

# Upper Gastro Intestinal Surgery



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## **INFORMATION FOR PEOPLE CONSIDERING SURGERY FOR WEIGHT LOSS.**

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## **INFORMATION ABOUT THIS BOOKLET**

This booklet is intended to explain issues involved in the surgical treatment of severe overweight or obesity. It is not supposed to replace medical advice given by your doctor but rather to add to it.

This booklet contains information across many obesity related topics. You may likely have questions that you wish to discuss while considering what treatment you wish to choose. There are spaces provided in the booklet for you to write down your questions for later discussion. I have endeavoured to include the most up-to-date information on obesity surgery, with the majority of information in this booklet sourced from American, United Kingdom, and Australian Government Health Agency documents. A list of references is included in the appendix near the back of the booklet.

## **About Obesity and Obesity Surgery**

### **Introduction.**

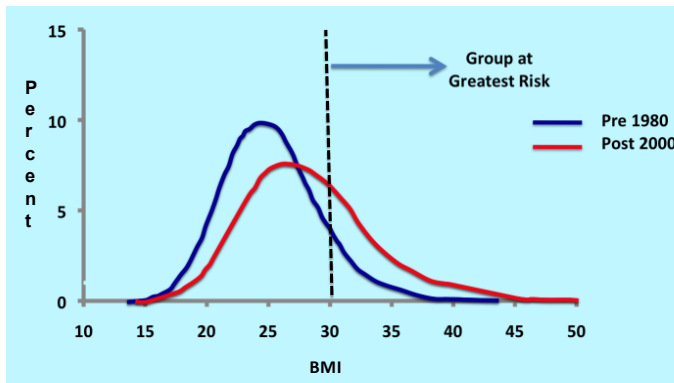
Surgery is currently the only consistently effective treatment for severe obesity however undergoing surgery involves lifelong change and varying degrees of risk. Reading this booklet is **essential** prior to having a consultation to discuss surgery. As there is more to surgery than “one size fits all”, the more information you can read the better.

Topics covered are:

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## OBSESITY IN AUSTRALIA: Most Australians have a weight problem

Recent estimates are that 67 percent of adult men and 52 percent of women are overweight, equating to about 8 million Australians. About 1 in 4 Adults are **obese**. The increase in our average weight is showing no sign of slowing and the proportion of people in the “obese” range has increased by almost 1% per year for the last 20 years. The costs, both social and economic, associated with obesity are enormous with hospital, medication, disability and “off work” payments costing billions per year.



The proportion of people above “ideal weight” (BMI < 25) and in the obese range (BMI > 30) is increasing, and now overweight and obese people outnumber those in the healthy weight range (its no longer normal to be healthy).

## OBSESITY DEFINITIONS

The word “obesity” now has negative connotations but it is simply the medical term for patients in whom excess weight poses a health risk. Rather than focus on actual weight, we often prefer to measure a person’s weight in relationship to their height. This measurement, the **Body Mass Index (BMI)** is calculated by dividing Weight (kg) by Height (metres squared), or  $BMI = \text{kg}/(\text{m}^2)$ . This allows us to compare someone’s weight with the weight of other people of a similar height in order to calculate how much they are overweight or their **excess weight**. We know that the risk of medical problems is related to how much excess weight someone carries so the BMI also allows us to estimate some of their risks. Using BMI also allows us to calculate an “ideal” weight for someone based upon their height.

**For example:** Someone who weighs **150 kg**, who is **180 cm (5' 11")** tall has a BMI = **46.3**  
Their theoretical “Ideal weight” = **81 kg** (calculated to BMI of 25) and they have an excess weight = **69 kg**. The “healthy” range for weight for someone of this height is actually **65-81 kg** (BMI 20-25), but it isn’t essential for people losing weight to aim for weights that are this low.

Every person being assessed for any type of weight treatment will generally have a calculation of their BMI, ideal weight, and excess weight performed, as this allows you to set treatment goals.

## Waist Circumference.

In people who have relatively mild weight problems but have weight related diseases (diabetes, hypertension, cholesterol), their fatty tissue may be distributed

around their abdomen which is the riskiest place to carry fat. Measuring waist circumference may give some people a better idea of the severity of their problem than relying on weight or BMI. For patients of Asian ancestry the BMI cutoff is lower (22.5).

Classification	BMI (kg/m <sup>2</sup> )	Waist Circumference
Normal Range	18.5 – 24.9	
Overweight	25-29.9	> 94 cm male > 80 cm female
Obese	> 30	> 102 cm male > 88 cm female
Class I	30 – 34.9	
Class II	35 – 39.9	
Class III	> 40	

Figure 1. Risk of medical problems related to BMI. In people who are moderately overweight an increased waist circumference indicates an increased risk of medical problems.

**Notes:**      **What is my BMI?**  
                   **What is my waist circumference?**

BMI = kg/(m<sup>2</sup>)  
 BMI = Weight (kg) divided by the sum of height (metres) to the power of 2.

**BMI =**

**Waist =**

### Weight and Health

Obesity is associated with a number of Medical and “Lifestyle” complications. The number and severity of these complications is directly proportional to the severity and duration of obesity and varies with the distribution of body fat (Figure 3).

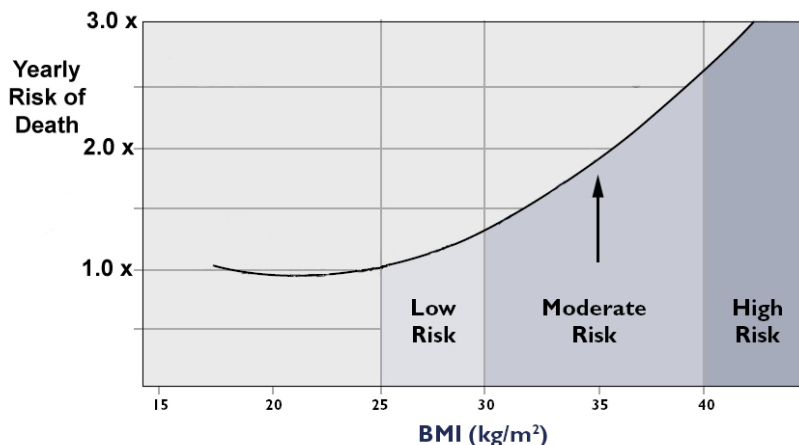


Figure 2. The **yearly risk of death from all causes doubles at a BMI of 35** and rises considerably above this.



**Psychiatric Conditions**

- 1) Depression
- 2) Eating disorders

**Yes No Worried**


**FIXING OBESITY IS GOOD FOR YOU**

Losing weight is an effective treatment for the medical conditions that obesity causes. The majority of the significant diseases that people have such as diabetes, hypertension, high cholesterol, sleep apnoea and depression are either controlled or significantly improved by weight loss.

**TREATMENT OPTIONS**

The aim of medical and surgical treatments is to encourage people to consume less calories than they use, which then means they use up their fat stores. In reality most people cannot exercise enough to compensate for overeating, so the bulk of the focus will usually be on what you eat and the amount you eat. The key to selecting a treatment for your weight problem depends on your goals. If you are a person who is overweight but not obese, there is no doubt that dieting and exercise will be able to help you to lose enough weight to help (see below). If you are a person who is obese, this may not be the case and you may be a candidate for surgery. Following consultation with your doctor, if you do decide on surgery then keeping focus on your goals will often help you determine which type of operation is suitable for you.

**Medical Treatments.**

Anyone who is thinking about weight loss surgery will have tried a number of diets in the past. While there are many types of diet, they all work by reducing food intake +/- increase exercise.

### Weight-loss Tools

<p><b>Reduced Energy Diet</b>                      Dietician supervised, aims for an energy deficit of 500-1000 calories per day, or alternatively 1500 calories intake for women and 1800 for men.                      The composition of the diet is probably unimportant (), and an average of 3-5 kg weight-loss maintained at 2-3 years is expected</p>	<p><b>Very Low Energy Diet (VLED)</b>                      Uses meal replacement with commercially available drinks or bars. Used alone provides 600-800 calories per day, or in combination with a normal meal to provide 1200 calories per day().                      Used frequently by specialist weight loss clinics, but requires supervision. For long term results is best given as part of a diet plan that will have the patient moving onto a supervised reduced energy diet with exercise.                      Is the one of the easiest and most reliable methods of rapid weight loss available if patients can be compliant, and is associated with the best long-term results.</p>												
<p><b>Drug Therapy</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Drug</th> <th style="text-align: left;">Action</th> <th style="text-align: left;">Weight loss &gt; placebo</th> </tr> </thead> <tbody> <tr> <td>Phentermine, Diethylpropio</td> <td>Noradrenergic agonists. Appetite suppression.</td> <td>3.5 kg</td> </tr> <tr> <td>Orlistat</td> <td>Inhibitor of fat absorption. Increases compliance with low fat diet.</td> <td>2.1 kg</td> </tr> <tr> <td>Fluoxetine</td> <td>Serotonin reuptake inhibitor. Appetite suppression.</td> <td>3.3 kg</td> </tr> </tbody> </table>	Drug	Action	Weight loss > placebo	Phentermine, Diethylpropio	Noradrenergic agonists. Appetite suppression.	3.5 kg	Orlistat	Inhibitor of fat absorption. Increases compliance with low fat diet.	2.1 kg	Fluoxetine	Serotonin reuptake inhibitor. Appetite suppression.	3.3 kg	<p><b>Exercise Therapy</b>                      3-4 hours of walking per week will provide 2-3 kg of weight loss(), and addition of a significant calorie reduction to this will give only 2-3 kg more. This degree of exercise causes a 1000-1500 calorie deficit <u>per week()</u> which is less than a take-away meal, but the beneficial effect on health will far outweigh the minimal effect on weight.                      About 30 minutes most days of moderate intensity exercise (able to raise heart rate) will confer significant protection from cardiovascular and other diseases(), so this is should be the <b>stated goal</b> for all weight management patients. More prolonged or intensive exercise should only be encouraged in patients who have managed this amount of exercise over a significant time period.                      About 5 hours a week of moderate intensity exercise per week is required to prevent progression of overweight to obesity, and 7 -10 hours a week to maintain someone in the "reduced obese" state, i.e to prevent weight-gain after a diet().</p>
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## Why is it so hard to lose weight?

As far as we can tell, Obesity is **permanent** and people will generally return to their highest weight when they cease any diet. Permanence is therefore the key to treatment, and there is no point starting something that you can't stick to forever. A high drop-out rate explains why diets fail. The message that we need to eat and exercise in a healthy manner is usually discarded early in a diet as people focus unnecessarily on weight rather than health. When people give up diets they often give up trying to be healthy and end up worse than before.



The aim of all weight-loss treatments is to keep patients under 1500-1800 calories per day lifelong. If a weight loss of over 20kg is wanted then the aim is a diet of 1100-1400 calories daily. If a diet can be managed permanently it will be successful

Weight-loss treatments (medical and surgical) require **lifelong change** in order to be successful. Our bodies are designed to fight weight loss however, so that when someone loses weight their body becomes significantly more efficient and their brain generates stronger and stronger hunger signals. This explains the intolerable discomfort that many people notice while dieting and the rapidity with which weight returns afterwards. The majority of people seeking surgery for long term weight control have had successful short term weight loss with diets in the past. **Regardless of the amount of weight lost your body will wish to return to the weight you were before the diet.**

**Notes: What diets and other methods have I tried?  
How much weight did I lose and for how long?  
Why did it fail do you think?**

## OBESITY (BARIATRIC) SURGERY

Obesity surgery has been shown to provide effective long-term weight control in the majority of morbidly obese patients. Obesity surgery is recognised by medicare and insurers as being a medical (not cosmetic) treatment. Obesity surgery has been recommended for morbidly obese individuals by the major health policy agencies in Australia, the United States of America and the United Kingdom. The effect of surgery has been followed up for as long as 20 yrs and it has been shown to reduce disease and death rates, to improve body image and social function and to reduce personal and community costs over this time.

### WHAT CAN BE ACHIEVED WITH OBESITY SURGERY?

A 10-15% weight loss will significantly improve the long-term health of an obese person, but this is almost impossible to obtain without surgery. Patients (and their surgeons) want more than this so the definition of "success" with an operation is defined as loss of over 50% of excess weight (ie losing more than **half** of the extra weight you carry) or maintaining a BMI under 35. Most people after surgery will therefore lose a lot of weight but will still carry some excess kilo's and loose skin (Figure 3).

There is a realistic possibility of remission of diabetes, high blood pressure, high cholesterol and sleep apnoea after surgery. Those patients in whom a remission is not obtained will in almost all circumstances be on significantly less medication.

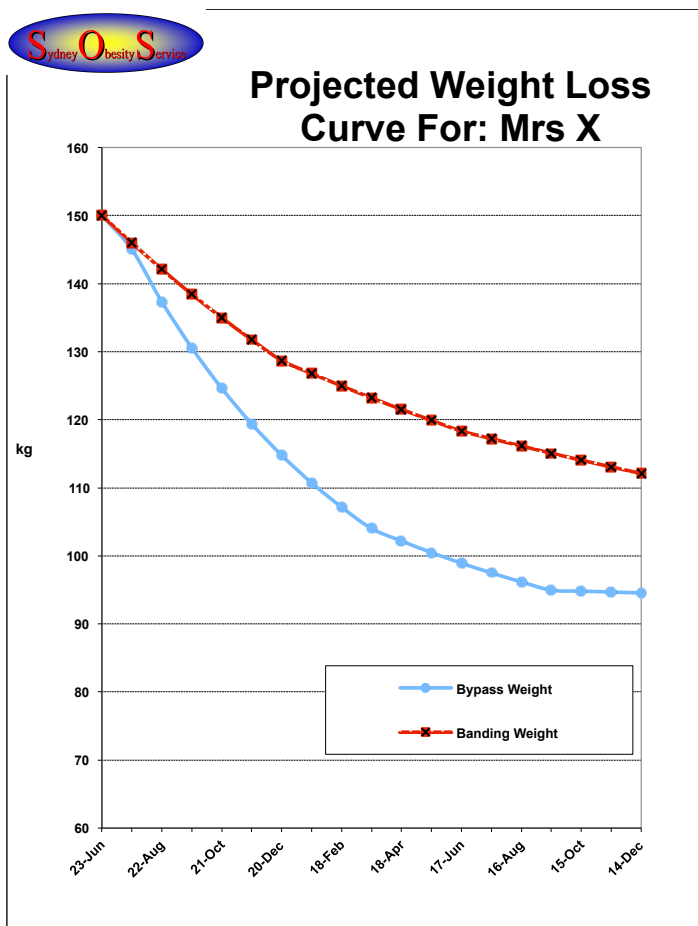
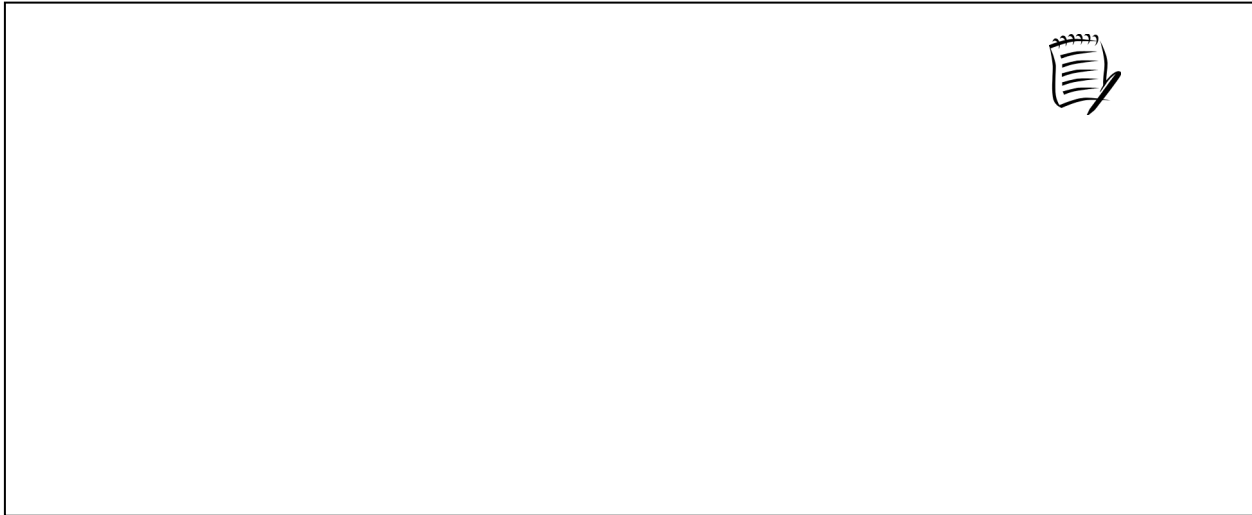


Figure 3. Projected post-operation weight loss over 18 months for a person weighing 150 kg at 180 cm (BMI 46).

The **red** line is the laparoscopic band estimate, and the **blue** line the gastric bypass estimate. The majority of patients will manage weight loss of a similar magnitude but individual weight loss will vary

What can obesity surgery achieve for you? **You need to have a list of obesity related problems that you wish to overcome, life goals you wish to meet, and an idea of what is the minimum weight loss you would wish to maintain long term.**

**Notes: Which obesity conditions do I wish to lose? WHAT ARE MY GOALS?**

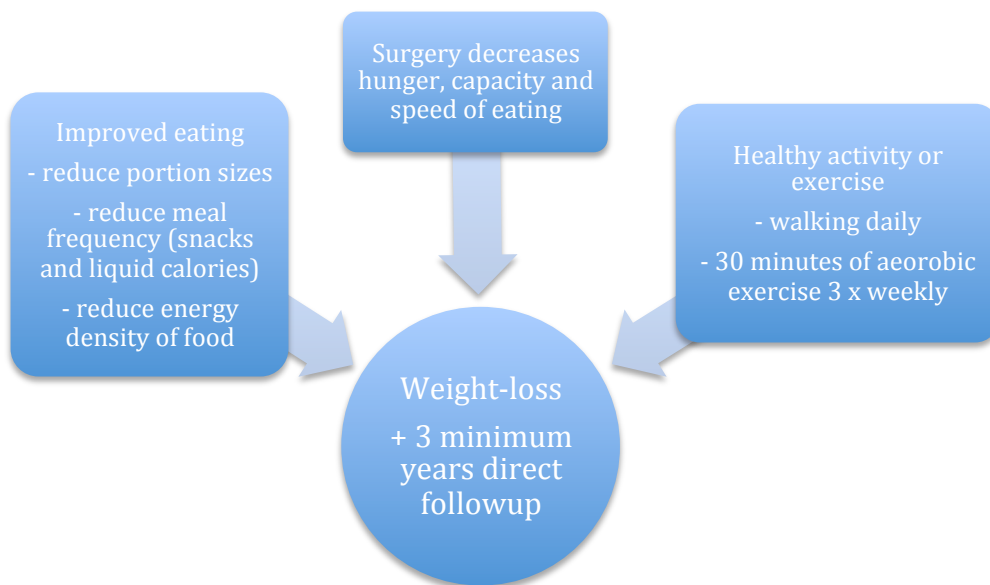


### **HOW DOES SURGERY WORK?**

For Obesity surgery to work a couple of things need to happen. A safe and effective operation is obviously very important, but once the operation is over the key to success is determined by the person having the procedure. Surgery does not 'cure' obesity as removing someones stomach or altering how their stomach works won't prevent them from overeating or force them to make the right choices with their food choices and lifestyle.

Surgery drastically reduces someones capacity to eat and their hunger, but if this isn't coupled with a lifestyle that leads to the person 'eating to live' rather than 'living to eat', they are likely to continue with the poor choices that led to them having a weight problem in the first place. A person who has weightloss surgery must accept the fact that obesity is due to a chronic energy imbalance ie overweight patients consume more food than they need, and in order to restore the balance they need to alter their approach to food so they spend the rest of their life eating significantly less.

Getting people to make fundamental and permanent change is difficult, and while we use surgery as a catalyst and a 'crutch' to help patients lose weight and gain health, we need a team approach to maximise the chance of success. The **Team** we provide are surgeons, physicians, nurses, dieticians and psychologists. The **Team** a patient brings are those people who try to support the decision to change such as a spouse or partner, friends, co-workers, a general practitioner etc etc. Once patients lose their weight they seem to have a good chance to maintain weightloss longterm (20 years +) and every effort needs to be made after surgery to make sure this happens!



## TYPES OF OPERATION- Choosing an operation that suits

**Not every operation and not every person is the same, you should take every opportunity to choose the best treatment for you.**

These operations work by helping patients limit their food intake. Operations that make someone not absorb their food (the BPD or Scopinaro procedure) are uncommon as they can lead to vitamin deficiencies and malnutrition. While all these procedures can be successful, results vary from operation to operation, from person to person and from surgeon to surgeon. Because of their differing nature they have varying plusses and minuses. Most people, following consultation with their doctor, are able to choose what suits them the best. When choosing a **surgeon** you should ask what operations they perform (and how many) as it may be difficult for them to offer an opinion on an operation that they do not perform routinely, and quite risky for them to practice it.

When choosing an operation it may be useful to speak to other people who have undergone similar procedures. Try to find out about as many of the options as possible, and have a look at blogs and social media to get a feel of the range of experiences that patients can have after this type of surgery. Remember that more than one option will exist for you!

There is no guarantee of weight loss, nor is there any ability to correctly judge how a patient will fare with a particular operation over another.

### Surgical Goals.

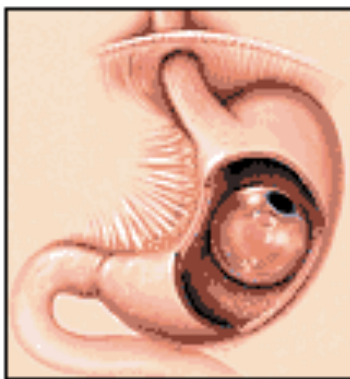
- 1) For the majority of patients we aim for a calorie target of about 800-1000 cal per day (most days) for 12-18 months and then a 1100-1300 cal intake after this (permanently).
- 2) Patients are to eat 'normal' healthy food, but smaller amounts (bread and butter plate) 3 times per day.
- 3) Vitamin +/- mineral supplements will be tailored to the individual on a lifelong basis.
- 4) Lifelong follow-up is essential. If someone cannot come back for follow-up then 'care' of the person post-surgery should be formally handed over to whichever Dr they are seeing on a long-term basis.

## Operations

### Intragastric Balloon (Figure 4)

This is not a surgical procedure but it still requires an anaesthetic and a short admission to hospital. The Balloon is a relatively new procedure that works by suppressing appetite and causing fullness after a few mouthfuls of food. Under a light anaesthetic the balloon is placed through the mouth into the stomach using a flexible endoscope, and inflated to fill up the mid-part of the stomach in the same way a large meal would fill it. The device is left in place for up to 6 months and is ideal for people who;

- 1) Are perhaps a little light to be considered for regular weight-loss surgery, or
- 2) Need to lose weight quickly for medical reasons (such as for a Joint replacement) but find it hard to do so, or
- 3) Are heavy enough to undergo regular weight-loss surgery but do not wish to commit to something permanent

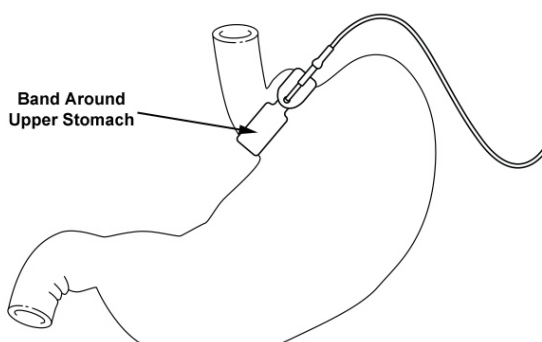


*Figure 4. **Bioenterics Intragastric Balloon.** The device “floats” in the stomach and causes a feeling of fullness. Diagram courtesy of Allergan Health.*

As the balloon is removed after six months, its effect is not permanent. It is hoped that the intensive “retraining” that occurs after Balloon placement can help people keep weight off long term. 25% of patients will maintain their weight-loss.

**Advantages:** Very low risk of long term complications. Rapid initial weight loss for most patients.

**Disadvantages:** 2-3% of people do not tolerate the balloon and need to have it removed before it has had any useful effect. Nausea common for the first few days. Average weigh loss is less than surgery (20 kg), and risk of weight gain is high unless significant lifestyle changes can be maintained after Balloon removal. > 75% will have weigh regain by 3-5 years post-procedure. Heavier people can find it especially hard to maintain weight loss after Balloon has been removed.

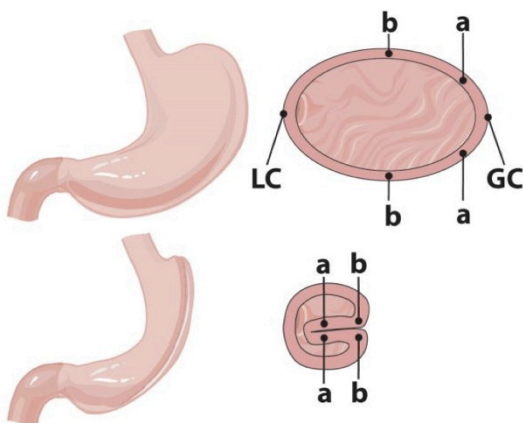


**Laparoscopic Adjustable Gastric Band** (Figure 5). The band is placed at the upper part of the stomach and it allows people to feel satisfied after eating only a small amount of food. As the size of the inlet to the stomach can be adjusted food is slowed down on its journey, allowing you to eat small

quantities of food over the same time that others will eat a large meal. Vomiting and heartburn can be minimised if this device is used correctly and the patient correctly instructed and able to adhere to lifestyle changes. The easy adjustability of the band is the key to allowing weight loss without affecting the enjoyment of a reasonable range of foods. Worldwide the band accounts for at least 25% of obesity surgery, but is the most common procedure in Australia. If done correctly it gives weight-loss similar to the larger operations but with reduced risks.

**Advantages:** Minimal vitamin deficiencies as no part of the bowel is bypassed. Lap banding is probably no more risky than elective gallbladder surgery (risk to life between 1 in 1000 and 1 in 3000), and is a very good operation in women of childbearing age.

**Disadvantages:** Some people cannot tolerate the restricted diet, and while the majority cannot eat white bread and chicken, sometimes the restriction interferes with the ability to eat other foods that are components of a normal diet (some fruits, vegetables and salad). It is possible to “beat” the operation by eating sweets/chocolate/ice cream and some people develop a preference for these foods leading to failure. These operations do not work so well for older, larger patients with diabetes. Due to the fact that banding seems “easy” to perform there has been a tendency for people to over-simplify the operation and aftercare and this has led to variable results. As bad outcomes can generally be avoided the operation remains a valid option for most patients.



**Figure 6.** Laparoscopic Gastric Plication. The greater curve (GC) of the stomach is folded inwards several times to create a small gastric tube similar to a sleeve gastrectomy

### **Laparoscopic Gastric Plication** (Figure 6).

This is the newest operation available. The results are known of only several hundred patients, and only out to 3 years or so. It has arisen in an attempt to fix some concerns about the Sleeve Gastrectomy (permanence of effect = potentially permanent side effects). It will most likely have a lower risk of leaks than the sleeve gastrectomy. The operation is cheaper to perform than other operations if patients lack health insurance, and it may also find a role in patients who wish to have a sleeve but feel they would refuse a bypass if they had sleeve related complications. No organs are removed, and no foreign material (other than sutures) is left inside the patient. The operation is potentially reversible, although scarring would prevent full reversibility. In some cases this can be combined with a Gastric Band. This operation is currently ‘investigational’ in that it should be performed as part of a study or audit until results are better known.

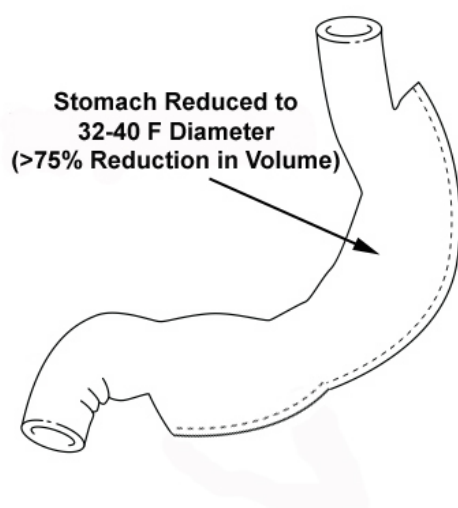
**Advantages.** Similar to the sleeve but less of a commitment as no stomach is removed. May be an alternative for lighter or uninsured patients.

**Disadvantages.** Long term results not known. There is a suspicion that dilation of the tube will be greater than for the sleeve. Further weight loss surgery would be harder than after a band or sleeve if significant weight regain occurs.

**Laparoscopic Sleeve Gastrectomy**(Figure 7), has some resemblance to the old fashioned “stomach stapling” procedures of the 1980's and 90's (the Vertical Banded Gastroplasty) and has probably replaced them worldwide. It involves removing the outer part of the stomach therefore significantly reducing your capacity to store food and generate hunger signals. People who undergo this operation lose hunger quickly during a meal and find it hard to overeat. Their stomach is turned into a narrow tube with a volume >75% less than before. Their maximum meal size reduces to less than a cup full of food but the restriction in volume of food that can be eaten occurs usually without significant restriction of the types of food that can be eaten. Vomiting is less common than for the Band, but more than the Bypass on average. Although the side effects of this gastroplasty are far less than “stomach stapling” the procedure is permanent so potentially any side effects could also be permanent.

The weight loss is quite rapid initially but weight regain occurs if patients don't try to change their eating habits. The Sleeve Gastrectomy can be used along the path towards a Gastric Bypass (see later) for patients wanting to consider some of the benefits of the Bypass (ease of weight-loss, minimal vomiting), without the negatives (potential Calcium, Iron and B12 problems, and the small risk of small bowel blockages). If the weight loss is not sufficient long term the Sleeve can then be converted to a Bypass laparoscopically without undue difficulty. If someone has a permanent side-effect from a sleeve gastrectomy then they may require a gastric bypass to address it.

This operation may be ideal for people who would like to avoid the risk of device failure or vomiting with a Gastric Band, people who do not wish to have the vitamin supplements of a Gastric Bypass, or people who may be too unwell initially to tolerate a Bypass but probably require it due to significant weight and metabolic problems (as stage one of two stage surgery). Because part of the stomach is removed it **is therefore permanent**.



**Figure 7. Sleeve Gastrectomy.** A narrow stomach tube is created and the outer part of the stomach discarded. This can be done as a “stand alone” operation or it can be “made stronger” with more weight loss by changing it to a bypass months or years later.

**Laparoscopic Gastric Bypass (Roux-en-y)**(Figure 8), There are several forms of this procedure that have been performed over the last 20 years or so. It is based on an operation used to treat stomach ulcers and cancers for over 100 years. The current operation involves a restrictive element (by considerably reducing the size of part of the stomach) and a hormonal component with early passage of food into the intestine. These two factors give the strongest possible appetite suppression. This makes weight loss relatively straightforward in the large majority of people. This operation has a very good combination of both effectiveness (how much weight is lost) and durability (how long it lasts) of weight loss. This is without some of the dietary limitations of restrictive operations and the nutritional deficiencies of intestinal bypass operations. It **Accounts for 65% of obesity surgery worldwide.**

Most of the published evidence leading to the worldwide acceptance of obesity surgery by Government Health Agencies in Australia, America, and the United Kingdom is based on Gastric Bypass Surgery which is the “Gold Standard” against which other weight loss methods are currently judged.

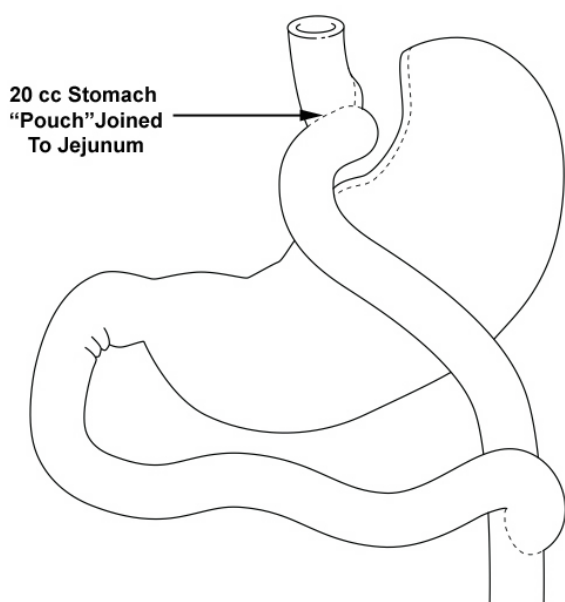


Figure 8. **Gastric Bypass.** Has a small volume gastric pouch, a narrow outlet from the divided stomach, and bypass of part of the small bowel. A ring can be placed around the stomach pouch during the operation in some people to limit the risk of weight regain.

**Banded Gastric Bypass. (fofi procedure)** In larger patients, or those who are habitual large meal eaters, a ring can be placed around the gastric pouch to prevent it softening due to forceful eating. Pouch softening may otherwise lead to increased capacity and late weight regain.

**Advantages:** Effective, long lasting weight loss in >85 % of cases. There are different versions of the operation (such as the mini-Gastric Bypass) which allows for a bit of flexibility during the operation

**Disadvantages:** Vitamin supplements should be taken daily. Some menstruating women will need iron tablets. Calcium tablets probably should be taken by post-menopausal women. The operation has similar or slightly less risk of operative complications but a greater risk of post-op complications than the Sleeve Gastrectomy. The risks are similar in magnitude to elective hip or knee surgery (1 in 200 to 1 in 1000 risk to life). There is a 3-5 % chance of bowel blockage in the years after surgery. People who have previous complex abdominal surgery can have

adhesions that make laparoscopic bypass difficult and those people may therefore require open surgery or consideration of other options.

**Notes: Do I know anyone who has had a weight loss operation?**

**What operation did they have?**

**Were they happy with their result?**

**What are my own weight loss goals?**

**What questions should I ask?**



## **WHAT ARE THE BARRIERS PREVENTING PEOPLE FROM HAVING SURGERY?**

Obesity surgery has been established internationally as the best method for sustained weight loss in the severely obese for over 20 years. Patients who miss out on surgery die at a younger age and have many more medical conditions and medical costs than those who get surgery. Patients who wait until they have permanent conditions such as bad diabetes, renal failure, heart attacks and cancer have worse outcomes if they choose surgery in desperation. Despite this, the majority of overweight patients with an obvious need for surgery do not have it offered to them. There are a number of potential explanations for this:

- 1) Although Medicare pays for surgery to be done on privately insured patients there is extremely limited access to surgery in the public hospital system. As surgery is not freely available it is therefore not considered as a treatment option by many physicians.
- 2) Cost. In most cases patients will be out of pocket several thousand dollars after surgery. 90% + of people however will save enough money in reduced medical and food costs after surgery that the operation will pay for itself within a couple of years. If someone values their health more than other things of equivalent cost then the benefits of the surgery are obvious.
- 3) Obesity is not perceived as a disease by some people despite the significant medical illnesses it causes. The erroneous belief that morbid obesity is a lifestyle affliction caused by a lack of willpower may lead to treatment not being offered.
- 4) There can be a tendency to refuse obese people surgical treatment saying that it is "too risky" and this (unfounded) belief has affected the decision making of both doctors and patients. Probably > 15 000 people die in Australia from their weight,

but death after weight-loss surgery is extremely rare despite > 10-12000 procedures being done yearly.

- 5) Some Doctors are unaware of the results of surgery and who may benefit from it. There are published recommendations available that recommend appropriate surgical treatments which can be freely obtained from the Australian Governments health policy advisors (the NH&MRC – see references).
- 6) Obese patients have often suffered discrimination, feel that they are (or have been told they are) to be blamed for their condition, and have failed so many treatments previous that they fear to enter into discussions about their weight with Dr's.
- 7) Even if surgery is offered it entails the prospect of risk taking and substantial change, these are things that we are all very resistant too. These issues need to be examined closely.

## CHANGE

Eating is a central part of our existence and what drives us to eat is more complex than just the feeling of hunger. The only way to lose weight is to eat less, and the operations described reduce appetite and the amount that can be eaten. Eating is a soothing, enjoyable activity that everyone uses as a way of coping with stress and socialising with others. Obesity surgery changes this permanently and the realisation that this coping mechanism may be removed can be a daunting prospect for anyone considering surgery.

The prospect of losing a lot of weight forces people to evaluate their body image and how other people see them. As overweight people may feel shame and blame themselves for their problem they can find it difficult to seek assistance.

## RISK- HOW SAFE IS THIS SURGERY?

Obesity surgery is **major surgery** requiring a general anaesthetic and as such carries a risk of complications or significant problems. These are not common but deaths have occurred.

The risks can be broken down into a number of categories:

- 1) **Anaesthetic risks.** Anaesthesia is very safe in this country and despite peoples fears, patients do not die “on the table” except in extremely unusual circumstances. The risk is so low it is very hard to measure, but is about 1 in 40 000.
- 2) **General risks.** Operations involve incisions which may become infected or heal poorly. Hernias and other wound complications are the most common problems after surgery. Operations also involve changes in bodily functions that put people at risk of chest infections (pneumonia), urine infections and blood clots (like the so called “economy class syndrome”). These are the risks that pose the greatest threats to life after major surgery. The risk of bleeding during the operation or immediately following it is also present, and this means that occasionally patients may require transfusions or even re-operation to get them well.

- 3) **Specific risks.** These risks are different depending on which operation you have and may occur early or late following the procedure. For example, the most feared complication in operations which involve the bowel is a leak from where the bowel is divided or joined. Although these joins are all made in a standard way which is repeated again and again from operation to operation, in about 1% of people they fail to heal, allowing the contents of the gut to spill out. This causes infection and almost always requires another operation and always significantly prolongs the recovery time. Other risks may be more relevant to some people than others so part of the process prior to surgery involves discussion of what is most relevant to the person having the procedure. Although we can tell you about the more likely risks, the list of rare complications is so long it would be almost impossible to tell you them all but it should be possible to discuss the risks that are most relevant to you. Prior to making a decision to have an operation these issues are best approached at an individual level.
- 4) **Death.** We all know that even driving to work involves the risk of accidents that can be fatal and that an operation will also carry a small risk. Most people go into operations with this expectation and accept the possibility that things may not go as planned. The risks depend on the type of surgery you are having and your age, weight and health and so your overall risk of death may vary from 1 in 200 to 1 in 3000.
- 5) **Disability.** Someone is effectively disabled while recovering from an operation and if they have complications then the duration of their disability can be prolonged. Some disabilities may be permanent and some permanent disabilities occur even if no obvious complications have arisen. This is because the effects of any operation vary from person to person and as these operations affect the way the body functions, if this affects quality of life, it may be a difficult problem to remedy. Disability may take the form of prolonged tiredness, abdominal pain, difficulty in eating, vomiting, or nutritional deficiencies. Most of these operations are to some extent reversible or modifiable, but attempting to fix or reverse the operation may not fix an established problem. **What makes these risks acceptable is the fact that obesity causes disability, psychological distress and risk to life.**

### **WHO SHOULD CONSIDER SURGERY**

The requirements for people wishing to undergo surgery for a weight problem are listed below. The most important determinant of eventual success, regardless of the operation performed is the realisation that an operation while facilitating weight loss, will not create weight loss "magically", rather it will help the individual to eat less. We are able to lend support to help make this happen, but the ability of the person undergoing surgery to work with the operation is the key to successful ongoing weight loss.

BMI > 40.  
BMI > 30-35 with medical complications.  
No hormonal cause for obesity.  
Obesity must have been present for 5 years and persisted despite adequate attempts with other weight loss measures.  
No alcohol or drug abuse.  
Absence of "major" untreated psychiatric conditions.  
Ability to comply with long term vitamin supplements and follow-up after surgery.  
Actively supportive General Practitioner.

*Table 1: People suitable for surgery*

## **WHO SHOULD BE DETERRED FROM SURGERY?**

There is no good answer to this question, other than to say that the decision to go ahead should not be taken impulsively. An operation is just the beginning of a lifelong change that will lead to permanent weight reduction. In order to maximise results a person needs to work with, rather than against their surgery. A desire to eat whatever you wish is probably not compatible with the desire to lose weight. Focusing on short term goals is also not ideal, as people can allow themselves to get into bad habits once they have lost weight (by snacking) as they can feel that they have achieved what they wanted to.

### **Before Surgery**

At least two consultations will be required. It is very important that we have the opportunity to assess both your risks and your desired outcomes from surgery. In order for you to make the best decision regarding which operation will suit you best a good understanding of how the different procedures may work for you will be needed. This will allow you to make decisions that best suit your circumstances. If possible you should bring a support person to your consultations, as they may be able to ask questions that you forget.

### **After Surgery**

Everyone is different regarding their requirements after surgery. The majority manage very well with simple verbal and written advice. Some people need more intensive support from our dietician and psychologist, and may need advice about exercise programmes etc also. As weight loss can trigger significant life changes it is not uncommon for people to require professional psychological support. Feeling down or confused should not be taken as a sign of failure.

## **WHAT TO DO NOW?**

Think about things, discuss your thoughts with your family. A large number of people having weight loss surgery do not even discuss it with their GP and although this simply reflects the belief that others may not take their problem seriously, it also robs them of a significant source of support.

Anyone perusing the web for information regarding obesity management would be well advised to consider avoiding websites with obvious commercial intent. There are good sources of information that can be obtained from neutral government

agencies, such as the American National Institute of Health (NIH), the American Society for Metabolic and Bariatric Surgery (ASMBS) the British National Institute of Clinical Excellence (NICE) and the Australian National Health & Medical Research Council (NH&MRC). If you visit internet chat sites, blogs or social media you should consider visiting those discussing more than one operation. Internet based information represents opinion rather than evidence, but listening to a range of differing opinions is useful when making your own decisions.

Discuss your options with your GP, they will be aware of your previous medical history and they, like ourselves will prefer you to have had sustained attempts at losing weight by other methods before considering surgery. Your GP will also have a central role in supervising your health following surgery should you go ahead. As a large number of your current medications will be ceased post-operatively you will need ongoing contact with someone who will be able to do this in a sensible manner. Take this booklet to your next visit with your GP, it will remind you of any questions you mean to ask him or her.

If you are considering surgery and would like to make an appointment, please keep this booklet and bring it to your appointment. Again it will serve as a useful reference point for discussion.

#### **Appendix and References**

The majority of the data and references for the above document can be found at the Government agency websites of the NIH (America), NICE (UK), and NH&MRC (Australia). These sites contain vast collections of the published data, and the NIH site especially provides a lot of practical information for laypeople.

Weblinks for references.

- 1) The Australian NH&MRC guidelines for management of obesity, including recommendations for surgery are at; <http://www.obesityguidelines.gov.au>
- 2) National Institute of Health, National Heart, Lung and Blood Institute guidelines are available at; [www.nhlbi.nih.gov/guidelines/obesity/ob\\_home.htm](http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm)
- 3) The National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health guidelines are at; [www.niddk.nih.gov/health/nutrit/pubs/unders.htm](http://www.niddk.nih.gov/health/nutrit/pubs/unders.htm)
- 4) The UK based National Institute of Clinical Excellence has a number of documents for patients and Doctors that can be found by searching at; [www.nice.org.uk](http://www.nice.org.uk). Specific documents relating to Obesity Surgery are at; <http://www.nice.org.uk/cat.asp?c=34789>.
- 5) Mini-gastric bypass, not used as reference material, but an interesting site: <http://www.clos.net/>
- 6) Australian Institute of Health. Cost of obesity in the National Health Strategy. Inaugural Scientific Meeting, Australasian Society for the Study of Obesity. Sydney, 1992. Sourced from <http://www.phaa.net.au/policy/obesity.htm>
- 7) Difficulties in provision of bariatric surgical services to the morbidly obese. Michael L Talbot et al. The Medical Journal of Australia 2005; 182 (7): 344-347. [http://www.mja.com.au/public/issues/182\\_07\\_040405/tal10771\\_fm.html](http://www.mja.com.au/public/issues/182_07_040405/tal10771_fm.html)