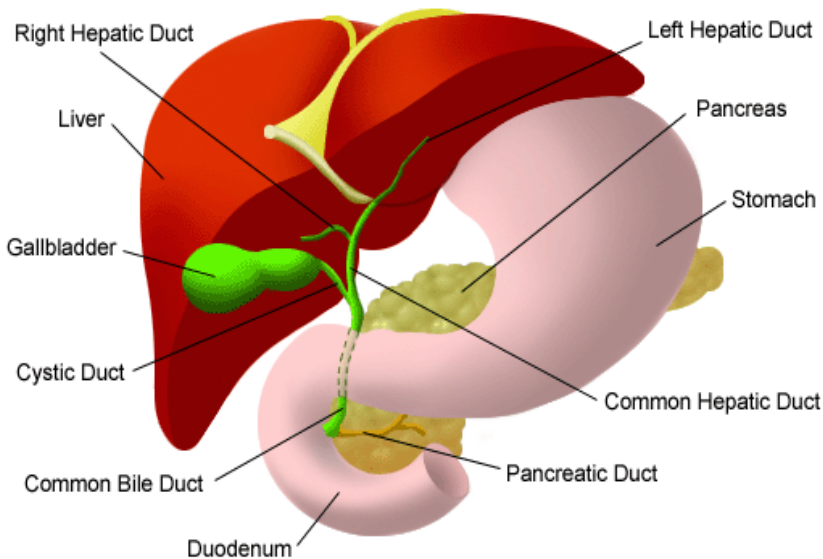


Liver Reduction Plan



Excess weight can cause the liver to become fatty, enlarged and fragile. This can cause complications such as bleeding from the liver. If the liver is too large, it makes it difficult for the surgeon to see the stomach and this can lead to conversion to an open procedure or in some cases surgery is abandoned. Following a liver reduction plan gives the surgeon better accessibility to the stomach and improved visibility all of which reduce the risk of complications.

A liver reduction plan is adequate in protein but low in calories, fat, sugar and complex carbohydrates (bread, cereals, pasta, rice and potato). A reduction in sugar and carbohydrates decreases the amount of glycogen (a sugar) that is stored in the liver. Since each ounce of glycogen also stores 3-4 ounces of water the liver loses water and shrinks in size. Much of your weight loss is fluid loss rather than true weight loss and therefore you will notice an increase in urination, this is a good sign and shows that the liver reduction plan is working.

The length of time on the liver reduction plan can be anywhere from 1 week - 6 weeks. Speak with your bariatric team to ascertain how long to follow the plan. There are several different forms of liver reduction plan. Your bariatric provider will give you specific guidance on which one to follow. Some centres use a strict milk diet, others meal replacement drinks and some use a modified eating plans. Regardless of which plan you follow they will give similar results.

If you are advised to follow a modified eating plan then it is important to ensure regular meals and high protein foods to curb your hunger. Avoid all high sugar foods including biscuits, cakes, chocolate, full sugar drinks and full sugar yoghurts and smoothies. A good way to reduce carbohydrate content is to $\frac{1}{2}$ your usual intake. This means that your liver is receiving $\frac{1}{2}$ its usual intake of glycogen. For example if you usually have 2 slices of toast for breakfast, reduce to 1 and replace your usual second slice of toast with a scrambled egg. If you usually have rice or pasta for an evening meal, $\frac{1}{2}$ the intake of carbohydrates and add extra vegetables or salad. As long as your usual intake of fat, sugar and carbohydrates reduces it will have a beneficial effect on the size of your liver.

Example of Liver Reduction plan	
Breakfast	<p>Porridge 27g sachet (No syrup or honey) Wholemeal / Brown Toast x1 with scrambled egg Weetabix x1 with semi skimmed milk Cereal (4 tbsp) with semi skimmed milk Mushroom omelette Toast with 1 boiled egg 3 crisp breads with low fat cream cheese or cottage cheese</p>
Lunch	<p>Soup with 1 slice brown bread Ham or mushroom omelette (2 eggs) with salad Jacket potato with cottage cheese (100g) or tuna (1 small tin) or Ham Bagel (x1) with soft low fat cheese and salad Sardines (90g) in tomato with toast x1 1 small pita bread with 3 slices of chicken or ham and salad Scrambled egg with 1 slice toast 1 small tortilla with 3 slices of ham, chicken or beef and Salad</p>
Evening Meal	<p>3 slices of chicken breast with 2 tbsp cooked boiled rice or couscous Bolognese sauce (1 cup) with 4 tbsp minced meat and 2 cooked tbsp pasta 1 small chicken breast with 2 boiled potato or 2 tbsp mash with vegetables Bolognese sauce (200g) with 5 tbsp of quorn mince 1 small fillet of salmon, cod, haddock with vegetables or salad Chili with 2 tbsp cooked boiled rice and vegetables 1 small jacket potato with ½ tin tuna and salad Mushroom and onion omelette made with 2 eggs Scrambled egg x2 with 1 slice toast 1 small tin of beans with 1 slice of bread</p>
Salad and Vegetables	<p>One portion of salad or vegetables should be the size of a cereal bowl.</p> <p>Suitable vegetables or salad include mushrooms, peppers, onions, celery, spinach, courgette, broccoli, aubergine, green salad, sprouts, lettuce, cucumber, broccoli and cauliflower, leek</p>
Snacks (2/day)	<p>Low fat / low sugar Yoghurt Apple or Pear or banana or kiwi fruit, melon or orange Sugar Free jelly (Unlimited)</p>
Fluids	<p>Water /No added sugar diluted drink Tea or coffee</p>

Initial Post Surgery modified consistency

Procedure	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Balloon	Soft	Solid	-	-	-	-
Band	Liquid	Puree	Soft	Solid	Solid	Solid
Sleeve/ Plic	Liquid	Liquid	Puree	Puree	Soft	Soft
Bypass	Liquid	Liquid	Puree	Puree	Soft	Soft

Initially after surgery there is a need to restrict the consistency of food that you consume. This is due to the presence of swelling from your surgery. Following a sleeve or gastric bypass you will also have internal stitches that need time to heal. Having foods that are too solid too quickly can be exceptionally dangerous and must be avoided. As the weeks progress there is more room in your new stomach and you can gradually increase the consistency of food back to a normal consistency.

It is recommended that you start on a liquid consistency, progressing onto a puree consistency, then soft and eventually back to a solid consistency. There is currently no national consensus with regards to how long you should remain on each individual consistency. Always check with your surgeon, specialist nurse or dietician who should provide you with guidance on suitable foods to consume.

It can take several months to fully progress back onto a normal food consistency. Foods such as bread, chicken, tough meats, skins of fruit and vegetables can sometimes be difficult to tolerate longer term. Everyone is different. You are the best person to judge if you can tolerate a specific food. For example if you feel discomfort, experience nausea or vomiting or abdominal pain it's your body telling you, that you are not ready for that food. Hold off for a few days and retry at a later date.

Description of Modified Consistency	
Liquid	Should flow freely. Should be able to move through a straw.
PUREE	Should be a thick, smooth, uniform consistency. A food that has been pureed and sieved to remove particles. Can be eaten with a fork or spoon and will hold its own shape on a plate. No chewing is required.
Soft	Food that is moist, with some variation in texture. Has not been pureed or sieved. Foods easily mashed and broken into pieces with a fork.
Normal	Any foods

Liquid Consistency

Liquid foods are easy for your stomach to digest and it gives the digestive system a chance to heal. The volume of food that you can consume is significantly reduced and you must therefore remember to take your time and sip fluids slowly. If you drink too fast there is an increased risk of nausea and vomiting. Initially you may be apprehensive, this is completely normal. As you become more accustomed to the volume of liquids that you can tolerate you will feel much better.

It is important to keep yourself well hydrated. One of the most common complaints in the first week after surgery is light headedness, headache and nausea. All of these symptoms can be related to dehydration. It is advisable to aim for at least 2500ml(8-10 cups) of fluid per day. A good sign is to check the colour of your urine.

A liquidizer is a brilliant way to ensure your food is the correct consistency. A thick soup (Homemade or bought) could be blended to a thin soup by adding some additional water. You could make a homemade smoothie and add additional milk to thin the texture. Buy a low fat greek yoghurt and add your own fruit using a liquidiser to gain the right consistency

Some manufactured soups, yogurts and liquid slimming aids may appear to be healthy but can often contain high amounts of fat or sugar. Always check the nutritional label. Aim for <8g sugar / 100g and < 5g total fat / 100g. Following a gastric bypass high concentrations of sugar and fat will increase the risk of diarrhoea, dumping syndrome and fatty stools.

Fresh fruit juice is often high in natural sugars and subsequently it is recommended to dilute 50: 50 with water to dilute the concentration. Whilst ice cream is liquid it is high calorie and should therefore be avoided.

Your body will tell you if it is not ready for this consistency. If you begin to feel nauseous, vomit or have increased pain it suggests that you are not quite ready.

Liquid Consistency	Portion size
Skimmed Milk	200ml (1cup)
Semi skimmed milk	200ml (1cup)
Low fat & low sugar yoghurt (no bits / no lumps) Muller light, Activia fat free, alpro soya smooth	1
Smooth thin soup (no bits / no lumps/ no cream)	200ml (1 cup)
Sugar free squash(reduced sugar)	200ml (1 cup)
Fromage frais / Mouse.	1
Home made smoothie made with milk	200ml (1cup)
Tea / Coffee (Weak)	200ml (1cup)
Sugar free jelly	200ml (1cup)
Oxo / Bovril / Marmite	200ml (1 cup)
Orange juice / apple juice (Dilute 50:50)	200ml (1cup)
Home made soup	200ml (1 cup)
Vegetable juice	200 ml (1 cup)
Water	200ml (1 cup)
Home made Latte	200ml(1cup)
Pro biotic drink	125ml carton
Peppermint tea	200ml

Puree Consistency

Food should be of a baby food /apple sauce consistency. It should be smooth in texture and should not need chewing. At this stage your calorie intake will be less than 500kcal/day. You should aim for 5-6 small puree meals a day. Your portion size for each meal should be around 3 tablespoons.

Your new stomach is sitting higher up and therefore you may feel tightness in your chest when you eat. Don't be surprised at how quickly you feel full, this is normal and to be expected.

There is not enough room in your new stomach to hold a small meal and a drink at the same time. To avoid feeling too full, avoid drinking fluid at the same time as you eat.

A liquidiser is still useful at this stage to ensure your food is the correct consistency. Extra liquids such as gravy and low fat sauces are a good means of thinning the texture of your food.

Some people buy baby food. These are designed to meet the nutritional needs of a baby and are subsequently of little nutritional value to an adult. Every day foods pureed to the correct consistency will be more advantageous.

Any food can be liquidised. You may wish to puree a meal. For instance shepherd's pie, pureed fish and potato or spaghetti bolognese. These foods liquidise rather well and are very nourishing.

Continue to check food labels ensuring <8g sugar / 100g and <5g total fat. This will help maximise your weight loss whilst avoiding any unnecessary side effects such as diarrhoea or dumping syndrome.

If you commence puree foods and experience any of the following symptoms (nausea or vomiting, abdominal discomfort), take a step back to a liquid consistency. Allow a couple of days for your stomach to settle and retry.

Puree Consistency (3 tbsp/meal)

1 tbsp puree fish (tuna, salmon, mackerel, pilchards, sardines) with 2 tbsp puree potato.

3 tbsp puree fish pie

1 cup of pureed leek and potato or lentil soup

3 tbsp puree shepherd's pie.

3 tbsp puree potato with 1 tbsp soft cheese (laughing cow light, Philadelphia light).

3 tbsp puree corn beef hash.

2 tbsp of Puree vegetables (carrots, swede, turnip, parsnips) with 1tbsp puree potato and gravy.

1 tbsp puree spaghetti hoops with 2 tbsp potato

2 tbsp Puree fruit without skins (banana, apple, peaches, strawberries)

3 tbsp puree lasagne or spaghetti bolognese.

3 tbsp puree tinned fruit in own juice

3 tbsp puree low fat low sugar rice pudding

3 tbsp Yam / plantin or sweet potato

3 tbsp porridge

½ weetabix

3 tbsp ready brek

200ml Soup (Smooth soup but can be thicker than liquid stage)

3 tbsp Low sugar breakfast cereal with 100ml semi skimmed milk/skimmed milk

	Example Of Puree Meal Plan
Breakfast	3 tbsp porridge
Mid Morning	1 Low fat low sugar yoghurt
Lunch	1 tbsp Puree tuna with 2 tbsp puree potato
Mid Afternoon	Glass of semi skimmed milk
Evening Meal	3 tbsp corn beef hash
Super	Glass of semi skimmed milk

Soft Consistency

Once you feel comfortable with a puree consistency you should progress onto soft foods. Food should moist and tender with some variation in texture. By this stage a liquidiser should not be required. Your portion size should be around 4-5 tablespoons. Your calorie intake is likely to be in the region of 600-700kcal/day maximum. You should aim for 4-6 small meals/day.

Chewing your food well is essential. This will ensure that food does not get stuck. Take your time when eating and always remember to stop as soon as you start to feel full. Your stomach can only hold a small quantity of food if you eat more than this you will be sick.

It is not recommended that you drink at the same time as you eat. Drinking before your meal fills your stomach with liquid leaving little room for food. Drinking fluid after a meal speeds up the rate at which food leaves your stomach which can increase portion size and reduce the feeling of fullness. Aim to drink your fluids in between meals, either ½ hour before or ½ hour after you eat.

Prior to your surgery your stomach has a large holding capacity to hold fluid. After surgery this is not the case. Dehydration is one of the most common reasons for re admission to hospital. . It is recommended that you aim for at least 2500ml/day.

To maximize your weight loss food choices should be as healthy as possible. You should aim for <8g sugar / 100g and 5g total fat / 100g, when reading food labels. This will prevent stomach irritation and dumping syndrome (gastric bypass only).

If you commence soft foods and experience any of the following symptoms (nausea or vomiting, abdominal discomfort), take a step back to a puree consistency. Allow a couple of days for your stomach to settle and retry.

Soft Consistency (4-5 tbsp/meal)

Fish pie

Mashed potato, carrot and turnip with gravy

Tender fish (tuna, salmon, mackerel, sardines) with mashed potato

4 tbsp Shepherd's pie / cottage pie

Small Jacket potato (no skin) with Philadelphia light

Small Jacket potato (no skin) with 2 tbsp cottage cheese

Small Jacket potato (no skin) with 2 tbsp tuna fish

4 tbsp cous-cous

4 tbsp casserole

Scrambled egg made with 1 egg

Rice pudding

Omelette made with 1 egg

3 tbsp Cooked boiled rice

3 tbsp cooked pasta with 2tbsp mince meat and bolognaise sauce

1 piece of soft fruit without skin (banana, apple, pear).

2 tbsp Spaghetti hoops with 2 tbsp potato

2 tbsp quorn / tofu with 2 tbsp pasta with low fat bolognaise sauce

Banana

Peeled apple or pear without skin

Soft peeled vegetables without skin

	Example Of Soft Meal Plan
Breakfast	1 weetabix with semi skimmed milk
Mid Morning	Banana
Lunch	Omelette
Mid Afternoon	Low fat rice pudding
Evening Meal	4 tbsp shepherd's pie
Super	Glass of semi skimmed milk

Solid consistency

Surgery is a tool. You still need to make the right food choices to gain the most from your procedure. You should aim for regular meals, adequate protein, a small quantity of complex carbohydrates, low fat and low sugar food choices, fibre as tolerated and alcohol in moderation.

Lifestyle changes and exercise are also important and a combination of all three will give you the best results. Healthy eating is not just about a healthy body weight. It should also incorporate a variety of food and food groups. It should be flexible to fit in with your lifestyle. Any plan must be sustainable and maintainable for the rest of your life.

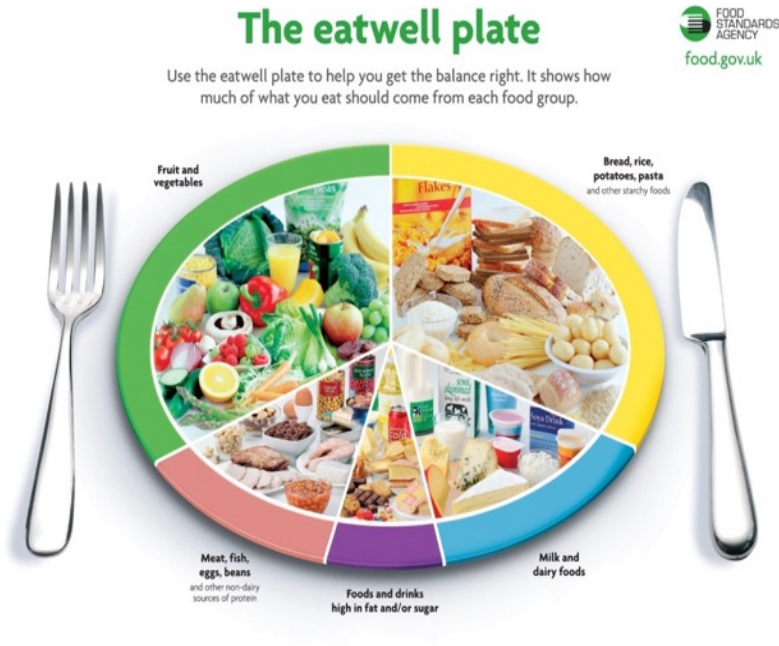
Once you can tolerate a solid food consistency you should aim for a variety of healthy food choices and food groups to help reduce the risk of nutritional deficiencies.

Don't panic if you initially struggle to manage some foods this is normal and usually eases with time. Some days you can tolerate food well. Some days the same food can make you feel sick. To improve food toleration chew food well (chew at least 30 times) and take your time when eating. This is especially important when having meats, bread or high fibre foods such as fruit and vegetables. If you experience nausea, vomiting or discomfort, revert back to puree/soft foods to allow the stomach to settle and retry at a later date.

Initially after surgery liquid, puree and soft foods are good choices. Longer term aim for solid food. If food is too moist it will slip through your band, sleeve or new stomach pouch resulting in consumption of more food. A solid consistency will leave you feeling fuller for longer.

If you are stressed or anxious this can irritate the stomach meaning it can be more difficult to tolerate food. Smoking also increases the risk of stomach irritation which can further exacerbate poor food toleration.

Longer term Healthy Eating Recommendations after weight loss surgery



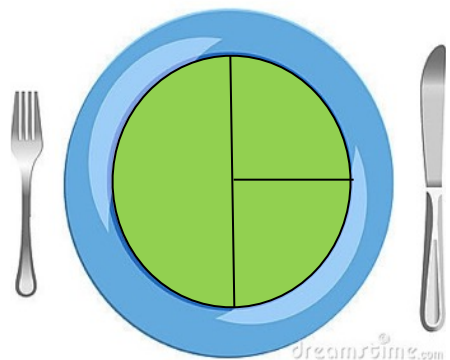
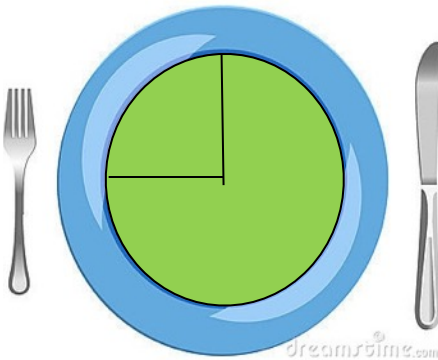
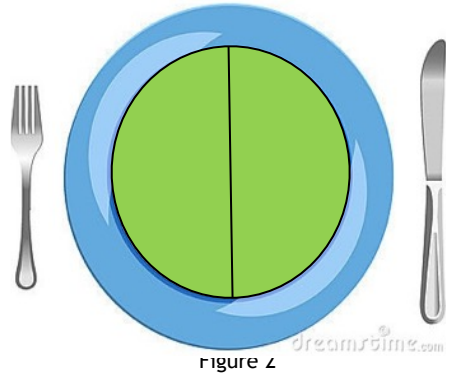
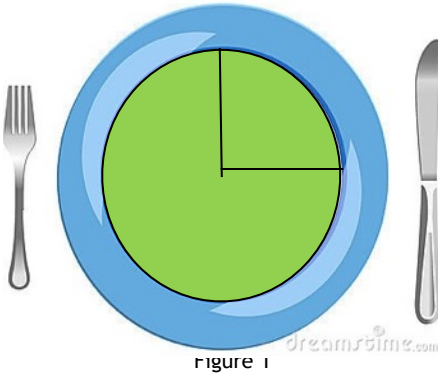
Regular Meals

The body needs fuel to function, without food it cannot work to its full potential. Regular meals provide a steady release of energy across the whole day. Following surgery you must eat regularly to ensure a steady source of fuel as unlike before surgery you cannot consume a large amount of fuel in one go.

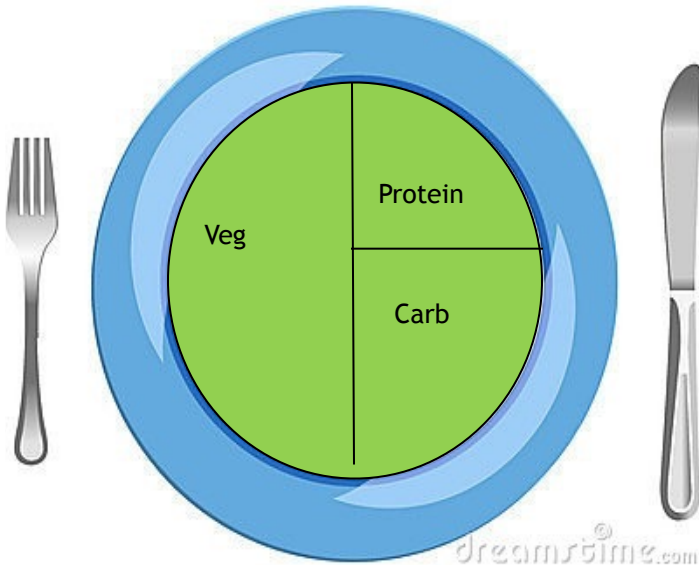
Long periods without food can increase hunger, make you more tired & irritable and make you crave for sweet foods such as biscuits and chocolates. Ensuring regular meals including breakfast, lunch and evening meal will help to avoid this.

In the first few months the size of your meal should be around 5-6 tablespoons. It is recommended that you have your own small plate, bowl, ramekin dish or cup to help you judge your portion size.

Between 6 weeks and 3 months post surgery your portion size is likely to be approx. a $\frac{1}{4}$ of a 7inch side plate(fig 1). By 6 -8 months this is likely to have increased to approx. $\frac{1}{2}$ a side plate(fig 2). At 1 year you are likely to be eating $\frac{3}{4}$ of a side plate(fig 3) and long term 1 year onwards you should aim to be eating a portion that is the size of a small 7 inch pate



Over time your portion size at meal times will increase but is likely to be $\frac{1}{4}$ - $\frac{1}{3}$ of your pre surgery intake. Protein foods should make up $\frac{1}{4}$ of your plate, carbohydrates $\frac{1}{4}$ of your plate and $\frac{1}{2}$ of your plate should be made up of vegetables.



Carbohydrates

Many individuals wrongly believe that foods such as bread, cereals, pasta, rice or potatoes can cause weight gain. If eaten in moderation then complex carbohydrates are a healthy food choice. Complex carbohydrates are a good source of energy, fibre, vitamins and minerals. Choosing the right carbohydrates can provide a filling and satisfying basis for meals.

You should aim for wholemeal/high fibre varieties whenever possible as whole meal breads, pasta and rice are an excellent source of fibre and are a useful means of preventing constipation. At meal times you should aim for $\frac{1}{4}$ of your plate to be made of complex carbohydrates.

Following weight loss surgery you are likely to see a significant reduction in the quantity of carbohydrates that you can consume. You may also find that carbohydrates such as soft and doughy bread, pasta and rice can be more difficult to tolerate.

Try a whole meal or granary varieties or toast as these foods can be easier to digest as they tend to be less doughy and sticky. Tortilla wrap and pita bread are good alternatives for sandwiches. Crisp breads and crackers are also useful sources of carbohydrates. If rice or pasta are difficult to tolerate always ensure a low fat sauce such as Bolognese which will help these foods to more through the stomach

Meat, fish and alternatives

These foods are good sources of protein. This is essential for new tissue formation, growth and repair of damaged tissue. Protein containing foods can also provide iron for healthy blood cells, B vitamins to prevent anaemia, zinc for the immune system and magnesium is essential for all cells.

A good protein intake is essential after surgery. This will help preserve your muscle mass yet burn fat. Long term it is recommended that you should always eat your protein first meat and chicken can often be difficult to tolerate. It is important to chew these foods well and you may find adding a low fat sauce or gravy can improve your toleration. Minced meat and fish tend to be easier for the stomach to digest and are therefore good alternatives.

Meat and meat products often contain high amounts of fat. It is advised that you aim for lean meats. Trim off visible fat, remove the skin from meat and grill your food rather than frying. Foods such as sausages, bacon and burgers should be avoided as they are still high in fat.

Fish is a healthy option to include at meal times. Oily fish such as salmon, fresh tuna, mackerel, kippers, trout and sardines contain omega-3 fatty acids. Omega-3 can help reduce your risk of heart disease. You should aim for at least 1 serving of oily fish per week. If you have had a heart attack it is recommended that you increase this to 2-3 times per week. Oily fish is moist and is generally tolerated well. Other forms of protein such as eggs, beans, pulses can also increase your protein intake.

Fruit and vegetables

Fruit and vegetables are an excellent source of fibre, vitamins and minerals. Fruit and vegetables also have a protective factor as they contain antioxidants that can protect against the development of some cancers and heart disease. Post surgery some patients can suffer from constipation. This is usually due to a poor fluid and fibre intake. If you do suffer from constipation then fruit and vegetables are a useful tool to alleviate this symptom.

Vegetables have little calorific value and are therefore a good food choice to help maximize weight loss. If you find that over time your portion size is increasing, then having additional vegetables is also a good

way of feeling full whilst avoiding a large increase in calories. Fruit and vegetables can be fresh, tinned or frozen. Some fruit has a high proportion of natural sugar and therefore large quantities are not

recommended. For example; one litre of fruit juice contains approx. 400 - 500kcal.

Following surgery, raw fruit and vegetables and skins of fruit and vegetables can be more difficult to tolerate. It is recommended that you chew these foods well. This should help avoid discomfort and potential nausea and vomiting.

You should aim for 2 portions of vegetables with each meal. This could be 1 tablespoon of carrots and 1 tbsp of peas or 1 tbsp of sweet corn and 1 tomato. This can then be increased as tolerated.

Fats

Fats contain excessive calories and are a major contributing factor to weight gain. Fats also have a strong link with heart disease. Foods high in fat should be consumed only in moderation. Foods such as butter, cream, full fat cheese, pastries, pies, crisps, chocolate and cakes are high fat and high calorie foods. Eating too many of these foods will increase your calorie intake, body weight and cholesterol.

When looking at food labels check for the following;

Low Fat	Moderate Fat	High Fat
<3g / 100g	10g-12g/100g	>20g / 100g

Following gastric bypass your body is unable to tolerate high fat foods and therefore you will experience fatty stools if you eat these foods. It is highly recommended that you avoid. There are differing types of fats in the diet. Some fats are better than others but ultimately you need to reduce the amount of total fat in the diet and aim for low fat foods.

Saturated fat

This is the worst type of fat (associated with high cholesterol). It is generally hard in appearance and is found in foods such as butter, lard, margarine, suet, full fat milk, full fat cheeses and fatty meats. It can also be found in meat products, pies, pastries, cakes and biscuits. To maximise weight loss it is recommended that you avoid saturated fats.

Monounsaturated fat

This is a better type of fat than unsaturated fat. It can help lower cholesterol but should only be consumed in small amounts. It is generally found in olive oils, rapeseed oils, spreads made from these oils, meat, hazelnuts, peanuts and seeds.

Polyunsaturated fat (Omega 6 and Omega 3)

This fat should be consumed in small amounts. Vegetable oils, soya oils, oily fish (such as salmon, mackerel, pilchards and sardines), nuts and seeds are a better type of fat, but ultimately too much will increase your calorie intake. Omega 3 oils are thought to be beneficial for heart health. You should aim for 1 portion of oily fish per week.

Sugar

Foods high in sugar should be consumed only in moderation. Chocolates, biscuits and fizzy drinks are convenient and easily accessible. They are comfort foods and probably the most difficult of all foods to consume in moderation. As these food items are very high in calories, a reduced consumption can be highly beneficial in assisting with weight loss. Following gastric bypass these foods will give you dumping syndrome and therefore you must avoid, or suffer the consequences.

When looking at food labels check the following

Low Sugar	Moderate Sugar	High Sugar
<5g / 100g	8g/100g	>12.5g / 100g

Fluid

An inadequate intake of fluid can lead to dehydration. Symptoms include tiredness, loss of concentration and hunger pangs. Urine can become more concentrated and headaches can become more frequent. After weight loss surgery it can be difficult to meet your hydration needs.

Following gastric banding dehydration is less common as you still have your normal stomach below the band to store fluid. However after a sleeve gastrectomy or gastric bypass your stomach capacity is significantly reduced and you are unable to hold this fluid.

It is recommended that you sip fluids throughout the day aiming for at least 8 cups a day. As previously discussed, avoid eating and drinking at the same time and avoid fizzy drinks.

As you lose weight you no longer require as much fluid so it becomes easier to meet your hydration needs.

Alcohol

Many people enjoy an alcoholic beverage and there is no reason why it should be completely avoided but alcohol should be consumed in moderation. It is recommended that women should have no more than 14 units of alcohol per week, and men to have no more than 21 units of alcohol per week.

However, alcohol is high in calories and therefore reducing consumption can assist in weight loss. Mixers often contain a high amount of calories therefore aim for lower calorie versions.

Following surgery you never have a large amount of food in your stomach to absorb alcohol. Subsequently alcohol will enter the blood stream much quicker and therefore be mindful of this when you drink.

Calorie content of alcoholic drinks	Kcals
Larger	166kcal
Whiskey (25ml)	56Kcal
Vodka	56Kcal
Red wine	170Kcal
White wine	150kcal
White wine sweet	200kcal
Champagne	190kcal
Cider	120kcal
Liqueurs	70kcal
Coke	135kcal
Lemonade	120kcal

Understanding food labels and nutritional claims

Nutritional claims can be misleading. A product that reads low fat may be high in sugar to enhance flavour; this includes products labelled 'diet' products. The only true way to know if a product is what it claims to be is to check the nutritional composition label. The summary below gives clear guidelines on what you should be aiming for.

Nutrient	Low	Med	high
Total Fat	3g	10g	20g
Saturated fat	1.5g	3g	5g
Sugars	5g	8g	12.5g
Salt	0.3g	0.9	1.5g

Consuming foods that are medium or high in fat, saturated fat or sugar will have a massive effect on your weight. TO maximise your weight loss you should be aiming for low on a daily basis.

Nutritional claims can be very confusing and also misleading. With so many products claiming to be 'healthy' it is important to be able to understand what the different claims mean.

Many products can claim to be low in fat or low in sugar. Always check the label for the rest of the ingredients. A common mistake is that many low fat yoghurt's may be low in fat but are high in sugar and therefore still contain a high amount of calories.

Claim	What does it mean?
Lite or light	The product must be at least 50% lower in at least one typical value (listed on the label or on the back of the pack), than standard product. For example if a packet of crisps is 50% lower in fat, 70% of that produce still contains fat. It is therefore a better alternative but still contains a high amount of fat and subsequent calories.
Low fat	The product contains no more than 3g of fat per 100g and is therefore a good choice.
No added sugar	The product has no sugar added to it, but this does not mean it is low in sugar
Fat Free	The product has no more than 0.5g fat and is therefore an excellent choice.
Reduced Fat	This product has 25% less fat than the product it is being compared to. It still contains a high amount of fat.
Low calorie	This product contains <40 calories per serving.
Sugar Free	The product is free from sugar. This is good choice. If you are not used to eating sugar free foods introduce slowly. Sugar free foods often contain artificial sweeteners that can have a laxative effect.

Snacks

If you snack on unhealthy foods such as biscuits, chocolates and crisps this will increase your body weight. Snacks do not have to be unhealthy. If you do feel hungry there are alternative healthy snacks that will help you keep control of your weight.

Eating Out

Many people are anxious with regards to eating out after surgery. There is no reason why you cannot eat out but you need to plan well and choose wisely. If there are certain foods that you find difficult to tolerate then it is not advisable that you try when you are eating out. Choose a food that you usually tolerate well. Moist, softer foods are a good choice so that you do not have to worry about any side effects. See some of the following suggestions on ways to stay healthy when eating out.

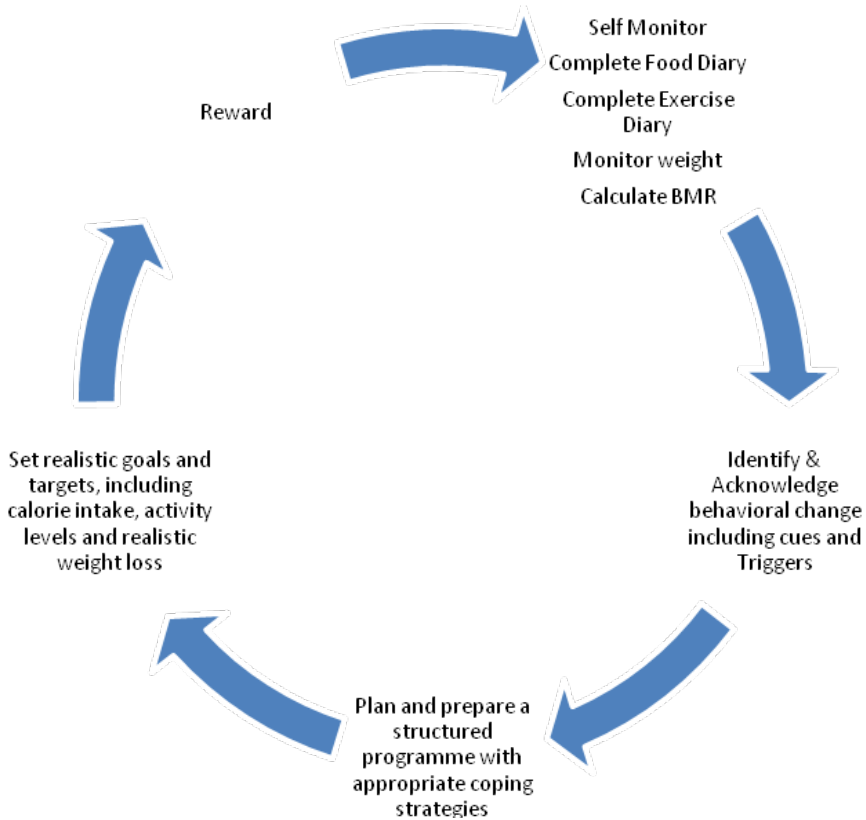
- Choose wisely earlier in the day. If you know you are going out in the evening make sure you eat as healthy as possible earlier in the day.

- Never arrive at a venue hungry, this may mean you eat more.
- Share a starter or dessert.
- Don't be frightened to ask for a smaller portion.
- Pay attention to how your food is prepared & cooked. Avoid deep fried, battered, creamy and aim for grilled, roasted, steamed.
- Avoid pies, pastries, sausage, and fatty meats and aim for chicken or fish.
- Opt for grilled or steamed items.
- Avoid creamy sauces and aim for tomato or vegetable based sauces.
- Avoid extras or side orders such as bread or garlic bread, chips, onion rings and have a salad or vegetables as a side order. (Ask for dressing on the side).
- Avoid extras such as tomato ketchup, mayonnaise, butter or cheese.
- Thin based pizza is a good alternative to thick crust.
- Buffets or Carvery allow you to decide your portion size.
- If you eat Indian or Chinese aim for boiled rice or vegetable based dishes with tomato based sauces.
- Have a fruit based dessert such as sorbet.
- Set a limit on your alcohol intake.
- Aim for lower strength alcoholic drinks
- Aim for low calorie soft drinks or mixers.

Behavioral Change Techniques

The amount of weight that you lose very much depends on how much weight loss surgery changes your behaviour. Whilst the band, sleeve and bypass provide a tool to help promote healthier behaviour they do not guarantee behavioral change.

Behavioral change techniques encourage the development of new skills and techniques that include self monitoring. Identify triggers and cues for your weight gain. Finding appropriate coping strategies so that you can plan and prepared, establishing realistic goals that are achievable and maintainable.



Self Monitoring

Self monitoring your food intake helps to raise awareness and identify any triggers of weight gain. You should include your meal frequency, food & drink choices, snacks, quantify your portion size, thoughts and feelings. Take a step back and have a look to see if your food diary highlights any reasons for weight gain?

Has there been a change in portion size?

Is food choice less healthy?

Am I missing meals?

Increase in snacking or grazing?

Has exercise decreased?

Comfort eating due to boredom?

Stress or worry?

Am I drinking more alcohol?

Have I been socializing more?

Monitoring your weight is the only way to truly know if you are on track. Many people wrongly believe that after weight loss surgery they will no longer need to think about their calorie intake and outtake. In reality, the day when you stop thinking about your body weight, intake and outtake is the day when weight regain will begin.

Calculating your calorie requirements can clearly define a target and goal to aim for. Your food diary is a useful way to see if you are meeting your target or identify what you might like to change.

Identify the behaviours that need to change

Some people can easily identify what needs to change, for some it can remain unclear. A food diary can help you to identify and acknowledge a cause. If you are still finding it difficult to identify a cause then a dietitian will be able to help you identify which behaviours may need to change.

Most individuals have triggers and cues that can lead to the consumption of less healthy food choices. Stress or anxiety a busy day at work, boredom or social situations will undoubtedly occur. You need to prepare a plan so that when that situation arises you can deal with it.

Coping Strategies

Planning allows you to prepare for a given situation. The environment in which you live, food choice, portion size, socializing, activity levels and mood can all be controlled to ensure that you keep on track. For example if you have a very busy week at work, making the right food choices can be difficult, plan ahead. Make sure you have your meals planned for the week ahead. Make sure there are some ready available freezer meals at home. Keep a supply of healthy snacks at work. Make sure comfort foods are out of reach.

Coping Strategies	
Control your Environment	<ul style="list-style-type: none"> • Keep tempting or trigger foods out of reach. • Avoid buying tempting or trigger foods. • Never skip your lunch or work through lunch, as this can lead to over eating when you do eat. • Continue to serve your meals on a small plate. • Do not go food shopping when hungry or on an empty stomach. • Unless you are preparing a meal, stay out of the kitchen. • Always have a supply of healthy snacks at home or work. • Continue to check all food labels. • Don't leave left over's in sight. • Always eat your meal at a table. • If you know you have a busy day, plan and prepare meals and snacks in advance. • Surround yourself with support.
Boredom	<p>Find a suitable Distraction</p> <ul style="list-style-type: none"> • Walk the dog • Ring a friend • Send an email • Cleaning • Paint your nails • Read a newspaper / magazine • Puzzle • Surf the net
Food choice	<ul style="list-style-type: none"> • Set a specific meal plan/ menu for the week. • Remove any trigger foods from the home or out of reach. • Always have a supply of healthy pre prepared meals available. • Always have a supply of healthy snacks available. • Make a shopping list and stick to it. • Keep a food and feelings diary to alert you of any unwanted behaviors. • Never fo to the supermarket on an empty stomach.
Hunger	<ul style="list-style-type: none"> • Ensure three meals / day. • Never skip meals. • Have a glass of water. • Are you actually hungry or are you bored? • Find an alternative coping strategy. • Wait ½ hour. • If you still feel hungry have a healthy snack. • Eat slowly and chew food well.

Portion size	<ul style="list-style-type: none"> • Continue to eat your meal on a small plate. • Rather than bulk freeze, freeze food into small portions. • If your portion size is increasing, increased the amount of vegetables rather than protein or carbohydrates. • Avoid missing meals as when you do eat you may eat more.
Stress or anxiety	<ul style="list-style-type: none"> • Avoid unnecessary stress by planning ahead. • Encourage a non food related coping strategy. • Ensure you have a supply of healthy snacks. • Set aside a non food related de stressor. • Ensure you have support.
Socializing	<ul style="list-style-type: none"> • Have a starter as a main meal. • Share a meal. • Do not skip earlier meals if you are eating out in the evening. • Ask for a ½ portion. • ½ your alcohol intake. If you usually have 2 glasses of wine, compromise and have 1. • Do not be afraid to leave food or say no.

Set Realistic Goals and Targets

Set realistic goals for calorie intake, exercise and weight loss. Your target should also be maintainable. Be specific in setting your goals. For example A structured meal plan based on 1500kcal/day. Incorporate 30minutes walking every day and set a target of 2lb / week weight loss.

Reward

Reward your success. This should be a non food related reward such as a new item of clothing or a day out. Remember how it feels to reach that goal and be proud of the achievement

Bariatric surgery & Pregnancy

It is advisable to avoid becoming pregnant until you are at least 12-18 months post surgery. This will help ensure that you are well nourished pre-pregnancy and help decrease the risk of nutritional deficiencies during pregnancy. Your baby develops most rapidly during the first three months of pregnancy, so this is a time of special importance.

Your body only requires around 10% more calories/day during pregnancy. Therefore the additional calories can be met with something as simple as an extra banana or glass of semi skimmed milk. During pregnancy you are expected to gain between 10-12kg. Most weight gain is in the second half of pregnancy at around 0.5kg per week. Patients who have undergone bariatric surgery should aim for this.

It is important to remember that pregnancy is not the time for weight loss. Although pregnancy is not recommended within the first year post surgery, If you do find yourself pregnant within the first year it is advisable that you seek additional advice from the bariatric team to ensure that we keep you and baby as healthy as possible.

You should aim for a variety of food groups to ensure that you receive a variety of nutrients. If you are concerned that you are not gaining enough weight or gaining too much weight then speak with your dietitian.

Your surgical procedure determines the guidance that you should follow. Please follow the specific advice that relates to your individual procedure

Procedure	Advice
Band	The band should be deflated as soon as pregnancy is confirmed. This will ensure that you are able to tolerate all foods and decrease the risk of deficiencies.
	Pregnacare plus is a pre natal multivitamin which should be consumed on a daily basis. It also contain folic acid therefore there is no need to take an addition supplement.
	The band can be re inflated once breast feeding has been discontinued.
Sleeve	Discontinue multivitamin.
	Commence on both Pregnacare and Pregnacare Plus , 1 capsule of each per day for the duration of your pregnancy.

	<p>If you have been taking additional iron supplements then it should be discontinued and may be resumed in the second trimester.</p>
	<p>Some patients may have been prescribed Lansoprazole. If you have been taking this drug please discontinue, as it is not recommended during pregnancy. This should be replaced by Omeprazole 20mg daily, this is safe to take during pregnancy.</p>
	<p>There is no need to take oral zinc, selenium or folic acid supplements as these are contained in Pregncare.</p>
<p>Bypass</p>	<p>Discontinue multivitamin.</p>
	<p>Take Pregncare and Pregncare Plus, 1 capsule of each daily for the duration of pregnancy. As bypass patients suffer from malabsorption both supplements must be taken.</p>
	<p>As the above vitamin supplements also contain iron, it is advisable that separate iron supplements are discontinued particularly in the first three months of pregnancy. Your Iron can be resumed in the second trimester.</p>
	<p>Please discontinue your Lansoprazole, as it is not recommended during pregnancy. This should be replaced with Omeprazole 20mg daily which is suitable and safe during pregnancy.</p>
	<p>Continue with calcium supplements for (e.g Calcichew D3 forte daily)</p>
	<p>There is no need to take oral zinc ,selenium or folic acid supplements as these are contained in Pregncare.</p>

What should I eat?

A variety of food is the best way to ensure that your diet contains all the necessary nutrients needed during pregnancy.

Following bariatric surgery certain foods can be more difficult than others to consume. Foods such as bread, chicken, skins of fruit and vegetables can often be more difficult to tolerate and therefore chew your food well and aim for other foods that are from the same food group that you can tolerate. For example if you struggle with chicken ensure you eat some fish, dairy products or beans and pulses to substitute your protein intake.

Protein

Protein's major function is that of growth and repair. It is therefore essential during pregnancy. Protein-rich foods include; milk, fish, cheese, yoghurts, pulses, eggs, lean meat, nuts, Cereals and soya protein such as Tofu & Quorn. A portion of protein should be included at each meal time.

Fibre

A healthy diet should contain an adequate intake of fibre. During pregnancy constipation can be a problem, therefore a diet high in fibre may be beneficial. Fibre is of little benefit unless you drink an adequate amount of fluid. Aim for at least 2500ml/day during pregnancy.

Suitable foods high in fibre include, cereals, particularly weetabix, bran flakes, shredded wheat, porridge, wholemeal bread, wholemeal pasta, wholemeal rice, fruit and vegetables, potatoes with skins.

Fluid

During pregnancy your thirst may increase. Do not worry as this is completely normal. Aim for 6-8 cups of fluid/day (Unsweetened fruit juice, Sugar-free squashes, Sugar-free drinks and Water).

Calcium and Vitamin D

Calcium is important for healthy bones and teeth. Good sources of calcium include: yoghurt, tinned fish (sardines), cheese, green leafy vegetables, milk, bread.

Calcium is only absorbed by the body if it receives an adequate amount of Vitamin D. Vitamin D primarily comes from sunlight on the skin but is also found in dairy products, vitamin and mineral enriched margarine, vitamin and mineral enriched breakfast cereals

Folic Acid

Folic acid has been shown to reduce the risk of nerve system defects such as spina bifida.. If you are already taking a general multivitamin pre pregnancy then additional folic acid is not required.

It is also advisable to consume a diet rich in folic acid during the first three months of pregnancy. Folic acid can be found in; Bread and cereals with added iron and other minerals, peas, spinach, carrots, sprouts, yeast extract, potatoes, cabbage.

Iron and Vitamin C

Pregnancy places substantial demands on the availability of iron in the body. It is required for healthy blood to prevent anaemia. Iron can be obtained from the following dietary sources, red meat, enriched vitamin and mineral breakfast cereals, poultry, dark green leafy vegetables, fish, beans, peas, lentils, and eggs. Vitamin C is required for the body to absorb iron from non meat foods. Try to have a glass of unsweetened fruit juice with meals.

Alcohol

Just as food reaches your baby so does alcohol. Alcohol also contains a high amount of calories and It should therefore be avoided.

Smoking

Stop smoking. It will harm your baby.

Morning sickness

Nausea and vomiting can be a problem during pregnancy. Some food can make you feel less sick than others. The following suggestions may be helpful. Dry foods such as toast and crackers may be able to tolerate. Avoid long periods without food. Aim for at least three meals/day and always include a small quantity of starchy foods such as pasta, rice, cous-cous or potato. Cold meals are often better tolerated than hot meals as the smell of cooking can make you feel sick.

Heart burn and indigestion

This may be a problem during the later stages of pregnancy and the following advice may help. Eat slowly and do not rush your meals. Relax before and after meals. Sit up-right whilst eating. Avoid greasy and spicy foods, fizzy drinks and citrus fruits if you find they cause a problem.

Safe eating during your pregnancy

Safe, clean and healthy food is always important, but there is a greater importance during pregnancy to protect you and your baby. Food poisoning bacteria such as Salmonella and Listeria can cause illness. It results from eating contaminated food. It is very important to try and avoid this.

- Always wash your hands with hot soapy water before preparing food.
- Keep your fridge and freezer at the correct temperature.
- Cook food thoroughly.
- Store raw and cooked food separately, raw food at the bottom and cooked food at the top of the fridge.
- Always check best before dates on food. Use within the recommended period.
- Do not reheat food more than once.
- When reheating food make sure it is hot throughout.
- Wash salads, fruit and vegetables that will be eaten raw.
- Observe microwave times.
- Keep pets out of the kitchen.

Foods to avoid because of the increased risk of salmonella

- Raw eggs. All other eggs should be cooked thoroughly until the white and yolk are solid.
- Homemade uncooked egg dishes such as mayonnaise, mousses, and ice cream.
- Ready-cooked hot chicken.
- All patês (unless tinned or shrink-wrapped and marked pasteurised).
- Soft, ripened cheeses (Brie, Camembert, Cambozola).
- Ready prepared salads (coleslaw, chopped salad ingredients).
- Unpasteurised cows' milk, sheep or goats' milk.
- Unpasteurised yoghurt.

Foods to avoid because of risk of Toxoplasmosis

Toxoplasmosis is an infection caused by parasites that live in raw meat, cat faeces and goats milk. Try to avoid :

- Raw/uncooked meat.
- Vegetables grown in soil contaminated by cat faeces.
- Unwashed fruit and vegetables.
- Unpasteurised milk and milk produce.