Te Whatu Ora
Health New Zealand
Waitematā

Surgical Weight Loss Options at Te Whatu Ora – Waitematā

INTRODUCTION

This information booklet is designed to provide you with an understanding of the different surgical weight loss options available at North Shore Hospital.
We hope that after reading this booklet and talking with our team, you will have a better understanding of what is involved in weight loss surgery including the benefits and risks. It should also help you decide which option is best for you and your lifestyle goals.

WHAT IS BARIATRIC SURGERY?

Bariatric surgery is also known as obesity surgery or weight loss surgery. It refers to operations designed to help reduce your weight.
The operations may restrict the amount of food you are able to eat, reduce the amount of food you can absorb from your gut, or both.
The term does not include procedures that remove fat from the body, such as liposuction or abdominoplasty (tummy tuck).

WHY SHOULD I CONSIDER SURGERY FOR WEIGHT LOSS?

Surgery is known to be one of the most effective methods to aid weight loss and maintenance. Many of you will have been dieting for much of your life. You may have lost a large amount of weight in the past but found it difficult to keep this weight off.
Alternatively, you may have never dieted before but have been referred by your GP or another specialist because surgery is considered the best option for you.
Carrying extra weight can also contribute to many other health problems or affect you physically and emotionally.

WHY TREAT OBESITY?

The main concern about carrying extra weight is the impact it can have on your health. We know that being obese can increase the chance of having many other diseases such as diabetes and heart disease.

Being obese can also shorten your life expectancy. The heavier you are and the longer you have been overweight or obese, the greater the risk. Surgery can be a way of managing your weight and preventing further health problems. However, it is only a tool to help you. Success will only be achieved by eating a healthy diet and getting regular exercise.

Weight loss surgery has been shown to prevent or improve conditions and diseases such as:

- Type 2 diabetes
- High blood pressure

- High cholesterol
- High triglycerides
- Heart disease
- Asthma
- Sleep apnoea
- Certain cancers such as breast, colon and endometrial cancer
- Polycystic ovarian syndrome
- Osteoarthritis and joint problems
- Infertility
- Stress incontinence

Studies have shown that weight loss surgery can also improve quality of life and increase life expectancy.

CRITERIA FOR SURGERY

You must meet the following criteria:

- Have a BMI of 40 kg/m^2 or more

OR

- Have a BMI of between 35 kg/m^2 and 40 kg/m^2 with other significant disease (for example, Type 2 diabetes or high blood pressure)

AND ALL OF THE FOLLOWING

- Have tried all other appropriate, available non-surgical measures but failed to achieve or maintain adequate, clinically beneficial weight loss **AND**
- Be willing to see the various specialists that we recommend and follow our instructions **AND**
- Be generally fit for anaesthesia and surgery **AND**
- Be committed to long-term follow-up care with us or your medical practitioner AND
- Be smokefree (this includes vaping)

Obesity surgery is an option if you meet the above criteria, are well informed, motivated, and have realistic expectations about what surgery can achieve for you.

BARIATRIC SURGERY REQUIRES COMMITMENT

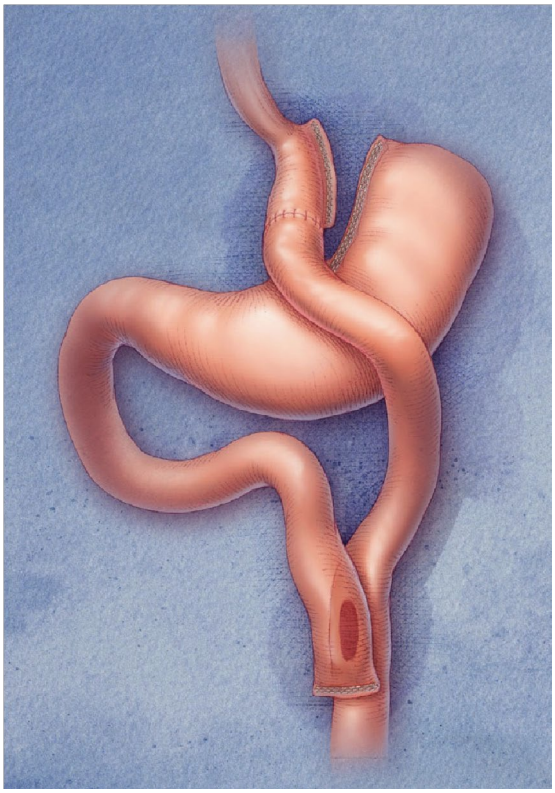
Making the decision to request bariatric surgery is a serious step and it is important that you fully understand what it will involve and what changes you will have to make to your diet and lifestyle.

Surgery is considered a tool for weight loss. Weight loss with surgery requires commitment and motivation. It is not a quick fix.

You will gain the most success from surgery and will avoid complications if you can commit to the recommended changes to your diet, exercise and lifestyle, and maintain them for life.

SURGICAL OPTIONS

1. Laparoscopic Roux-en-Y Gastric Bypass



The gastric bypass is a combined restrictive and malabsorptive procedure. The first step creates a pouch, in the same position and of a similar size to that created with the gastric band. The surgeon creates this pouch using metal staples that are similar to stitches. The stomach will be cut through so that the pouch is no longer attached to the rest of the stomach. The top section of the stomach (the pouch) will hold your food.

The surgeon will count down 75–150cm from the top of your small intestine and divide it. They will then bring up the end that is not attached to your remaining stomach and attach it to the pouch. Food will now travel from the pouch straight into the small bowel. The divided end of the small bowel that is connected to the remainder of your stomach is then connected 75–150cm below where the other end is joined to the gastric pouch. This allows the digestive juices (gastric and pancreatic juices) to enter the small intestine and digest the food. The main effect is that the amount of food you are able to eat is reduced. Therefore, you will fill up quickly and stay full for longer (after only a few mouthfuls of food).

Most people find that they do not get the same feeling of hunger that they did before the surgery. The bypassed portion of stomach and intestine does not affect the absorption of most

of the nutrients that you eat. However, it may reduce the amount of protein, vitamins and minerals that you absorb.

The dietitian will discuss with you the diet required to meet your essential nutritional needs. To avoid developing a deficiency, you will need to take vitamin and mineral supplements daily for life. We will also take regular blood tests to detect any nutritional deficiencies early and allow additional supplements to be started before you become symptomatic.

The option of a silastic ring may also be discussed. This ring is placed around the gastric pouch to prevent future dilatation. A silastic ring has been shown to improve both long term weight loss and reduce long term weight regain. A small proportion of patients (less than 5%) are intolerant of the ring and will require a minor operation to have it removed.

EXPECTATIONS OF WEIGHT LOSS

Most people lose weight quite quickly over the first year following bypass surgery. You will generally reach your target weight after –12-18 months after surgery.
On average, people lose 65–75% of their excess body weight. There is variation in the amount of weight that people lose following surgery.
Adherence to dietary advice and exercise programme will result in greater weight loss and better weight maintenance. The dietitian will discuss with you what changes you would need to make to your eating patterns to have the best weight loss results.

ADVANTAGES

- The amount of food you can eat is restricted
- You are likely to feel fuller quicker and stay fuller for longer
- Weight loss starts from the time of surgery
- Weight loss tends to be faster than following the gastric band
- You can lose on average 65–75% of your excess weight
- The average weight loss after surgery tends to be higher than after a purely restrictive procedure such as the gastric band.
- Weight loss is more predictable than adjustable gastric banding
- The gastric bypass procedure is particularly effective at reducing medication requirements and improving blood sugar control for patients affected by Type 2 Diabetes Mellitus*

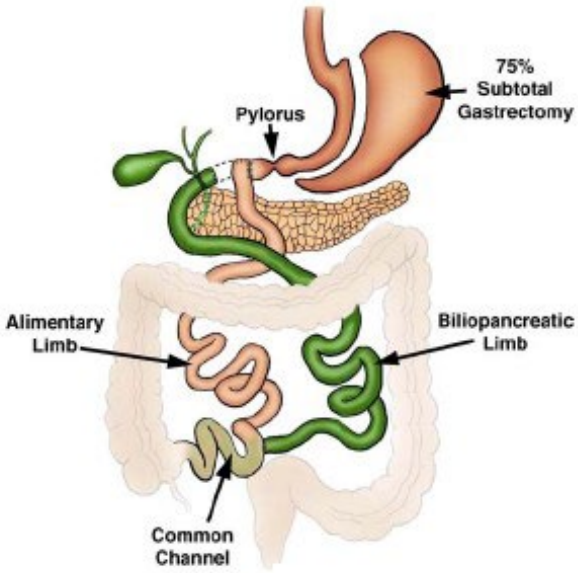
A large analysis showed resolution of diabetes in 84% of patients 2 years after surgery, and in 71% of patients less than 2 years after surgery*

*(Buchwald et al 2007 American Journal of Medicine)

DISADVANTAGES

- Obstruction can occur where the new joins are created at the pouch and further down the intestine. This may require a procedure (endoscopic or surgical) to widen the area and allow food to travel through at the correct rate
- You will need to take daily multivitamin and mineral supplements for life
- You will be at greater risk of suffering from nutritional deficiencies such as vitamin B12, iron and calcium and may require additional nutritional supplements if you are found to be deficient.
- Your hair may thin although this is temporary while losing weight at a rapid rate
- You may develop gallstones due to rapid weight loss. It may be necessary to undergo a further operation to remove your gallbladder.
- You may experience dumping syndrome, a condition experienced by 70-80% of people who have had a gastric bypass. In this procedure the valve which regulates the emptying of the stomach contents into the small bowel, called the “pylorus” valve, is bypassed. If you eat too much sugar, fat or alcohol, or large amounts of food, the stomach rapidly empties into the small intestine leading to symptoms which begin during or soon after eating (called ‘early’ dumping) and those that begin 1- 3 hours afterwards (called ‘late’ dumping). Early dumping includes nausea, vomiting, bloating, diarrhoea, and shortness of breath. Late dumping includes sweating, headache, weakness, dizziness, and even loss of consciousness. It is not considered a health risk but can be very unpleasant. You can avoid dumping syndrome if you follow the recommended diet after surgery.
- Nausea and vomiting may occur, particularly in the first few days after surgery. Vomiting is also common if you eat too quickly or eat too much.
- An ulcer at the join between stomach and intestine may develop in 12 – 27% of cases.
- Some weight regain may occur over time after the first two years, but patients are as a group much better off from a weight and health standpoint even long after surgery.
- You will have better results and are less likely to experience complications if you follow the recommended dietary changes.

2. Duodenal Switch (DS)



The Duodenal Switch combines restrictive and malabsorptive elements to achieve and maintain the best reported long-term percentage of excess weight loss among modern weight-loss surgery procedures.

THE RESTRICTIVE COMPONENT

The Duodenal Switch procedure includes a partial (sleeve) gastrectomy, which reduces the stomach, effectively restricting its capacity while maintaining its normal functionality.

With the duodenal switch, the valve situated at the outlet of stomach (called the “pylorus” valve) is kept intact. This eliminates the possibility of dumping syndrome, marginal ulcers, stoma closures and blockages, all of which can occur after the gastric bypass procedure where the pylorus valve is bypassed.

THE MALABSORPTIVE COMPONENT

The malabsorptive component of the duodenal switch procedure rearranges the small intestine to separate the flow of food from the flow of bile and pancreatic juices. This inhibits the absorption of calories and some nutrients. Further down the digestive tract, these divided intestinal paths are re-joined; food and digestive juices begin to mix, and limited fat absorption occurs in the common tract as the food continues on its path toward the large intestine.

EXPECTATIONS OF WEIGHT LOSS

Following this operation people tend to lose weight quickly and lose 75–90% of their excess body weight over 12 -18months.

ADVANTAGES

- Less food intolerance compared to other weight loss procedures. In fact, you can eat normal variety of food items albeit in much smaller portions.
- Weight loss starts from the time of surgery
- You can lose on average 75–90% of your excess weight
- You may be able to maintain your weight loss better than with other surgeries.
- The operation has the highest rate of resolution of obesity related conditions e.g. diabetes is cured in 99%, sleep apnoea in 99%, hypertension (high blood pressure) in 84%, and high cholesterol in 99% of patients.*
- Dumping syndrome is very rare. This occurs after the Gastric Bypass operation but rarely occurs with the Duodenal Switch operation because the pylorus valve, between the stomach and the small bowel is preserved and remains functional. For more information on dumping syndrome see information under Laparoscopic Roux-en-Y Gastric Bypass.
- No risk of marginal ulcer. This can occur after the Gastric Bypass operation in 12 – 27% patients. The ulcer occurs at the section of the small intestine joined to the stomach because the intestine is put in direct contact with the stomach acid. This risk is minimal in the Duodenal Switch operation because there is no join up between intestine and stomach and also because the pylorus valve is preserved.

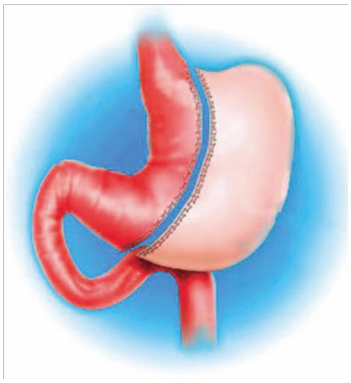
*Buchwald H, et al. Bariatric Surgery–A Systematic Review of the Literature and Meta-analysis. Journal of the American Medical Association 2004 Oct 13;292(14).

DISADVANTAGES

- The surgery itself has more risks than the sleeve gastrectomy or gastric bypass because it is a longer and more complex procedure.
- Because there is less intestine available for absorption, you will be at a relatively greater risk of suffering from nutritional deficiencies than the bypass or sleeve, particularly calcium, vitamin A and D and protein. Close monitoring for protein malnutrition, anaemia, and bone disease is required after this operation. The dietitian will support you in achieving the diet required to meet your essential nutritional needs and you must take multivitamin and mineral supplements (including vitamin A, calcium, iron and folic acid, vitamin D and vitamin K) every day for the rest of your life. You will have to have to pay the cost of these supplements yourself, as most of them are not funded.
- **The consequences of not taking supplementation as prescribed can be very serious and in some cases, life threatening**
- Your hair may thin although this is temporary while losing weight at a rapid rate.

- You may develop gallstones due to rapid weight loss. It may be necessary to undergo a further operation to remove your gallbladder, or it may be removed at the time of surgery.
- Foul smelling flatulence and loose stools may be experienced especially if dietary changes have not been made to low fat choices. The dietitian will help you achieve a low fat diet to minimise these symptoms.
- Nausea and vomiting may occur, particularly in the first few days after surgery. Vomiting is also common if you eat too quickly or eat too much.

3. Laparoscopic Sleeve Gastrectomy



The sleeve gastrectomy is a purely restrictive operation. In this procedure, the surgeon creates a narrow tube from the stomach and removes the remainder. The surgeon uses metal staples that are similar to stitches and then cuts through the stomach.
The new stomach tube, or pouch, is about one eighth of the size of the original stomach. Unlike a gastric bypass where food enters a small pouch and then passes straight into the small bowel, the route that food takes following a sleeve gastrectomy is the same as it took before surgery. Most people will lose 50% or more of their excess weight. Weight loss is generally quite fast, however because the intestines are not bypassed, most people do not lose as much weight as with the duodenal switch or gastric bypass.
The sleeve gastrectomy can be used as the first stage of a 2-stage procedure, such as duodenal switch or gastric bypass. You can discuss this option with your surgeon when you meet with them in clinic. The second operation is generally scheduled 12-18 months after the first surgery.

EXPECTATIONS OF WEIGHT LOSS

Weight loss occurs quite quickly over the first year following a sleeve gastrectomy. Most people lose between 50-60% of their excess body weight, although this can vary and some may lose more. Adherence to dietary advice and exercise programme will result in greater weight loss and better weight maintenance. The dietitian will discuss with you what changes you would need to make to your eating patterns to meet your essential nutritional requirements for protein, vitamins and minerals and have the best weight loss results. You must take a daily multivitamin and mineral for life to prevent nutritional deficiencies.

ADVANTAGES

- The amount of food you can eat is restricted
- You are likely to feel fuller quicker and stay fuller for longer
- Weight loss starts from the time of surgery
- You can lose on average 50-60% of your excess weight

- Your intestines remain intact, so food is digested and absorbed as normal
- The surgery can then be followed by conversion to the duodenal switch or gastric bypass if required resulting in further weight loss
- No risk of internal hernia or anastomosis complications
- Risk of dumping syndrome is very rare

DISADVANTAGES

- You may not lose as much weight as following the bypass or duodenal switch and you may be at more risk of regaining weight
- Your hair may thin, this is temporary while losing weight at a rapid rate
- You may develop gallstones due to rapid weight loss. It may be necessary to undergo a further operation to remove your gallbladder, although this is quite rare
- Most of your stomach is removed. This is a permanent procedure; in other words it is irreversible.
- Nausea and vomiting may occur, particularly in the first few days after surgery. Vomiting is also common if you eat too quickly, or eat too much
- You will have better results if you follow dietary changes and follow an exercise programme.

Possible Complications of Obesity Surgery

Obesity surgery may be associated with complications that are common to any abdominal gastrointestinal surgery including:

- General anaesthesia**:** patients who are obese are at greater risk of surgical anaesthetic complications.

- Pulmonary embolism: this condition occurs when a blood clot in the leg (deep venous thrombosis) breaks off and travels to the lungs. Sometimes this can cause sudden death, but most patients develop sudden shortness of breath. This occurs in about 1% of patients. To help prevent this, you may be put on blood thinning medication (heparin) and given compression stockings while in hospital. You will also be encouraged to get out of bed and walk as soon as possible after surgery.

- Heart attack: obese patients are at increased risk of developing a heart attack due to the higher cardiovascular risk (such as high blood pressure, Type 2 diabetes, high cholesterol).

- Infection: the risk of infection is generally low. Lung infections are rare if you follow the postoperative respiratory physiotherapy guidelines. Abdominal and urinary infections are rare and can be treated with antibiotics.

- Anastomotic/ Staple line leaks: leaks from the gastrointestinal tract can occur where the bowel and stomach are connected and sewed. If a complete seal does not form, bowel contents can leak into the abdomen causing a serious infection. This occurs in about 0.5-3% of cases of gastric bypass, sleeve gastrectomy and duodenal switch. If a leak is suspected, you may need X-ray testing or emergency surgery.

- Bleeding: can occur in 3–5% of cases and is usually resolved by stopping the blood thinning medication (heparin) which prevents blood clotting and pulmonary embolism. Occasionally surgery may be needed to stop the bleeding.

- Spleen injuries: these are rare but have occurred during surgery. In some cases, you may have to have your spleen removed.

- Bowel obstruction: bowel obstructions can be caused by scar tissue in the abdomen, kinking of the bowel, or the development of an internal hernia. It can occur in up to 5% of cases and a further operation may be needed to correct it.

- Incisional hernia: this occurs more frequently in the open surgery technique and is rare when using the laparoscopic ‘keyhole’ technique. It usually requires an operation to repair the hernia.

- ANASTOMOTIC STRICTURE (NARROWING AT THE NEW JOINS BETWEEN STOMACH AND INTESTINE): can occur in up to 5% of gastric bypass. This usually responds to balloon dilatations (endoscopic procedure).

- VITAMIN AND MINERAL DEFICIENCIES

- DEATH: there is about 0.5 to 1% risk of death associated with the surgery although this can vary in relation to the type of surgical procedure and your clinical conditions (comorbidities).

WHICH OPERATION IS RIGHT FOR ME?

There is no straightforward answer to this question. It is likely that you will have an idea of the procedure you would prefer when you first attend the clinic. This may be based on your own research or from talking to other people who have had surgery. It is our job to provide you with the information based on our clinical experience to help you decide. It will be a joint decision between you, the surgeon and the rest of the team.

SOME IMPORTANT THINGS TO CONSIDER:

I SMOKE

You will be advised to quit smoking. We will not consider you for surgery if you are actively smoking because smoking is associated with higher risk of anastomotic leaks and ulceration after surgery. If you need support with this, we can refer you to the Waitemata DHB outpatient smoking cessation service.

I DRINK ALCOHOL

We recommend caution with alcohol consumption after surgery. The absorption of alcohol is unpredictable and one glass of wine may result in you becoming drunk. Alcohol should be avoided completely for the first year after surgery and as much as possible long-term as it is high in calories and may slow your weight loss. If you drink alcohol after surgery you are at higher risk of developing Wernicke-Korsakoff syndrome. This is a potentially life-threatening condition that results from severe deficiency of thiamine (vitamin B_1) and can cause irreversible brain damage.

I COMFORT EAT OR BINGE EAT: Surgery does not stop binge eating or emotional eating or change the triggers for these. While binge eating will not necessarily prevent you from having surgery, we need to think carefully about whether it would be better to get some additional help to address this before having surgery. We can help you access this support.

I AM PLANNING TO BECOME PREGNANT SOON

We recommend that you do not fall pregnant while you are rapidly losing weight after surgery. During weight loss, your body may not be getting all the essential nutrients it needs for you and your baby to be healthy. We advise you wait 18 months to 2 years after surgery before

falling pregnant. If you do fall pregnant, we advise you inform us so we can monitor you more closely.
It is important to remember that you are likely to become more fertile when you lose weight and so precautions need to be taken, even if you have been told you cannot have children.

I'VE HAD PREVIOUS ABDOMINAL SURGERY

Generally, you will still be able to undergo surgery. If you have had many surgeries of your abdomen, you may need open rather than keyhole surgery. Your surgeon will discuss this with you.

IS THE PROCEDURE REVERSIBLE?

We do not consider any of the procedures reversible as reversing the procedure would result in weight regain. Reversal procedures also carry more risk than the initial procedure.

I AM UNABLE TO ATTEND REGULAR APPOINTMENTS

You will need to attend regular hospital appointments after your surgery to ensure everything is going well and you are losing weight safely. You will have follow-up clinics every 3 months for the first year after surgery with a Dietitian or Nurse Specialist, blood tests will be required 10 days before each appointment. Follow up after the first year will move to group sessions six monthly then yearly. Most patients will be discharged from the Bariatric Service to their General Practitioner after 2-3 years post-surgery.

If you cannot attend these appointments, you will not be considered for surgery.

I SNORE

This will not stop you from having surgery, however it is important to know that snoring can be a sign of obstructive sleep apnoea. If you have sleep apnoea, we may need to delay your surgery until your sleep apnoea is managed so that surgery can be conducted safely.

WILL MY EATING PATTERNS AND LIFESTYLE HAVE TO CHANGE AFTER SURGERY?

Yes. Many people believe that surgery for weight loss will force you to follow healthy eating patterns, but this is not true. Surgery can help you lose weight but the amount you lose and how healthy your diet is depends on your hard work and determination.

Surgery restricts how much food you can take in at a time. This helps you to limit your food intake and therefore lose weight. Given that you cannot eat as large a quantity of food, it is extremely important that the food you do eat provides adequate amounts of essential nutrients such as protein, vitamins and minerals. It is also imperative that you take the recommended doses of vitamins and minerals every day for the rest of your life. It is possible to become protein-malnourished and deficient in nutrients if you do not follow the recommended diet and take the prescribed supplements. This can have serious and potentially irreversible effects on your health. The dietitian will educate you on the diet that is required to minimise these deficiencies. However, you may be required to take additional

supplements if blood tests show that you have a deficiency. You are likely to have to pay the cost of these supplements yourself as most of them are not funded.

It is important to realise that while the procedures restrict the amount you can eat, they do not physically stop you from eating your favourite foods. You are still ultimately responsible for the types of food you choose to eat. You will need to use willpower to stop eating energy dense foods such as crisps, chocolate, biscuits etc. Even small amounts of these foods can slow down your weight loss.

It is quite common to eat to provide comfort or to help cope with stressful or distressing situations. Realistically we cannot change the fact that you are likely to experience stressful or difficult things at some point in your life but it is very important to find alternative ways of coping with these.

We recommend that people start making changes to their diet and exercise before surgery to maximise the safety and long-term outcomes of surgery. You need to gradually prepare yourself for the changes ahead otherwise it can be daunting to make all the changes following surgery.

It is essential that you increase your activity levels. This will help prevent you losing muscle tissue while you lose weight. It will also help you to lose more weight, and prevent weight regain. We generally recommend people begin by incorporating daily walks into their lifestyle or use a pedometer and aim to build to 10,000 steps per day.

Remember, surgery is a tool to assist weight loss; no matter what you think it is NOT the easy option.

WILL I HAVE LOOSE, SAGGY SKIN AFTER I LOSE WEIGHT?

Most people are left with some loose skin, especially around the abdomen, arms and thighs. You may feel you need surgery to remove some of this skin. Factors which cause saggy skin include massive weight loss in areas where there was a lot of fat (eg abdomen, inner thighs), smoking (destroys elastic fibres in skin) multiple pregnancies and advancing age. Going to the gym and exercising all muscle groups with resistance training may reduce saggy skin.

PREPARING FOR SURGERY

In order for surgery to work, there are a number of 'rules' you will need to follow in order to lose the most amount of weight and minimise complications.

You can start preparing yourself for surgery by starting to practice the following:

- **EATING SLOWLY** - to avoid overfilling your small pouch. Allow at least 30 minutes for every meal and learn to stop eating when you feel full. Overfilling can result in regurgitation (vomiting). You will need to be able to make time to have your meals without distractions (TV or phone) or being in a rush.

- **CHEWING WELL** - to avoid food pieces becoming lodged at the bottom of your pouch. This causes discomfort and can lead to regurgitation. Chewing well also helps you slow your meals down and if you savour every mouthful you will feel satisfied with less food.

- **NOT DRINKING FLUIDS WITH MEALS** - this can overfill your pouch and lead to regurgitation. Aim to stop drinking 30 minutes before you are going to eat, and then wait 1 hour after eating before you drink again.

- **EATING REGULARLY** - this stops you getting too hungry and eating too fast. Eating regularly also results in more weight loss than if you ate irregularly, or grazed and snacked all day.

- **EATING SMALL PORTIONS** - it takes a while for your brain to adjust to the small size of your pouch. Using a side plate, or toddler plates and cutlery helps you keep your portions under control.

- **MENTALLY PREPARING** - start to analyse your eating behaviour and any triggers for comfort eating or over-eating (for example particular situations, emotions, times etc). Start finding alternative ways of coping or other things that you can do at these times. It is better if you can address these issues before surgery.

WEIGHT LOSS GOAL

It is a requirement for public hospital patients to achieve some weight loss prior to surgery. This makes surgery safer for you. Weight loss will be achieved using diet activity, and very low calorie diets (VLCD).

You have 12 months to meet your weight loss goal from the day you receive the goal. If you do not meet your weight loss goal in 12 months you will be discharged back to your General Practitioner.

Approximately six weeks after receiving your weight loss goal you will be booked into a group Zoom session with a Bariatric Dietitian to discuss healthy eating.

On the day you receive your weight loss goal, we will give you a letter with the Bariatric CNS email on it. Once you have achieved your weight loss goal please make an appointment at your GP practice and have either your GP or GP practice nurse confirm your current weight and email it to bariatricCNS@waitematadhb.govt.nz

Once we have received the email a clinic appointment with a surgeon will be arranged for you. During this clinic you can discuss which surgery is best for you.

WEIGHT-LOSS MEDICATIONS

There are medications that can help weight-loss. These medications are not tolerated by the Bariatric Service. If you use this type of medication to assist you in reaching your weight loss goal you will be **immediately discharged** from the Bariatric Service and a new referral will not be considered until six months has passed. If your General Practitioner suggests prescribing you one of these medications to help you meet your weight loss goal, please decline if you wish to remain on the Bariatric Programme.

APPOINTMENTS

Most of these consultations are held in the Outpatient's Department on the ground floor of North Shore Hospital or Waitakere Hospital.

Some patients are at a higher risk of developing complications during or after surgery due to a pre-existing illness. You may be referred to the following:

- **RESPIRATORY PHYSICIANS -** sleep studies if you are at risk of stopping breathing when you are drowsy or respiratory function if you have breathing difficulty due to lung disease

- **ECHO, ECG OR STRESS STUDY** - if you are at risk of developing a heart failure, a heart attack or other heart disease.

- **ENDOSCOPY** - if you have a history of acid reflux or upper gastrointestinal tract disease.

• **ANAESTHETIST** - you will need to come to an anaesthetic assessment clinic for review once you have been booked for surgery

PSYCHOLOGY

Unfortunately, the Bariatric Service at Waitemata District Health Board does not have a Psychologist. Please speak to your General Practitioner if you are interested in a referral.

Please read over this booklet more than once and bring it with you for your first meeting with one of the Bariatric Surgeons.

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