces the capacity and emptying rate of the stomach. As a result the stomach fills quickly and empties slowly leading to a substantial reduction in food intake and major weight loss as a consequence.

## Who is suitable for Obesity Surgery?

Obesity surgery is not cosmetic surgery. It is only appropriate for those who approach or exceed double their ideal body weight. When performed on such people substantial weight loss is achieved and improvements in quality of life and future health can be expected. Many medical problems including the following are seen to improve and often even disappear.

- high blood pressure
- diabetes
- high cholesterol
- sleep apnoea
- asthma
- heartburn and reflux
- joint and back problems
- polycystic ovary disease and infertility
- depression

Obesity is most often measured by Body Mass Index (BMI) which relates weight to height as follows:

	<u>BMI</u>
normal weight	19–25
overweight	25–30
obese	30–35
severely obese	35–40
morbidly obese	40–50
super obesity	over 50

Obesity surgery is generally thought to be appropriate in those with a BMI over 40 or BMI over 35 when there are associated health problems (co-morbidities).

Providing individuals have a serious weight problem with a BMI in the vicinity of 35 or greater, they are candidates for the surgery. The ultimate determinate of who is suitable and should have the surgery, is a preparedness to undergo major surgery, with its attendant risks and uncertainties.

Following bariatric surgery the risk of heart disease and stroke is generally reduced and life expectancy improves, usually by many years.

In addition to the many obvious benefits related to physical appearance and physical ability there is generally a major boost to self-esteem and self-confidence which leads to a much improved quality of life.

Major changes occur in the lives of those who have bariatric surgery. These are almost always beneficial but are gained at the expense of not being able to eat and drink freely. People who have had a such surgery will never be able to forget this. They will always have restrictions on their eating. This may cause embarrassment while eating out with friends or in restaurants. Some people may find this price unacceptable.

In general terms, providing individuals can identify for themselves major and realistic benefits that should follow substantial weight loss, they will not be disappointed with the procedure, and the restrictions imposed on their eating habits will be tolerated and be regarded as acceptable. The majority of people who have had this surgery see it as one of the best things they ever did. However, the reliability and durability of weight loss does vary from surgeon to surgeon and with the operation performed.

## Types of obesity surgery

The first operations to achieve weight loss were performed in the late 1950s. Since then a variety of different operations have been developed and undertaken. All have had their successes and their difficulties. Some led to serious problems and are no longer recommended. Not infrequently revision operations have been required because of technical problems or weight regain and a number of operations have obtained a bad name. As a result of this world-wide experience with a variety of procedures, gained over many years, we now know much more about the key elements of a successful operation.

There are three main types of operations performed today and each have their advantages and advocates. We, and most surgeons around the world, recognise the gastric bypass (often called Roux-en-Y gastric bypass) to be the most reliable and effective of the operations in terms of weight loss achieved. However, many surgeons, including most in New Zealand today prefer to perform what is known as the sleeve gastrectomy because of its simplicity. The third type is the laparoscopic adjustable gastric band (Lap Band) which grew rapidly in popularity from the mid 1990s, but which is now seldom performed because of its frequent technical problems and now accepted, disappointing long-term results.

There are many different forms of gastric bypass performed around the world, and they are not all the same in terms of reliability in the longer-term, although most will achieve a very similar weight loss in the first twelve to twenty-four months. These days most gastric bypass operations are being performed laparoscopically or by keyhole surgery, but we believe the Fobi pouch, which is the most reliable form of gastric bypass, cannot be performed well laparoscopically, and for that reason we continue to perform this by open surgery.

The basic principle adhered to in obesity surgery is to create a small new stomach (or pouch) which fills readily and empties slowly. The pouch is generally only 10–30ml in size and the outlet of the pouch is 1–2cm in size depending on the operation performed.

In the gastric bypass operation the food empties from the pouch directly into the small intestine or jejunum (Figure 1) and thereby bypasses the remainder of the stomach and duodenum, which are left in place and remain healthy. This bypass of the duodenum is probably responsible for some of the most important physiological changes that occur after gastric bypass, and which result in such striking health benefits (refer to section “What benefits can you expect?”).

With the lap-band (Figure 5) and its forerunner the vertical banded gastroplasty (VBG) (Figure 4) the food simply passes from the small stomach pouch through a small opening into the larger part of the stomach and from there down the duodenum. These two procedures differ in the way in which the pouch and its opening are made. In the former an adjustable inflatable ring is placed around the top of the stomach just below the oesophagus. In the VBG the pouch is created with a staple line which can disrupt or give way, and the outlet is created by placing a band or ring around the outlet to fix its size.

The Fobi pouch, lap-band and sleeve gastrectomy operations will now be discussed in more detail. The VBG is no longer performed these days having been replaced by the lap-band operation. Many of those who have undergone lap-band have developed technical problems or major weight regain and a revision operation has become necessary. For this reason lap band is also very seldom performed today.



## The Fobi Pouch

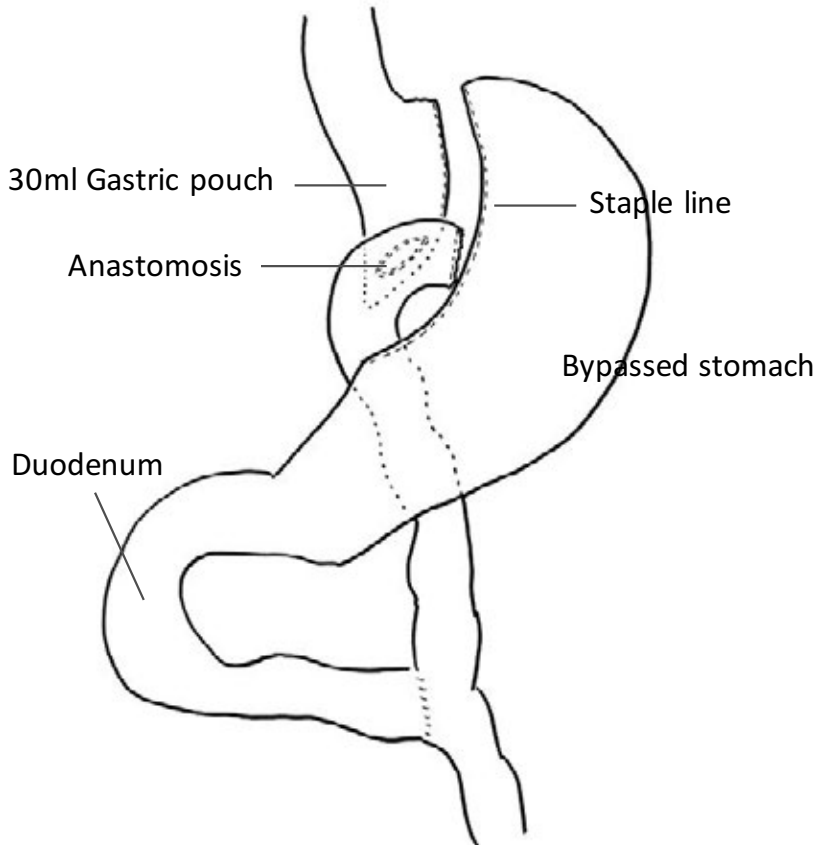
The Fobi pouch operation (Figure 2) is a form of Roux en Y gastric bypass which incorporates a number of features which we believe make it the most effective and reliable (in the long-term) of the gastric bypass operations. It was devised by Dr Mal Fobi, from Los Angeles. Dr Fobi has been one of the most important figures shaping the development of obesity surgery through the 1980s and 1990s. He first advocated the operation in 1993 and we began performing this at Wakefield in 1997. The four key features of this operation include:

- 5–10ml narrow, vertical pouch
- divided stomach
- reinforced staple line
- silastic ring to fix size of outlet

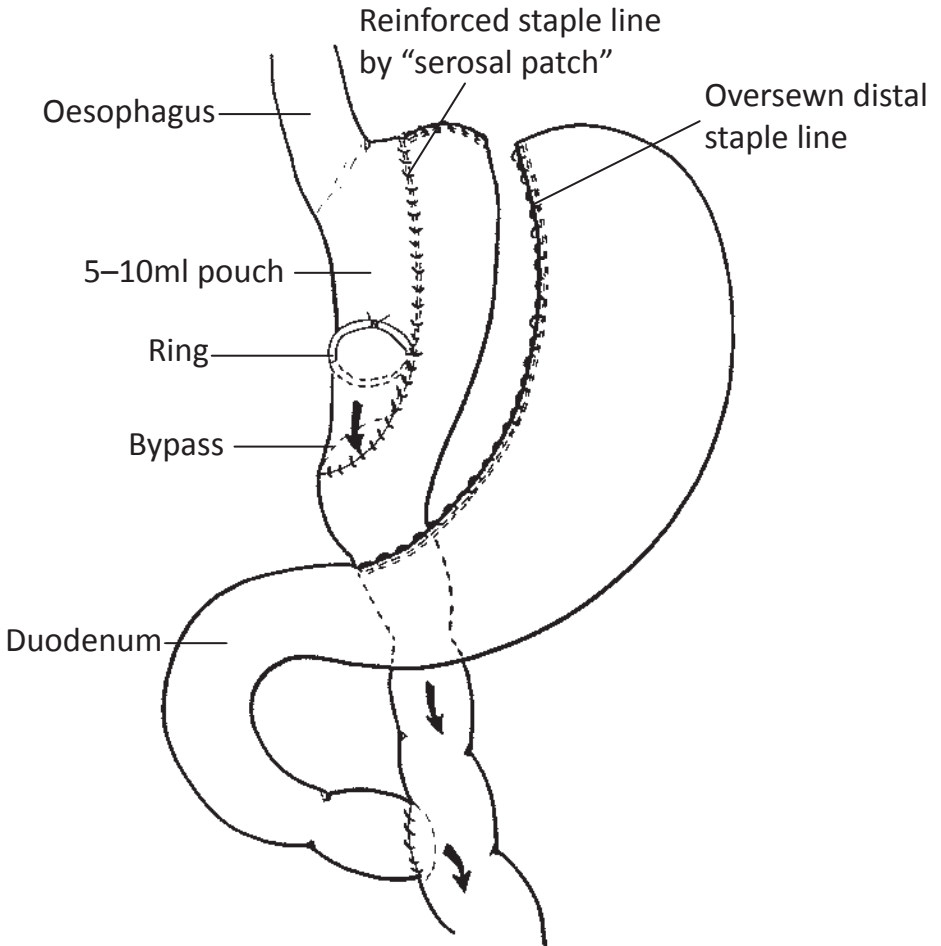
These features (except for the divided stomach) are unique to the Fobi pouch and make it superior to other gastric bypass operations. The narrow pouch is longer yet smaller than in most other gastric bypass operations, and is the key to the pouch not distending with time. (Compare the ease of blowing up a small round balloon with that of a long narrow balloon!).

The vertical and narrow orientation of the pouch means it is much less liable to distension and enlargement than pouches with a more horizontal or rounder orientation. This protects against weight regain in the future. The divided stomach means the prospect of staple line disruption or breakdown is much reduced and the reinforcing of the staple line with a patch of the outer layer of jejunum, almost eliminates the problem of staple line problems thereby protecting against future major weight regain.

**Figure 1:** Roux-en-Y gastric bypass



**Figure 2:** The Fobi pouch gastric bypass



The silastic rubber ring is placed around the gastric pouch in such a way as to permanently limit the size of the gastric outlet, and thus the rate of emptying from the pouch. Gastric bypass procedures in which a ring is not used are likely to develop a larger and larger outlet with the passage of time, meaning more food may be eaten and weight regain occurs.

Experience has taught us to use a 6.5cm length of silastic rubber tubing. This gives an outlet of approximately 2.0cm which allows for a good tolerance of high fibre, low calorie foods such as fruit, salads and vegetables. If people have too much trouble eating these types of food, and experience very frequent regurgitation of food, we may advise removal of the ring, which can usually be done laparoscopically. With the 6.5 cm ring we need to do this in about 2% of patients. Our experience with smaller rings led us to have to remove them in a higher proportion of people (5.5cm – 20%, 6.0cm – 6%).

There is a lot of interest these days in performing gastric bypass laparoscopically. We do not do this. This is because it is difficult to achieve the long narrow pouch laparoscopically and we believe we can perform it more reliably and safely by open surgery. In the end what matters is achieving a good long-term result, as safely as possible. The difference of three to four weeks in recovery time between the laparoscopic and open surgical techniques, does not, in our view, warrant any compromise in long-term results. There is now ample evidence in the medical literature to indicate the superiority of the open Fobi Pouch operation over the laparoscopic gastric bypass, in terms of long-term weight loss and /or weight regain.

## Sleeve Gastrectomy

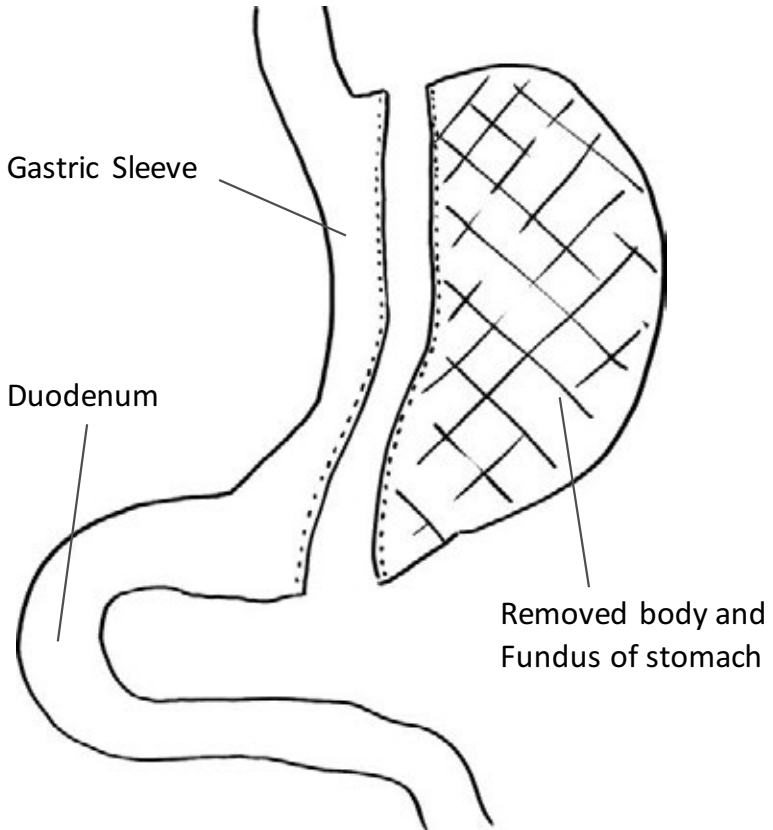
Sleeve gastrectomy (Figure 3) became popular in the mid to late 2000s as the disappointing long-term results of lap-band operations became more apparent. Like the lap-band operation it is relatively simple to perform laparoscopically which has made it appealing to both surgeons and prospective patients alike.

The operation entails removal of around 2/3 to 3/4 of the stomach, as shown in Figure 3. The operation leaves a stomach tube of between 80 and 120ml, which empties relatively quickly. With time the tube, particularly at the top end tends to enlarge and allow more food to be taken and as a result weight regain commonly occurs after 3–4 years.

The sleeve gastrectomy has been very widely performed in Australia and New Zealand from around 2005, well before any results beyond 1 year had become published and generally available. The principal reason for this choice was that it is very much easier to learn and perform than gastric bypass surgery, which is challenging and difficult. Sleeve gastrectomy is the commonest form of surgery performed in NZ and Australia today and remains very common around the world. Reflux is a significant problem after this surgery, and for that reason, this is not a good choice of operation for those with pre-existing hiatus hernia or gastro-oesophageal reflux symptoms.

As experience has grown and time passed, longer term results have become available and indicate that although early weight loss from this operation is better than from a lap-band, and even comparable to gastric bypass, weight regain is commonly occurring within 3–5 years. This leads to disappointment and a growing need for revision surgery. Such revision surgery usually takes the form of conversion to gastric bypass, but when performed in this setting weight loss is not as reliable as when gastric bypass is performed as the first operation.

**Figure 3:** Sleeve gastrectomy



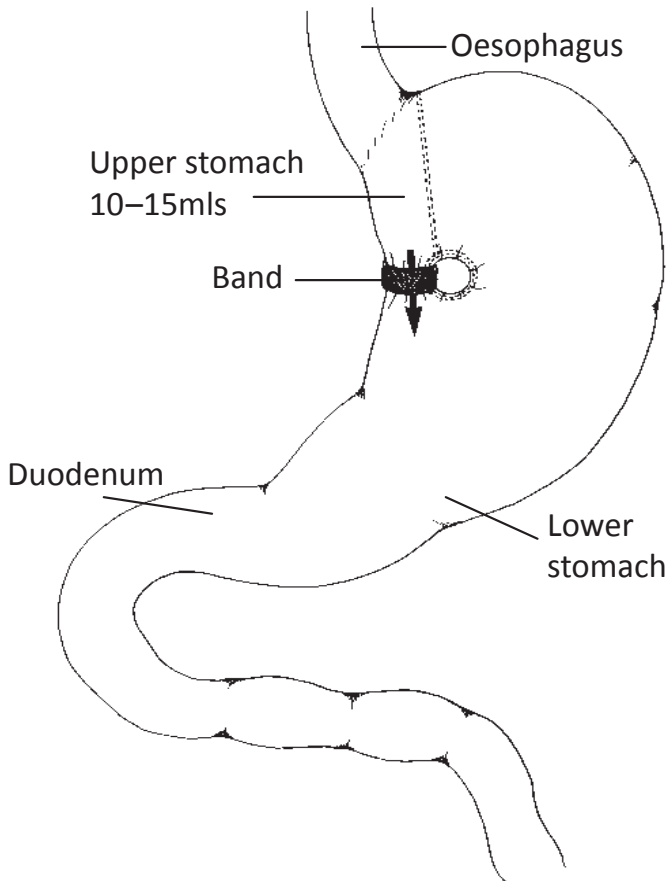
## The Lap-Band operation

In the late 1980s and early 1990s the vertical banded gastroplasty (VBG) shown in Figure 4 was a very commonly performed operation around the world. It was simpler than a gastric bypass to perform and could be done with fewer potential complications. However, to be effective the size of the outlet of the stomach pouch was critically important. If this was too large, there was poor weight loss. If it was too small there could be extreme difficulties with eating high fibre foods (with frequent regurgitation and reflux) and people often found themselves having to eat high sweet and fat containing foods (ice cream, biscuits, milkshakes, chocolate) and weight regain occurred as a consequence. In addition staple line disruption occurred in 20–40% of individuals with ultimate regain of weight.

As a result of these shortcomings, the lap-band operation emerged in the early 1990s and has become very popular, particularly in Europe and Australia, since that time. The advantages of the lap-band over the VBG are that the outlet is adjustable, thereby overcoming (seemingly) the problem of getting the size of the outlet just right, and there is no staple line to be disrupted. In addition the procedure could be done laparoscopically relatively easily, and for that reason had considerable appeal.

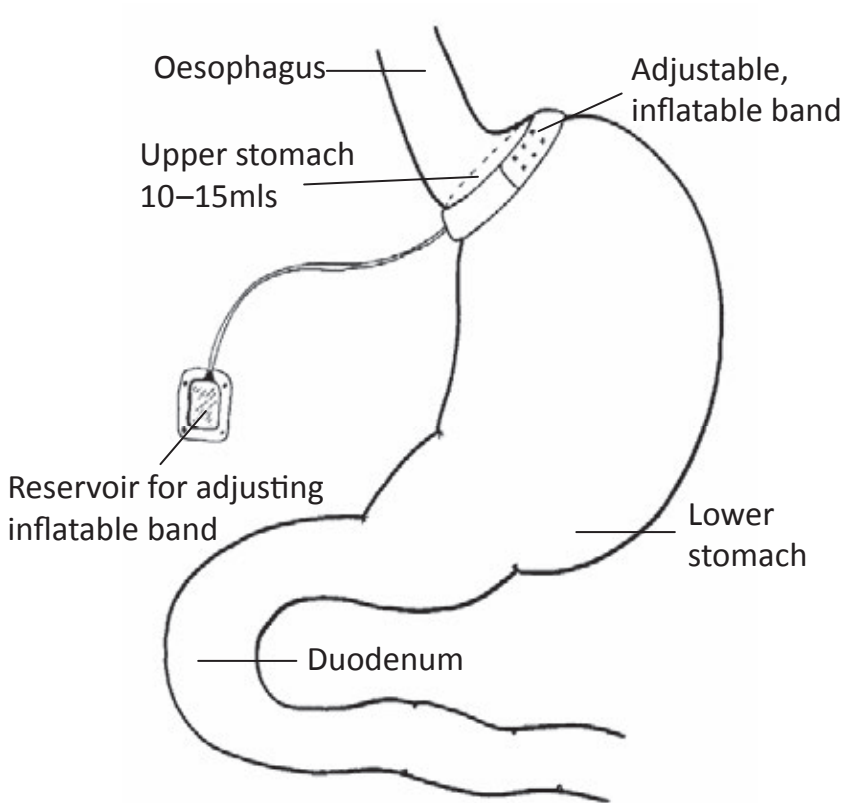
In this operation an adjustable (inflatable) band is placed around the upper part of the stomach, just below the oesophagus, in such a way as to divide the stomach into a small upper pouch and a larger lower stomach remnant (Figure 5).

**Figure 4:** Vertical banded gastroplasty (VBG)





**Figure 5:** The Lap-band operation



## Which operation is best?

There is universal recognition that gastric bypass operations achieve better weight loss than the lap-band, and it is now also recognised that long-term weight loss after gastric bypass is better than after sleeve gastrectomy. However, gastric bypass remains a more complex and challenging procedure for the surgeon. The Fobi pouch operation is the most challenging of the gastric bypass operations, but the published results both in the short term and long term are better after this form of gastric bypass than after those performed laparoscopically. Because it is best performed by open surgery it is commonly perceived by surgeons and patients as being “old fashioned” and more dangerous. In our experience this operation can be performed with a high degree of safety, and for that reason we believe it is the best operation for most severely obese individuals. The likelihood of needing to revise a Fobi pouch is very small. This is its principal advantage.

Lap-band relies totally on restricting intake, and experience from around the world shows that disappointing results are seen in as many as 50% of patients within five years. Furthermore, the placement of a foreign body around the stomach brings its own technical problems with band erosion and migration, necessitating removal and or replacement. We do not think this is a good option for those looking for a permanent solution to their severe obesity and the operation has lost favour around the world.

The average weight loss achieved by lap-band after two to three years is 50% of excess weight. The range is very great with as many as 10% of individuals losing very little weight. Sleeve gastrectomy is commonly reported to achieve weight loss of 65–75% of excess weight after 1–2 years, but weight regain is common in the following years. Gastric bypass surgery on the other hand achieves an average excess weight loss of around 65–75% after two to three years, and our experience with the Fobi pouch gastric bypass shows this weight loss is maintained very well, out to twenty years, which is our longest follow-up to date.

The advantage of emptying food directly into the jejunum is that the intake of anything more than very small quantities of high calorie foods (e.g. sugars and fats) results in an unpleasant sensation known as “dumping”. As a result those who have this operation tend to dislike and avoid these high calorie foods, which they may previously have enjoyed. “Dumping” refers to a state where people feel faint, lethargic and experience profuse sweating and palpitations to such a degree that they generally need to lie down. It may be accompanied by diarrhoea. The feeling develops some 10–15 minutes after eating sweet food and lasts for about the same period of time. It is not dangerous.

VBG and lap-band, in contrast to gastric bypass, rely totally on the small size of the gastric outlet, and for that reason many with these operations find they are not easily able to eat high fibre foods. This encourages them to have a high intake of sweet and fat containing (low fibre) foods which in turn diminishes the weight loss that is possible. Dumping does not occur with these operations.

The precise mechanism of weight loss after sleeve gastrectomy is uncertain, but certainly includes restriction of food intake and reduced appetite. While it does not have the same degree of discouragement of fat and sweet containing foods as does gastric bypass, it certainly does lead to reduced appetite.

Whereas gastric bypass permits and encourages low calorie/high fibre foods, the VBG and lap-band tend to encourage high calorie/low fibre foods. This is an important distinction that is perhaps the main reason for the superiority of the gastric bypass in terms of weight loss. Sleeve gastrectomy sits somewhere in between these operations in this respect. The important point about gastric bypass then becomes the safety with which it can be performed, and which type of bypass is performed. Although gastric bypass is being done laparoscopically in many centres, this entails some compromise on the features that are important for long-term maintenance of weight loss.

## How surgery helps achieve weight loss

Gastric bypass severely restricts the quantity of food you can eat at any one time. By eating only at meal times and only until you feel full, your daily food intake will be decreased enough to provide a weight loss of between 1–3 kilograms a week during the first six months after surgery. The rate of weight loss is greatest during the first six months but then slows and stabilises by about twelve months. In those who are very heavy (eg over 160kg) some weight loss can go on for as long as eighteen months.

For you to achieve the maximum weight loss you need to make some important changes to your daily eating habits. These include:

- eating three meals a day
- minimise snacks between meals
- take 20–45 minutes to eat a meal
- chew all food thoroughly
- stop eating when you feel full
- sip fluids throughout the day as you cannot take large quantities at once
- avoid high calorie drinks

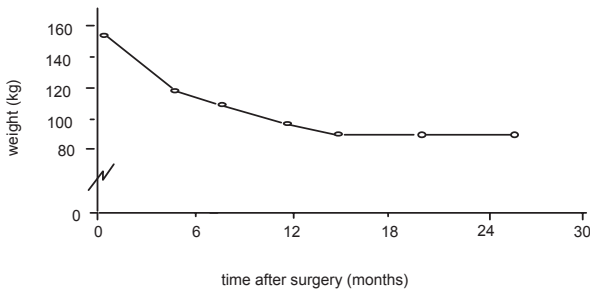
Gastric bypass surgery is not a miracle procedure or an easy way out. It is major surgery and for best results it must be accompanied by healthy eating habits and regular exercise. Gastric bypass helps you to establish good eating habits as the small stomach pouch and the small outlet limit the amount you can eat at any one time.

Remarkably gastric bypass also seems to change the foods you wish to eat and at the same time virtually eliminates the feeling of hunger. You are not likely to seek or enjoy sweet or fat containing foods after having the bypass. This of course contributes to the weight loss you will achieve.

## How much weight can you lose?

It is usually possible for around three quarter of excess weight to be lost over a twelve to fifteen month period. For example, a 120kg person with an ideal body weight of 60kg could expect to lose 45kg resulting in a stable weight of 75kg. In most instances the weight loss after Fobi pouch surgery is permanent, although some minor weight regain can occur over the years after surgery. It is very unusual to see regain of much or all of the weight that was lost.

The graph below shows the weight reduction of a typical patient over a two year period. Before surgery the patient weighed 156kg and fell to around 93kg by eighteen months.



While it is not possible to predict with certainty how much weight you will lose, most patients can expect to lose between 60 and 80% of their excess weight. Maintaining your weight loss is influenced by how carefully you follow the recommendations regarding eating habits and how much regular exercise you take following the surgery.

## Will the weight loss be permanent?

Weight loss always occurs after gastric bypass and can be expected to be greater and more lasting than after sleeve gastrectomy and lap-band. While after some forms of gastric bypass some weight regain can certainly occur, as a result of pouch enlargement, this is much less likely to be seen after Fobi pouch gastric bypass.

Weight regain is usually associated with the development of poor eating habits which are common after lap-band. After sleeve gastrectomy and gastric bypass it is usually due to gastric pouch enlargement or enlargement of the outlet of the stomach pouch. Such enlargement of the gastric pouch is not generally seen after Fobi pouch, and enlargement of the outlet cannot occur when a ring has been placed, as is done in the Fobi pouch. The ring and the long narrow shape of the gastric pouch are the principal features of the Fobi pouch operation which make it the most reliable form of gastric bypass operation.

Earlier types of the gastric bypass which did not involve division or transection of the stomach also allowed for failure because of possible staple-line disruption or breakdown. Even with very reliable surgical staplers this could occur in over 20% of patients, and was a frequent source of disappointment and need to revise the operation. Once again such problems are almost never seen after the Fobi pouch operation, which entails division of the stomach and reinforcing of the staple lines with sutures.

## What benefits can you expect?

The most immediate and obvious benefit from substantial weight loss is the almost universal improvement in self-esteem and self-confidence. This has far reaching benefits into all areas of life. As a result, most people become more active physically, socially and in their personal relationships with their partner, family and friends.

Obesity carries with it an increased risk of many life shortening diseases such as diabetes, high cholesterol, heart disease and high blood pressure. These conditions are all related to what is called insulin resistance. Although we still do not know the cause of insulin resistance, it is known to be very damaging to the body and is present in almost all severely obese individuals. Currently there are no effective drugs to overcome insulin resistance, although we do know that it virtually disappears within a week of having gastric bypass surgery. This effect contributes to the many health benefits of gastric bypass surgery and as a result life expectancy is enhanced, often by many years.

All operations for severe obesity lead to marked improvement and even resolution of many conditions including type 2 diabetes, hypertension, high cholesterol, sleep apnoea and asthma. The extent and permanence of these benefits is greatest with gastric bypass, followed by sleeve gastrectomy and then lap-band.

There is also a risk of many other disease states which may not shorten life but which affect quality of life. These include such things as asthma, sleep apnoea, back and joint problems, infertility, depression and heartburn. Most, if not all of these conditions are relieved or improved by substantial and permanent weight loss. Where they do not already exist, the risk of developing them is diminished.



## What are the risks?

Gastric bypass is a major operation, and because of your weight and the possibility of pre-existing medical problems the risk of complications occurring during or after surgery is potentially greater than in other major operations. There is a small but very real risk of death from post-operative complications. Providing the surgery is performed by surgeons experienced with the technique, this risk should be no more than 0.5%, unless serious respiratory or heart disease is already present. The most serious potentially fatal complications which may arise include:

- pulmonary embolus (clot to the lungs)
- internal leaks leading to peritonitis or intra-abdominal abscess.
- major anaesthetic problems or drug reactions.

These complications may lead to further major operations being required and a prolonged hospital stay and convalescence. Other unpleasant, but not usually as serious, problems which may develop are:

- infections of the wound, chest or urine
- deep vein thrombosis (DVT) or leg clots
- bleeding from the spleen and possible splenectomy
- stomach ulceration
- narrowing or stenosis of the join between the stomach pouch and jejunum
- hernia in the scar
- dizziness or faintness after eating
- wide or unsightly scars
- vitamin deficiencies if supplements are not taken

**Note:** this is by no means a complete list of complications

Special measures are taken at the time of surgery and in the few days after surgery to avoid many of these problems but they cannot be totally prevented. Only the most common of the complications sometimes seen have been mentioned here. Unfortunately there are a large number of possible problems that can occasionally arise. If you feel you need a much more detailed account of possible complications, please discuss this at the time of your consultation in the clinic.

Our expectation is that you will follow the guidelines given to you by our staff to try to prevent any complications. However, in spite of your and our best efforts, one or more complications may occur in up to 10% of patients. However, in our experience of over 1500 operations, serious and life threatening complications occur in less than 1% of instances.

### **For Revision Gastric Bypass Patients Only**

The most common reason for a revision to be performed is for weight gain or other problems which may have occurred following a previous obesity operation. Unfortunately revision operations are usually much more difficult than the first operation because of internal adhesions at the site of the surgery and problems related to impaired blood supply of the stomach, as a result of the previous surgery. As a consequence, revision surgery carries a somewhat greater risk of dying (1–2%), serious complications (10–20%) and prolonged hospital stay, than the first operation. Revision operations are also less reliable and less predictable in terms of expected weight loss than a good first operation. It is for these reasons that we believe the first operation should be the best. This is why we recommend Fobi Pouch as the operation of choice for most individuals with severe obesity. Revision surgery is almost never needed after Fobi pouch surgery.

## What are the drawbacks?

The principle disadvantage, other than the surgical risk of all gastric bypass procedures, is the life-long difficulty with eating that is brought about. Everyone must learn to eat carefully and slowly, and certain types of food will not be tolerated. After Fobi pouch surgery approximately two thirds of people will be able to eat most types of food providing they eat slowly and carefully. However, the remaining one third of people will have variable difficulty with eating which may result in regular vomiting or regurgitation of some food and a limitation of the type of food that can be eaten. This limitation may vary from being minor to quite major with complete inability to manage some foods within different food groups. A small number of people may only be able to manage soft puree type foods for life. There is no way to predict what the eating pattern of any individual will be. This is one of the uncertainties and unpredictable features of this surgery.

For those who have extreme difficulty with eating it may be necessary or desirable to re-operate to remove the silastic ring. This is a relatively straightforward further operation, which can usually be done laparoscopically. After ring removal the range of food which can be eaten generally improves although restriction does remain. Some weight gain is usual and the individual must take rather more responsibility for their eating if major weight regain is to be prevented in the long-term. A gastric bypass without a ring is not as reliable an operation as one with a ring.

Following major weight loss most individuals will feel the cold much more acutely than before surgery, and many will notice sitting for long periods on hard seats is less comfortable because of awareness of bony prominences.

Alcohol tolerance and consumption is affected as alcohol absorption occurs more readily. **If you drink you must not drive.**

The first gastric bypass operations were performed in the 1960s so there is now a good deal known about possible long-term disadvantages of the surgery.

Although the amounts of food eaten after gastric bypass seem very small, this does provide adequate nourishment and allow for excellent health. There are no known major metabolic or nutritional problems that seem to arise, although some vitamin deficiencies will develop if follow-up is not undertaken or the recommended supplements are not taken.

We recommend that all patients who have had a gastric bypass should take a multivitamin tablet daily for life, in order to supplement what will be provided by the daily diet. In addition, because the stomach and duodenum are bypassed, many patients will require additional supplements of vitamin B12 (by injection or sublingual tablets), folic acid and iron. These are all tested for regularly during follow-up and will be prescribed if necessary.

It is common for those in North America who have had a gastric bypass to be put on calcium or vitamin D supplements. We don't believe these are necessary for all patients as the calcium stores (in the bones) in those who are severely obese start very high. It probably is sensible however, for women to have periodic bone density measurements done after menopause to see that their bones still contain the calcium necessary to prevent easy fractures. A few women may require calcium or vitamin D supplements.

## What happens in hospital?

You will come into hospital the afternoon before your operation and any test which has not been completed prior to your admission will be done then (e.g. chest x-ray, ECG, blood and sometimes breathing tests).

This will be a busy afternoon and you will meet the various team members involved in your care:

- your surgeon
- your anaesthetist
- your ward nurses
- a physiotherapist

You will have the opportunity to discuss a variety of aspects of your operation and care with these team members.

The operation usually takes between two to three hours and is performed through an incision which passes from the lower end of your breast bone down to your navel. We work very hard to ensure you have as little pain as possible, as this aids in your recovery. Pain relief is usually achieved with what is called a PainBuster device which delivers local anaesthetic into your wound for 4 days and a PCA device (patient controlled analgesia) which delivers morphine or pethidine intravenously. A number of other pain killers may be given as well.

Your nurse will assist you to get out of bed and begin mobilising within four hours of returning to the ward after the operation. It is important that you co-operate with the nurses and physiotherapist with deep breathing exercises, coughing and moving your legs if the risk of complications is to be minimised.

You will usually be permitted to suck ice the first day after the operation and you will begin drinking small amounts of water the following day. The volume of this intake will be increased slowly until your discharge day. The central (intravenous) line inserted during your operation will provide hydration until you can tolerate fluids orally. Intravenous fluids are usually discontinued on or before day four following your operation. At this time you will be allowed a variety of alternative fluids such as clear soup, tea, coffee, cordial or juice. When you can tolerate these fluids without difficulty (usually fourth or fifth day after surgery) you will have your first meal. This will involve a few teaspoons of puréed food.

By the time of your discharge which is normally on the fifth or sixth day after the operation, you will be managing to take small amounts of puréed food. You will however have very little interest in eating at this time and will be content to take only a few teaspoons of food at each meal. Fluid intake is more important at this stage of your recovery.

## What can you expect after going home?

By the time you leave hospital you will be capable of eating small amounts, showering yourself and attending to your own personal needs. You will however require some help with normal domestic activities at home for one to two weeks. As with any major operation there will be an initial period of four to six weeks during which you will need more rest than usual and during which time you will slowly increase your level of activities. By six weeks after the operation you would normally be back to performing everyday activities and be able to return to work. You should avoid putting major strain on your abdomen for around three months to reduce the chances of a hernia developing.

Some patients may develop constipation. A good fluid intake is essential to avoid this. We can advise you on appropriate treatment for constipation if necessary.

Your eating pattern will steadily improve over the first few weeks as the internal swelling related to your surgery subsides. You should concentrate on puréed/semi soft foods for a few weeks but then, as you feel able, you can begin to introduce more normal foods. You should however continue to be aware of the very small intake that you require. You should eat slowly and chew well. Making use of smaller serving dishes such as ramekins can be useful.

During the first two to three months it is recommended that you avoid the following foods because these may simply get stuck in your pouch.

- bread
- rice
- pasta
- red meat

If things do get stuck, you will experience discomfort and repeated retching. Often all that comes up is stringy saliva. If this happens you should concentrate on taking fluids only until things clear. Occasionally a gastroscopy may be required in order to clear the blockage.

Your final eating pattern is arrived at by trial and error. During this learning phase you should expect to have occasional episodes of regurgitation if you eat the wrong type of food or too much too quickly. You will certainly learn to identify those foods which cause difficulty but it is always worth trying to come back to them a few weeks or months later. As a general rule, we would suggest keeping food fairly simple in the first two to three weeks after your operation and in particular avoid citrus or spicy food. Your eating pattern will improve steadily over the first few months and six to twelve months after surgery most people will be eating a relatively wide range of foods though in only small amounts.

Foods high in fat or sugar may cause a phenomenon called “dumping” which results in your becoming nauseous, bloated, faint, sweaty and experiencing palpitations. You may need to lie down for 20–30 minutes after which time the symptoms will pass. This feeling of “dumping” discourages the intake of even small amounts of fat, dairy food and simple sugars. This of course contributes to weight loss.



During the phase of rapid weight loss, it is common to notice that some of your hair falls out. This most often occurs between three and nine months after surgery. While this may be alarming at the time, you can be confident re-growth almost always occurs.

You may be left with a lot of loose skin particularly on the abdomen, inner thighs, buttocks and arms. Regular exercise may help, but will not totally prevent this from occurring. If this is a problem later you may choose to have cosmetic surgery to remove areas of excess skin. We can suggest appropriate treatment for this should you seek it.

### **Wound Care**

There are no sutures to remove as they are internal and dissolvable. Steri-strips will be placed on the skin to support your wound and these can be removed ten days after surgery. These strips are waterproof. Do not rub your wound and dab-dry it with a towel. It is not necessary to use any creams or antiseptic lotions on your wound.

If you feel your wound is not healing well or you have any of the following symptoms please contact your General Practitioner.

- redness or swelling in the wound
- discharge from the wound
- feeling generally unwell
- develop a high temperature
- chest pain or shortness of breath

Avoid the following for four to six weeks

- Any heavy lifting / severe straining
- Heavy housework e.g. vacuuming, sweeping, washing floors, cleaning bedrooms.

### **Pain relief**

On discharge from hospital it is our expectation that you will require only light pain relief. We suggest paracetamol caplets that are easily swallowed and can be obtained from the supermarket. Do not use anti-inflammatory medications, if at all possible, without discussing it with our nurses or doctors (i.e. Voltaren, Naprosyn, Ibuprofen, Aspirin). These can cause painful problems with stomach ulcers that can be difficult to treat.

## Psychosocial aspects of weight loss

As weight loss occurs most people find tremendous benefits follow in their personal lives as a result of the boost to their self-confidence and the altered attitude of others towards them. Some people find that after they lose weight following gastric bypass surgery their spouse or partner behaves unexpectedly towards them. This is usually the result of insecurity on the part of the partner or spouse arising from the weight loss and the accompanying increase in self-confidence. Some counselling is occasionally required in order to assist with problems that may develop within a relationship.

Those who have relied on eating as a means of coping with tension, boredom, stress or depression may find the restrictions on eating a particular problem and will have to learn new coping methods. This should entail identifying and addressing emotional triggers for eating. This will be discussed again at our pre-operative interview.

Possibly obesity has for some time been the exclusive focus of dissatisfaction in your life and other problems may have been neglected and been allowed to pile up. Sometimes weight loss exposes these others problems and these may also need to be addressed prior to or following surgery.

We strongly advise that you have a General Practitioner who you feel you can relate to and who is supportive of your decision to have surgery. If problems do occur as a consequence of your weight loss your General Practitioner should be your initial contact for support.

It is normal to experience “down” days after any major surgery. Gastric Bypass is no exception. At these times you may question your decision to have had this operation and this too is not unusual. At such times we strongly advise that you look toward the long term goals and benefits of your weight loss to keep you on track. Should your concerns persist we advise that you contact your General Practitioner or the Clinic.

## Nutritional Supplements

Because your intake of food will be severely restricted you will be placed on a multi-vitamin tablet. It is important that you take this each day for the rest of your life. It is difficult to predict what might happen if you don't do this but subtle vitamin deficiencies might occur, which could have profound effects on your brain, eyes and nervous system.

Most people who have a gastric bypass will develop a deficiency in vitamin B12 because they no longer absorb this vitamin effectively as a result of the bypass of the stomach. Vitamin B12 levels will be measured regularly after your operation and if these fall too low a sublingual vitamin B12 tablet or injection will be prescribed by the Clinic. Once this requirement has developed it remains as a life-long requirement. Failure to take the Vitamin B12 supplements regularly leads to poor energy, inability to concentrate, irritability, anaemia and if ignored for too, long-term serious effects in the nervous system can follow.

Some people who have had a gastric bypass will also develop a deficiency of folic acid which is another vitamin. This deficiency results from the bypass of the duodenum which is the site where folic acid is best absorbed. Once again folic acid levels will be measured regularly and if necessary you will be commenced on daily folic acid supplements indefinitely. The consequences of not taking this are similar to the consequences of not taking Vitamin B12. Folic acid levels are especially important in pregnancy and it should certainly be taken if you become pregnant.

Patients who have had a gastric bypass may develop an iron deficiency because iron, like folic acid, is best absorbed in the duodenum. Iron levels will be checked regularly following the operation and if iron deficiency develops a 3-month course of iron tablets will be needed. This may need to be repeated each year or occasionally be taken continuously. If iron supplements are required but not taken severe anaemia would develop and have a profound effect on your energy levels and your health.

Even after your weight has stabilised, twelve to eighteen months following your surgery, and appropriate supplementation established, you should have blood tests every year to check the following:

- Full Blood Count
- Creatinine and Electrolytes
- Liver Function Tests
- Folic Acid, Vitamin B12 and Iron levels
- Calcium and Phosphate
- HbA1c for diabetes

These will be done each time you have a follow up visit in the Clinic. But after these visits cease, they should be done yearly by your own General Practitioner. Occasionally deficiencies of zinc and copper may develop over the years.

## Recommended follow-up after surgery

The changes after surgery are life-long and there may be periodic problems relating to the surgery and the restrictions on eating imposed by the surgery – even many years later.

It will be important for you that, if there are problems relating to your operation and weight loss, you be seen by a doctor familiar to the surgery you have had and its potential difficulties.

We recommend seeing you at:

- four monthly intervals for the first year
- six monthly intervals for the second year
- subsequent annual follow-up with your  
General Practitioner

You will be recalled for visits up to the 24 month time and supplied with the appropriate blood test form. If we seem to have overlooked sending you an appointment you should contact the clinic.

**If you become very tired at any time or have troubles which may be related to your surgery you should request a follow up visit which can be arranged through the clinic.**

# Notes



# Notes

WAKEFIELD OBESITY SURGERY  
IT CHANGES LIVES

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