# FOREWORD

This booklet is to provide a brief introduction to achieving and maintaining significant weight reduction by bariatric (weight loss or obesity) surgery. Should you decide to undertake surgery you will be made fully aware of all aspects of the operation in consultation with our surgeons, psychologists, dietitians, exercise consultants and the administrative staff at our centres.

Our centres aim to provide patients with lifelong support. We emphasise that weight loss surgery is the beginning of a process of establishing and maintaining a healthy body weight for life. The operation is really the first step in your treatment, which will continue for the rest of your life. It will take a little while to adapt to the changes in your body, but the rewards of improved health, looking well, feeling better about yourself, and being able to participate more in all aspects of life, are well worth the effort. We conduct regular workshops for our patients to advise and support them on this journey.

We strongly encourage anyone considering weight loss surgery to attend one of our regular information sessions. We feel it is essential for you to have a clear and comprehensive understanding of the preparation for operation, the operation itself and how it works, and life after weight loss surgery.

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## WHAT IS OBESITY?

Obesity is unhealthy excess weight. It is the most common medical problem in our community. Depending on its definition, between 15% and 20% of the population in most Western countries is considered to be obese. The number of obese people in Australia and throughout the developed world has doubled over the last twenty years and with this increase has come a parallel increase in the incidence of Type II diabetes which is almost always caused by obesity.

Obesity is a disease recognised by the World Health Organisation. It has a number of component causes including genetic factors, (eg. having family members who are obese) and environmental factors (eg. aspects of modern life including fast food, less active jobs etc.). The severity of obesity is determined by a measurement called the body mass index.

| BMI – $kg/m^2$ | |
|---|---|
| Healthy Weight | 18 – 25 |
| Overweight | 25 – 30 |
| Obese | 30 – 35 |
| Severely Obese | 35 – 40 |
| Morbidly Obese | 40 and over |

Check your height and current weight and then use the BMI calculator on our website – www.vosc.com.au **or** calculate by dividing your weight in kilograms by your height in metres squared.

Morbid obesity is usually associated with significant medical problems, known as comorbidities, which include hypertension, diabetes, heart disease, stroke, sleep apnoea, depression, arthritis and premature death. Life expectancy becomes increasingly diminished as the body mass index rises, so that a person with a body mass index of 40 has approximately twice the chance of premature death as a person with a normal body mass index. Morbid obesity is also associated with significant physical and social limitations.

# TREATMENT OPTIONS

## DIETS & EXERCISE

The conservative treatment of morbid obesity by dieting and exercise programs is notoriously unrewarding. Most people who are obese will have tried many diets and weight reduction programs. They usually produce only very limited and transient weight loss. In fact, most people who have tried dieting regain the lost weight and more – so called “yo-yo dieting”. The failure of diet programs led to the hope that a surgical procedure would be able to achieve lasting weight loss.

## SURGERY

Obesity surgery (or bariatric surgery) has been performed for many years but it is only in the last fifteen years or so that it has advanced sufficiently to become a mainstream treatment option, mainly through the development of operations that have much less unpleasant side effects for the patient, and the introduction of keyhole (laparoscopic) surgery. There are several surgical techniques available and some that have been tried and are now no longer performed.

Weight loss brings personal satisfaction, a rise in self esteem and social benefits, however more significantly, the health problems associated with morbid obesity improve progressively with weight loss, and people requiring drug therapy, say for hypertension or diabetes, find it can become unnecessary to take medication.

## WHO CAN BE CONSIDERED FOR BARIATRIC SURGERY?

You must be significantly overweight. We would not normally consider performing the operation on anyone whose body mass index is less than 35. However, we sometimes give consideration to patients with a body mass index between 30-35 if they have a lifelong history of obesity and/or have developed some of the co-morbidities. You must have an earnest desire to lose weight. We would expect that you have made serious attempts to lose weight by dieting, as we would take this as an indicator of your commitment to the management of your obesity.

It is important that you realise bariatric surgery is a very considerable intervention in your dietary lifestyle – your co-operation and commitment are necessary if you are to maintain a lifelong healthy body weight. We will provide the advice of a dietitian, psychologist and exercise consultant to assist you in making these lifestyle changes.

We strongly recommend that you speak to your GP and gain his/her support in considering weight loss surgery. You will need a referral from your GP. We will keep your GP updated on your progress unless there is a specific request made by you not to do so.

## SURGERY OPTIONS

The human body lays down fat stores if the calories in the food you eat exceed the energy you burn up. There are a number of complex processes which the medical profession are only just starting to understand that seem to contribute to increasing obesity – the appetite mechanisms go wrong and you continue to eat even though you do not need the calories. And of course, once your body is carrying the extra weight it becomes harder to burn up calories with physical activity.

Obesity surgery works by helping to reduce the number of calories that are available in your body. There are two ways this can be achieved surgically:

**Restriction –** by reducing the size of the stomach, only small meals can be eaten and the appetite is satisfied.

**Malabsorption** - by bypassing part of the small intestine, less calories from food are absorbed by the body.

There are several surgical procedures available; some have been widely used but are now largely discarded.

**The current options are:**

**☛ Laparoscopic adjustable gastric band placement ☛ Gastric bypass ☛ Sleeve gastrectomy ☛ Biliopancreatic diversion**

All these procedures achieve significant and durable weight loss but carry different degrees of risk from complications. Laparoscopic gastric banding is by far the least likely to be followed by severe complications or death and for this reason is currently the only procedure offered by our centres. Because it is the only procedure we carry out we have achieved very considerable experience and expertise in it.

## LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING OPERATION

The laparoscopic adjustable gastric banding operation was developed to prevent the problems associated with the earlier procedures. It is done by placing a small collar around the upper part of the stomach, creating a very small stomach above it that fills quickly, resulting in a feeling of fullness.

This usually lasts for some time as the food passes only slowly from the small pouch because of the restriction of the band. The opening from the stomach can be adjusted by injecting or withdrawing fluid from a balloon on the inside of the collar.

The laparoscopic adjustable gastric banding procedure has three major advantages:

### 1. IT IS ADJUSTABLE

The tightness of the band can be adjusted by injecting fluid into, or withdrawing fluid from, the balloon on the inner aspect of the band. This is achieved by passing a needle into the small reservoir that is implanted under the skin at the time of operation. If the band is too tight weight loss will be too rapid and there may be some vomiting. This is corrected by withdrawing some of the fluid from the band. Conversely, if there is inadequate weight loss more fluid can be introduced thus tightening the band.

## 2. THE BAND IS PLACED LAPAROSCOPICALLY

The laparoscopic adjustable gastric band is normally placed by laparoscopic or "keyhole" surgery. This means that there is no major abdominal incision. The operation is performed by passing a telescope into the abdomen through a small skin incision, and usually four other small incisions are made through which to pass instruments and to place the band. These are quite small puncture wounds. The absence of a major incision means there is very little pain post-operatively and an early return to full activities.

On rare occasions it is not possible to place the band by the laparoscopic method and an incision is required. The operation is still exactly the same, however recovery is usually a little longer.

## 3. IT IS REVERSIBLE

Although there is no intention of reversing the operation, if there were to be any unexpected development, the band can be removed, usually laparoscopically. The stomach will return to its normal shape.

## HOW IS THE OPERATION DONE?

Firstly your general fitness for operation is assessed. Normally you are admitted to hospital on the day of your surgery. The operation is performed under a general anaesthetic and takes about one hour. It is performed laparoscopically, that is, a telescope is introduced into the abdominal cavity through a small puncture wound above the umbilicus. If the initial examination confirms that there are no problems, such as adhesions resulting from previous surgery that would make the laparoscopic procedure unsuitable, other small puncture wounds are made to pass instruments into the abdomen. The band is placed around the top of the stomach, creating a small pouch above the band. The band is connected by a tube to a reservoir which is placed under the skin on the abdominal wall. This requires an incision approximately 4 cm. long in the centre of the upper abdomen. This reservoir is accessed by a needle passed through the skin to introduce or remove fluid from the balloon inside the band. This is the way the band is adjusted. The balloon is left empty at the time of operation and fluid is not introduced until 4 – 6 weeks after operation. After the operation an X-ray is performed to check the position of the band. Patients are normally discharged from hospital following this X-ray.

If the operation cannot be performed safely by laparoscopic means it is then necessary to proceed to an ordinary abdominal incision to place the band. The band placement is identical; however, your hospital stay may be extended by a day or two.

Following the laparoscopic procedure, although there is no major abdominal incision there is some discomfort and you will be given adequate analgesia to keep you comfortable. There can also be a period of post anaesthetic fatigue which may last for up to two weeks.

Immediately after the operation, it is very important to adhere to the post-operative eating and drinking instructions to allow your internal stitches to heal properly. It is also important in the early stages not to stretch your stomach pouch by eating too much. For this reason you will be advised to follow a liquid or pureed diet (the consistency of baby food or apple sauce) for the first four weeks, before progressing to mashed food, and then a solid diet. This ensures that healing is complete, the band is set firmly into place, and the pouch above your band does not become dilated. Comprehensive guidance and education on foods and meals choices will be given to you prior to your operation.

Approximately four to six weeks after surgery the first fill of the band is done. This is performed with a syringe and needle through the access port and is not a painful procedure. This is repeated at regular intervals until you reach your individual “sweet spot” where your band restriction is sufficient to still enable you to eat enough food so you are not hungry and adequately nourished, but reducing your calorie intake to ensure you are losing weight at a steady, gentle pace (½ – 1 kilogram per week is ideal).

It is anticipated that you will have a gradual reduction in weight over a period of twelve to eighteen months and in general, the aim is for you to lose two thirds of your excess weight over this period.

Your excess body weight is the amount of weight you were carrying above what is regarded as a healthy normal weight for someone of your height. For example, if you weigh 120 kg. and your ideal body weight is 70 kg., your excess weight would be 50 kg., and two thirds of this would be 33 kg.

## ARE THERE ANY PROBLEMS?

Because your stomach and intestines are not cut or permanently altered with this surgery, it is a very safe procedure, however laparoscopic adjustable gastric banding is a major surgical procedure and complications can occur. These are not common but the quoted risk of dying from a gastric band is 1:1000 patients and is most often caused by a blood clot forming in the lung (pulmonary embolism). To prevent this we give you medication to help thin your blood and get you out of bed soon after your operation. There is always the possibility of the surgeon encountering a technical difficulty at the time of operation. If your anatomy has been complicated by previous surgery and scarring, or if your liver is very large and fragile, it may not be possible to complete the operation by laparoscopic surgery and conversion to an open operation may be necessary. This does not have an effect on the band, but will delay your recovery time.

After laparoscopic adjustable gastric banding, a problem can occur if the band moves and the small gastric pouch above the band becomes larger (this is called “a slip”). This can cause partial obstruction and vomiting and if the pouch enlargement is significant this will require repositioning of the band. This problem is thought to be more likely to occur if there has been repeated vomiting. This is the reason we insist on a liquid diet for the first month after operation.

Other problems that may occur following gastric banding surgery include band erosion (the band can eat through the wall of the stomach), and problems with tubing leakage, or rotation or infection of the reservoir.

In the longer term, medical journals report a 10% - 15% chance of re-operation at some stage following gastric band surgery.

Despite the best management a small number of people fail to adjust to the new eating habits and don't lose weight with a gastric band.