Patient information
Laparoscopic gastric bypass surgery

AUCKLAND | WEIGHT LOSS | SURGERY

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Introduction

This information booklet has been developed to help prepare you for your gastric bypass operation. It discusses what you can expect before, during and after your stay in hospital and helps you with the lifestyle changes you need to make after surgery.

Please ensure that you have had time to read, and understand all the information contained in this booklet. It is important that you give yourself adequate time to process this information. We are happy to answer any questions that you may have.

There is plenty of space throughout the book for you to write questions down, and it is advised that you do so in order to remember them when you see your specialist.

Remember this is the beginning of a challenging journey. It is important that you are well prepared with information and determination in order to reap the benefits.

Surgical overview

Gastric bypass is considered by many surgeons to be the "gold standard" operation for morbid obesity and is commonly done worldwide. It is the operation with which all other weight loss procedures are compared.

Gastric bypass is a more technically challenging procedure to perform than other surgical procedures available but for most people recovery time and risk is similar to the sleeve gastrectomy (also known as the gastric sleeve). It has grown in popularity because it produces sustainable long-term weight loss in most patients, and many problems associated with obesity such as diabetes and sleep apnoea are improved or completely resolved.

The gastric bypass procedure involves creating a very small pouch out of the stomach and attaching it directly to the small intestine, bypassing most of the stomach and the first part of the small bowel. This small stomach pouch cannot hold large amounts of food, and by skipping the first part of the small bowel, hormones that control our appetite and food absorption are also affected. Together, this results in significant and sustained weight loss. This additional hormonal effect makes it a particularly effective operation for diabetes and other metabolic complications of obesity.

After surgery, patients start on liquids before moving to a pureed diet while the stomach heals. Several weeks after gastric bypass surgery patients progress to eating three small meals a day of normal consistency food. Entree-sized meals are enough to produce a sensation of fullness, making it easier for patients to limit the amount they eat.

Gastric bypass is now routinely done by laparoscopic (keyhole) surgery, which involves several very small incisions, rather than by open surgery, which uses one large incision. Harmless CO_2 gas is introduced into the abdomen, inflating it, and creating a space for the surgeon to work. The surgeon introduces a long narrow camera and surgical instruments to perform the procedure.

Laparoscopic procedures have the advantages of less pain and shorter hospital stay and recovery, as well as significantly reduced risks of wound infection or hernias. If, for some reason, your surgeon cannot complete the procedure laparoscopically, he can switch safely to the open procedure. The chance of this happening is low and would only be done in your best interests.

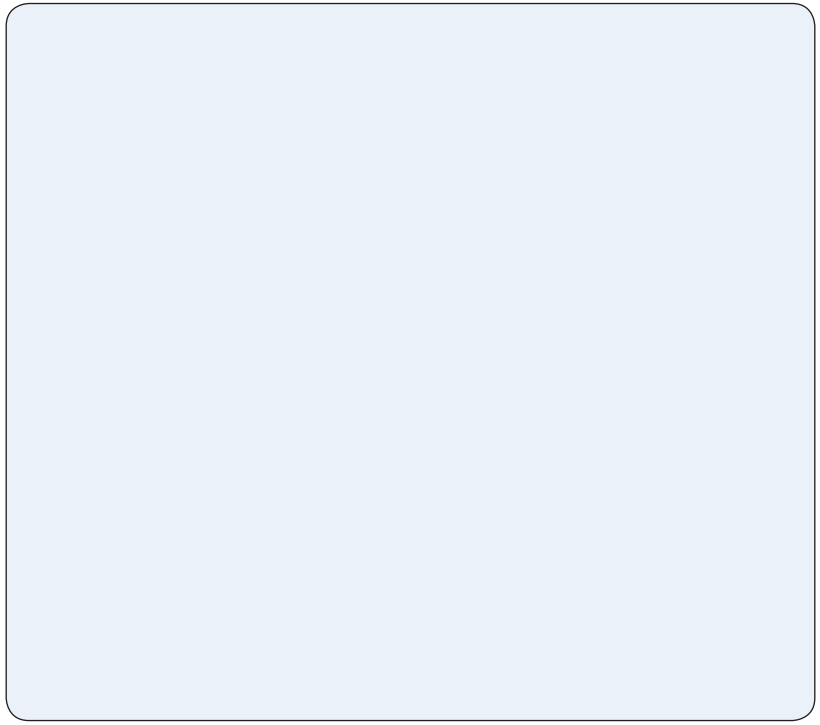
Improved health

Gastric bypass reduces the risk of death from obesity. Many obesity-related conditions, such as type II diabetes, obstructive sleep apnoea, joint pain from arthritis, high cholesterol and high blood pressure, are either completely resolved or substantially improved.

Long-term weight loss

Most patients achieve good to excellent weight loss results following gastric bypass surgery; typically this is 65 to 75 per cent of excess weight. Patients lose most of their weight in the first 12 to 18 months, before their weight stabilises. There can be some weight regain after this time, but it is usually minor. **There is no amount of weight loss that is guaranteed.**

Healthy lifestyle changes, with better diet and regular exercise, lead to a better outcome after the surgery. Gastric bypass is best seen as a tool that makes these lifestyle changes achievable for most patients.



Anaesthesia for surgery

An anaesthetist is a medical specialist just like a surgeon, requiring the same length of training, and you will have a fully trained specialist anaesthetist for your surgery. The anaesthetist will contact you prior to your surgery to ask you about any previous and current health issues. Please feel free to ask about any aspect of your anaesthesia care. It is important you try to answer all questions fully to enable the anaesthetist to use the best anaesthetic techniques for your surgery.

Specifically, it is very important to tell the anaesthetist about:

- any previous anaesthesia problems
- any allergies
- any history of pulmonary embolus (blood clot in the lung) or deep vein thrombosis (blood clot in the leg).

The anaesthetist will arrange for extra tests if they are required to give your anaesthetic safely. If needed, the anaesthetist may ask to see you prior to the day of surgery.

You will usually meet your anaesthetist before your operation on the day of surgery, who will answer any further questions you may have and obtain your informed consent for the anaesthesia.

Laparoscopic gastric bypass requires general anaesthesia: this is a combination of drugs used to put you into a state of controlled and reversible unconsciousness. The anaesthetist monitors you continuously during this time, and you will be given painkillers and anti-emetics (which help prevent nausea and vomiting) while you are asleep. In the recovery room, further medications will be given as needed.

Pain is normally minimal after this procedure but it can be felt in the small incisions made in the abdomen. Occasionally, the gas used to inflate the abdomen can cause pain in the shoulder tip, but this rarely lasts long and is easily controlled. If ongoing pain relief is needed, then a PCA pump or "pain pump"(patient-controlled analgesia) can be used. You push a button and the pump delivers a dose of painkiller. You cannot give yourself too much; the machine will limit the amount of painkiller it delivers to a safe level. Nausea and vomiting can be troublesome for some people but there are many drugs we can use to prevent this. Your anaesthetist will chart a list of drugs for the ward nurses to give, and we would encourage you to use them as required. The nurses can contact your anaesthetist at any time for advice about pain-relief and any other non-surgical problem.

Your anaesthetist will be involved with your care for two to three days after the operation in co-operation with your surgeon. He or she takes care of pain-relief, nausea/vomiting and intravenous fluids, as well as managing most medical problems, such as diabetes, while you are in hospital.

Hospital admission

Day zero

Admission

You will be admitted to hospital on the morning of surgery unless you have specific medical problems that your anaesthetist and surgeon wish to monitor closely overnight. It is understood that you will have had a thorough shower prior to admission, and that you bring along everything you require for your hospital stay. If you have any further questions for your surgeon or anaesthetist, please write them down and bring them with you to hospital.

CPAP (continuous positive airway pressure)

If you currently use CPAP for obstructive sleep apnoea, please bring your machine with you to hospital.

Medications

Bring in all medications, including over the counter and herbal medications. Don't stop any medications unless told to do so by your anaesthetist or surgeon.

During the admission process your surgeon, anaesthetist, admission nurse and theatre nurse will see you. This will mean that different people ask you the same questions. This is a safety issue, and although it can be frustrating, it is important. Use this time to ask any questions that you may have.

When you have been admitted and changed into your theatre gown and TEDs (stockings to prevent leg clots), you will wait in the preoperative area until theatre is ready. A warming blanket is often used at this time to keep you extra warm. A final check between the theatre staff and the admission staff takes place before you go through to the theatre.

You will move onto the theatre bed, which is narrow and firm, and a blood pressure cuff, ECG and an oxygen monitor will be attached to you so your anaesthetic team can monitor you closely throughout the procedure. Your anaesthetist will place a drip into a vein and ask you to breath some oxygen through a plastic facemask. Your anaesthetist will then gently send you off to sleep.

Recovery unit

You will wake up in the recovery unit with monitoring attached to you. You will have a drip. Occasionally a urinary catheter (tube into the bladder) and/or a drain (tube into the abdomen) is used as well. The PCA pump will be attached to your drip, if required.

Further post-operative care

When you are awake and comfortable you will be transferred to the ward. Occasionally we keep patients in the high dependency unit (HDU) initially. Typically, patients who are larger, older, or with medical problems that need closer monitoring will go to the HDU rather than the ward. Whichever location you are in, your nurse will record your vital signs regularly and give medications to control pain or nausea. You will be encouraged to do deep breathing exercises to keep your lungs healthy, and to move into a chair.

We use several means to prevent clots forming in the legs and lungs. Early mobilisation is important, and your nurse and the physio will help you with this over your stay. You will also have TED stockings on and a FlowTron machine (inflatable stockings). You may be given injections of heparin, which is a blood thinner.

You can start to suck on some ice or to take sips of water on your first night.

Day one

Ward

If not already on the ward, you will move there on day one. You will be encouraged to slowly sip your way through 1 litre of water over the day. When you are able to manage this amount of water, your IV can be removed. Do not try to hurry this: have a cup or water bottle to hand and sip slowly and steadily. If you appear to be managing fluids well, your diet will progress to bariatric free fluids (see nutrition information section).

Usually your PCA will be stopped at this time too, and oral medication used for pain relief if required. Your catheter will be removed when you can move independently to the toilet. If you have a drain, this will be cut short with a bag fixed over it or removed to allow you more freedom to move. You will continue with measures to prevent blood clots (as described above). Your surgeon and anaesthetist will see you, as will your dietitian and physiotherapist.

It is important that you get up and move around as soon as you are able, so you will be encouraged to walk around the ward. This allows your lungs

to fully expand and the circulation to your legs to return to normal. Moving gently and regularly around your room and the ward is extremely important for a rapid and uncomplicated recovery.

Day two

Walking will continue to be encouraged. You will continue to be given heparin injections and wear the TED stockings all the time. The FlowTron device will be used when you are not moving around.

All your medications should now be taken orally, perhaps crushed or in liquid form. You should be managing bariatric free fluids by this stage, and you can proceed to a bariatric pureed diet as you are able. (Advice on bariatric pureed diet is provided in the nutrition information section.)

Many patients, if they are progressing well, will be able to go home on this day. If you have a drain, it will usually be removed before discharge.

Day three

If you did not leave hospital the previous day, preparations will take place for this today. Your diet should be a bariatric pureed diet (see nutrition information section). Walking as much as possible and deep breathing exercises will be encouraged.

Advice on discharge

You will be reminded to eat three meals a day. This must be by the clock, as often you will not feel any hunger. Remember to take small bites and chew, chew, chew. When you feel full, STOP eating.

In the early days after surgery, you will need to re-learn what your new stomach can manage. Almost every patient will at some stage inadvertently swallow a mouthful of food that is too large or too solid to pass through easily. This usually results in an uncomfortable, dull pain behind the breast bone. The best way to manage this circumstance is to simply wait and stay upright. Gravity will eventually help the food to pass. Sometimes the food will be regurgitated. Do not try to push or flush the food down with more food or fluid. This will only worsen the situation. Do not panic: it is almost impossible to do harm to the operation by swallowing something that does not go down easily.

You will be given a prescription for medications to be taken after discharge.

These include:

- analgesia for pain relief, usually for up to two weeks
- anti emetic to help with nausea usually for up to two weeks
- anti acid to reduce stomach acid usually for six weeks
- occasionally heparin for prevention of pulmonary embolism

Occasionally you may be prescribed a laxative, such as lactulose, for help with bowel movements.

You should carry on taking your normal medications that you were on before surgery, unless specifically told to stop. Some medications will need to be monitored closely after surgery and sometimes the dose should be adjusted. This is particularly important with medications for diabetes, blood pressure, depression or epilepsy. Your GP can help you with this. Some tablets taken in the first six weeks after your operation may need to be crushed.

We advise you continue wearing your TED stockings for 10 days post operation. This is to reduce the chance of blood clots that can form in the legs and can go to the lungs.

If you have successfully managed to stop smoking prior to your surgery, then you should maintain this postoperatively. Smoking can cause ulceration and narrowing at the surgical joins that have been created. It is important that you refrain from alcohol post surgery until you have got used to your new stomach, and then drink only in moderation as it will have a much more potent effect.

Driving should be avoided until you are completely comfortable and able to move freely. For most people this is in one to two weeks.

Follow-up appointments

One week	You will be contacted by phone around one week after your operation to check on your progress. Use this call to ask any questions you may have.
Two weeks	You will be asked to make an appointment to see your surgeon in two to four weeks after surgery. Make sure you keep this appointment.
Four weeks	Please make an appointment to see your dietitian
Six weeks	Appointment to see your surgeon. Some patients may find it helpful to see a psychologist at this time.
Three months	Appointment to see surgeon (or nurse practitioner) and dietitian
Six months	Appointment to see surgeon (or nurse practitioner) and dietitian
Two years	Appointment to see surgeon (or nurse practitioner) Many patients will be able to be discharged after two years. Your GP will be asked to arrange blood tests to check your vitamin levels on an annual basis.
Every year	Appointment to see surgeon (or nurse practitioner) if required.

Often you will be asked to obtain specific blood tests in the week before an appointment. Other medications, such as calcium, vitamin D and iron, may be prescribed after surgery at these follow-up visits.

Potential complications

All surgery has risks, and as any stomach operation for obesity is considered major surgery, it has significant risks associated with it.

People have died from having operations for morbid obesity. It happens rarely, but the risk can never be removed completely. If you are older, or you already have certain health problems related to your obesity, your risk may rise. Heart attacks after the operation, clots that form in the leg veins which then pass to the lungs, or leakage of the stomach joins can cause death in morbidly obese people after surgery. This risk is between 1 in 500 and 1 in 100. Thorough precautions are taken during surgery and your hospital stay to minimise these risks, but they cannot be eradicated altogether.

Other problems that can occur after gastric bypass surgery include pneumonia, wound infections, and ulceration or narrowing at the joins made between the stomach and the bowel. Some of these are relatively minor and do not have a long-term effect on your recovery. Other complications may be more significant and require a longer hospital stay and recovery period. Antibiotics at time of surgery, deep breathing exercises and early mobilisation after surgery are some of the measures taken to reduce the risks of these complications.

After gastric bypass surgery, patients need to take iron, calcium, and vitamin supplements lifelong to prevent complications associated with malnutrition. Sometimes these are best given as an injection.

Complications that can occur with gastric bypass surgery are listed below. This list is long, and although most patients have no complications, or minor complications only, please take note and ask your surgeon and team any questions that will help you to understand the risks associated with obesity surgery.

During surgery

- A larger incision may need to be made because of technical difficulty with keyhole approach
- An injury to the bowel or other organs from insertion of keyhole instruments
- Bleeding from blood vessels or injured organs
- Technical difficulty leading to change in operation strategy
- Complications related to placement of intravenous and arterial lines This includes bleeding, nerve injury, or pneumothorax (collapsed lung)
- Nerve or muscle injury, usually temporary, related to positioning during surgery
- Allergic reactions to medication, anaesthetic agents or prosthetic devices

After surgery

- Death. Rate between 1 in 500 to 1 in 100
- Leak from staple lines or joins. Rate between 1 to 2 in 100. May require further surgery or lead to sepsis
- Bleeding. Rate around 1 in 100. May require transfusion or further surgery
- Infection at keyhole incisions, or deep within the abdomen. A serious infection is often called sepsis. This is uncommon but can lead to further surgery, a longer hospital stay organ failure or death
- Deep vein thrombosis (blood clot in the leg veins). These can occasionally travel to the lungs (pulmonary embolus). Rate around 1 in 100
- Pneumonia or other breathing problems. The worst of these is respiratory failure, which is the inability to breathe adequately after surgery, and may require support of breathing in an intensive care ward
- Heart attack or abnormal heart rhythm
- Stroke
- Pancreatitis
- Urinary tract infection or injury to the urinary tract from catheter insertion
- Colitis (inflammation of the colon), usually due to antibiotics used in surgery
- Constipation

In the longer term

- Troublesome symptoms may include abdominal pain, change in bowel pattern, tiredness, bloating, nausea or vomiting
- "Dumping syndrome". This is an unpleasant feeling after eating sugary foods. Usual symptoms are anxiety, tremor and sweatiness
- Narrowing or ulcers where the stomach and small bowel join. May require stretching with a balloon or, rarely, surgery
- Anaemia. Usually because of lack of adequate vitamin intake. Prevented by regular blood tests and supplementation of vitamins, especially B12
- Excessive or inadequate weight loss. Rarely requires further surgery
- Dehydration or imbalance of body salts, usually from inadequate fluid intake, infrequently requires admission to hospital
- Inflammation of the remaining stomach or oesophagus
- Gall bladder disease, usually from gallstones that form during rapid weight loss. Can require surgical removal of the gallbladder
- Hernias at the site of incisions
- Internal hernias. These can occur inside the abdomen because of rearrangement of the bowel or scarring from surgery. This may block the bowel, and is an ongoing risk that occurs in 1 per cent of patients per year and then requires urgent surgery to correct
- Psychological problems can include depression, adjustment disorder, relationship difficulties and rarely suicide
- Liver disease or failure. Can occur if there is underlying liver damage that is worsened by weight loss or surgery
- Thinning of the bones (osteoporosis) can lead to fractures especially in women. Prevention requires lifelong dietary calcium supplements
- Hair loss from malnutrition. This usually resolves within a few months of surgery and is usually only noticeable to the patient

Nutritional information

After gastric bypass surgery you will need to make changes to your eating patterns. The diet after surgery progresses from a liquid diet to a pureed diet to a soft diet and then a modified diet. This progression is designed to allow your body to heal. It is very important that you follow the diet's progression to maximise healing and minimise risk of complications.

Before surgery

For two to six weeks before your surgery you are required to follow a low calorie diet. The programme followed is Optifast or Dr Mcleods. Your dietitian and surgeon will advise on the amount of time you will need to follow this diet.

Why is it necessary to lose weight pre-surgery?

- To lower body fat levels for better access for the surgeon i.e. safer surgery
- To reduce the size of your liver which would otherwise be in the way
- Greater ability to adapt to post-operative dietary requirements
- Improved surgery outcomes
- Reduced operating time and post operative risks
- Improved physical function and mobility post-surgery

What is Optifast?

- Very low calorie diet (VLCD) that is < 800kcal per day
- Nutritionally complete. (All the protein, vitamins and minerals that you need)
- Involves three "meals" per day, which can be milkshakes soups or bars

How does it work?

- Each VLCD meal is taken at usual meal times and provides all essential nutrients
- You need to drink at least 2 litres of the following fluids per day:
    - Water
    - Diet soft drink
    - Black tea or herbal tea without milk or sugar
- A maximum of 2 cups of low starch vegetables are allowed per day
- Replacement fibre – 1 tsp of psyllium or equivalent per sachet of Optifast eg Metamucil or Benefibre
- Please see attached "foods allowed" lists below for more information

If you are having trouble with this diet or having symptoms such as nausea, please call your dietitian, surgeon or your GP.

Additional allowances

Allowed				Avoid
fruit	one of – 200g strawberries, 1 lychee, 1 apricot, 100g cooked rhubarb, 1 slice of pineapple, 2 passion fruit, 100g grapes, 1 lime, 1 apple, 50g cherries, 1 mango, 1 medium orange, 1 peach, 1 small pear, 120g pear in natural juice, 120g plums, 5 prunes			all other fruit including banana
low starch and green vegetables (2 cups per day)	alfalfa sprouts asparagus beans bok choy broccoli brussel sprouts celery cabbage capsicum carrots	cauliflower cucumber eggplant garlic lettuce leeks mung beans mushrooms onions	radish shallots silver beet snow peas spinach squash tomato watercress zucchini	corn green peas legume lentils potato pumpkin sweet potato
soups	stock cubes	vegetable soups (using allowed vegetables)	miso soup	all others
sauces and condiments	lemon juice vinegar worcestershire sauce	soy sauce (in moderation) chilli		
herbs and spices	all herbs and spices		mustard tomato paste	
miscellaneous	artificial sweeteners	unsweetened lollies/gum	diet jelly essence – banana, mint, strawberry	
calorie free fluids (at least 2 litres extra per day)	water tea diet soft drink	diet cordial mineral water		fruit juice alcohol

After surgery

Day zero (evening of surgery)

- Ice to suck, sips of water

Day one

- 1 litre of water (slowly, as tolerated)

Day two

- Bariatric free fluid diet, progress to bariatric pureed diet as tolerated (very small amounts of puree/mashed food only, half a teacup at a time at most)

Day three to week three

- Progress to bariatric pureed diet as you are able

Week four onwards

- Small meals of soft food that is high in protein and low in fat and sugar

General information

During all of the above stages and when you have recovered fully from surgery it is crucial that you:

- AVOID liquids with meals (do not drink 30 mins pre and post eating)
- Drink between meals and aim for six to eight glasses of fluid per day
- Follow a general healthy diet, low in fat and sugar

Constipation

Because you are eating less, constipation may be a problem. Keeping up with your fluid intake and occasionally using a gentle laxative will help with this. Most patients will not feel the urge to have bowel movement for several days after surgery. This is because you will be taking very little food and is entirely normal.

Dumping syndrome

- This can make you feel awful, but is not dangerous
- It occurs due to the "dumping" of highly concentrated carbohydrate (sugar) into your bowel
- Symptoms include; dizziness, abdominal pain, flushes, diarrhea
- It can occur straight after eating or one to three hours after eating
- AVOID all high sugar containing food and fluid e.g. lollies, ice cream, juice/cordial, soft drinks

Handy hints

- If you try to eat too much too quickly vomiting or regurgitation may occur
- Do not consume liquid calories such as fruit juice, soft drinks, cordial, or milkshakes
- Eat slowly, chew all food well and take time with your meals.
- Ensure you have an adequate protein intake. Protein should be eaten before carbohydrates (starchy) foods
- As soon as you are home after your surgery start taking a multivitamin daily such as Centrum

Puree diet

- To be followed until three weeks after your surgery.
- Eating too much can result in complications before healing has occurred

Important points

- Eat slowly
- AVOID very hot or very cold foods
- DO NOT drink within 30 minutes of meal times
- It is normal to be managing only very small amounts during this phase. Eating with a teaspoon from a small plate is a good idea

Foods allowed	Foods to avoid
high protein, low fat pureed foods: low fat yoghurt, milk, cottage cheese, porridge, mashed weetbix, creamota, scrambled or poached eggs, pureed meat/chicken/fish, pureed/ mashed vegetables/potato, smooth soups, pureed fruit	raw fruit raw vegetables breads rice pasta nuts seeds skins solid food

Foods allowed	Foods to avoid
low fat products	butter margarine oil avocado cheese (high fat varieties) ice cream cream
soups	stock cubes
low sugar products low calorie drinks water herbal teas	cordial, soft drinks jelly

Sample meal plan (initially only 1-2 tablespoons of food at a time):

Breakfast Creamota or Weetbix
low fat milk or
1 tablespoon low fat yoghurt 1 tablespoon pureed fruit

Lunch smooth vegetable/pumpkin soup
scrambled egg

Dinner puree chicken and low fat gravy
or mashed fish
puree potato/pumpkin/vegetables

Snacks (x3/day) puree fruit, mashed banana, low fat yoghurt and milk

Soft diet

- After your puree diet move to a soft diet for two weeks
  Then gradually move to more solid foods
- Aim to have only 3 meals per day
- You should be using a bread and butter size plate

Food group	Foods allowed	Foods to avoid
meat, chicken and fish	tender chicken, fish and meat in bite sized pieces or minced. shaved ham, turkey or chicken tinned salmon and tuna in spring water	hard or stringy meat fat, chicken skin or gristle. fried meats

Food group	Foods allowed	Foods to avoid
milk and milk products	low fat milk, cottage/ricotta cheese, low fat yoghurt.	ice cream, high fat cheeses, cram and full fat milk
fruit	soft fruits: peeled pears, apples, stone fruit, melon	pips, skins, pith
vegetables	cooked vegetables: mashed, stir fried, grilled or boiled introduce salads slowly	tough or raw vegetables: beans, corn, celery, broccoli stalks etc.
breads and cereals	low fat crackers e.g. cruskits, rice, pasta, noodles, porridge, weetbix, bran flakes.	doughy bread, muesli, high fat cereals.
drinks	diluted juice, diet soft drinks and cordials, herbal teas, coffee or tea with low fat milk	soft drinks, energy drinks, milkshakes, full fat milk drinks, juice
miscellaneous	artificial sweetener, herbs and spices, marmite, stock, low fat hummus, minimal oil when cooking.	sugar, chocolate, sweets, syrups, jams, butter, cooking oils, potato chips, high fat crackers, creamy sauces.

Handy hints

- Introduce more solid foods after a few weeks e.g. salads, red meat
- AVOID bread and instead have low fat crackers e.g. rice crackers, cruskits
    - look for <5 g fat per 100g.
- Small amounts of toasted vogels bread can be eaten. AVOID soft white breads
- Continue to chew food well and take your time eating
- AVOID fluids with meals
- Do not over eat as this will make you uncomfortable and may cause vomiting
- Continue to eat regular meals and select healthy food options to optimise your continued weight loss
- You will need to make sure that your meals are nutritious and include all the nutrients your body needs
- Choose foods that you enjoy and take time to savour their flavours

Food to include at each meal:

Protein

You need to include low fat protein at each meal to ensure you maintain your muscle stores and loose fat stores e.g:

- lean red meat two to three times per week e.g. lean mince, eye fillet
- fish and chicken (no skin)
- low fat dairy products e.g. trim milk, low fat yoghurt and cottage cheese
- tofu, beans and lentils e.g. baked beans, hummus, kidney beans

Protein is very important; you should start each meal with it. Hair loss, though temporary, can be a problem if there is inadequate protein in your diet. Using protein powders (muscle building formulas) in fruit smoothies and purees can be a good way to increase your protein intake. Always include some protein with each meal as it will help to keep you feeling satisfied for longer.

Fruit and vegetables

- fresh, frozen or canned vegetables. AVOID hard seeds and pips
- fruit that has been peeled and membranes removed

Carbohydrate/starchy food

- eat two to four serves per day
- 1 serve = 1/2 cup pasta/cereal, 1 slice ofbread, 1 egg-sized potato
- potato, bread, rice, pasta and cereals should be eaten in very small amounts only
- if you are having bread use wholegrain varieties e.g. Vogels as this will fill you up more
- protein foods should take priority

Fluid

- six to eight glasses of fluid per day (do not count coffee, alcohol or caffeine drinks)
- AVOID full strength juice, cordials, high calorie fizzy drinks, milkshakes etc

Fats

- use very minimal margarine or preferably none
- vegetables can be stir fried with a teaspoon of olive oil
- generally avoid oil for cooking. Grill, bake, boil, stir fry or dry roast
- AVOID fatty meats e.g. sausages, luncheon sausage, salami

Handy hints

- order entree-size meals when dining out
- aim to exercise 45- to 50mins five days per week. This should be continuous cardio type of exercise rather than weights, of enough intensity to "raise a sweat"
    - Brisk walk, cycle, cross-trainer, aqua jogging or swimming. Weight-bearing exercise is best for weight loss maintenance

Vitamin supplements

You will need to take vitamins and minerals following surgery to compensate for the fact that bypassing part of the intestine prevents your body from absorbing not only calories, thus resulting in the desired weight loss, but also some of the vitamins and minerals that are vital for your body to function normally.

The symptoms of vitamin and mineral deficiency can rarely appear early after surgery, can be quite pronounced, and can include bone pain, hallucinations and weakness. If symptoms appear at this early stage then the problem can often be resolved with treatment. More commonly, however, symptoms do not begin to appear until some time after surgery, even several years.

In many cases, the administration of such vitamins and minerals as B12, thiamine and copper can certainly help to reduce or eliminate symptoms, but in a significant number of patients some of the symptoms can be permanent.

Prevention of these problems is far better than cure. This is easily done by regular, daily use of a multivitamin, as well as calcium supplementation (usually starting six months after surgery), and a regular injection of vitamin B12 (to be given by your GP). This needs to continue lifelong.

Gastric bypass surgery is a major surgical procedure that requires you to not only make significant changes to your lifestyle in the weeks and months following surgery, but for the remainder of your life. One of these lifestyle changes is the need to take vitamin and mineral supplements. Failure to do this can have significant consequences.

Healthy lifestyle choices

There are several long-term habits that you should adopt to get the most out of your surgery. The first post-operative year is a critical time that must be dedicated to changing old behaviours and forming new, lifelong habits. Lack of exercise, poorly balanced meals, constant grazing or snacking, and drinking alcohol or carbonated drinks are frequent causes of not achieving or maintaining weight loss.

To maintain a healthy weight and to prevent weight gain, you must develop and keep healthy eating habits. You will need to be aware of the volume of food that you can tolerate at one time and make healthy food choices to ensure maximum nutrition in minimum volume. A remarkable effect of bariatric surgery is the progressive change in attitudes towards eating. Patients begin to eat to live; they no longer live to eat.

Obesity cripples the body. As weight is lost, the burden on the bones, joints and vascular system is decreased. Given proper nutrition and physical motion the body will rebuild its broken framework. The most effective way to heal the body is to exercise. People who successfully maintain their weight exercise daily.

Exercise and the support of others are extremely important to help you lose weight and maintain that loss following gastric sleeve surgery. Exercise improves your metabolism.

- Take walks at a comfortable pace almost immediately after surgery and progress as you can tolerate
- Resume higher impact exercise six weeks after the operation, as a general rule
- Attend a support group or exercise with a friend to boost your confidence and help you stay motivated

A physiotherapist will see you whilst you are in hospital. They can give you initial advice regarding exercise. Your GP can give you information about groups or programmes in your area. There is a lot of support around you; ultimately it is up to you to make use of it.

10-point plan

1. Do not drink liquids within 30 minutes of meals
2. Eat three small, protein-focussed meals per day at regular times, sitting at a table.
3. Stop eating when feeling full or if feeling discomfort.
4. Always cut food into small pieces, eat slowly and chew food very well savouring your food. Use a teaspoon.
5. Concentrate on eating protein-rich foods such as fish and seafood, cheese, eggs and poultry. Eat protein foods first before any other food.
6. Do not snack between meals.
7. Avoid very sweet food, (lollies, chocolate, and high-sugar drinks), or very rich or highly processed food to prevent the unpleasant effects of dumping syndrome.
8. Sip liquids slowly, drinking at least half a cup every hour between meals to avoid dehydration.
9. Minimise alcohol intake as it is high in calories, may cause an ulcer and the effects may be felt much more quickly. It also tends to lead to eating foods that are less healthy.
10. Take a multivitamin iron and calcium supplement daily, and have regular B12 supplements.