

All you need to know about diet and weight loss surgery (sleeve gastrectomy)

A sleeve gastrectomy is an operation where the surgeon resects (removes) a large portion of the stomach converting the normal sac shaped stomach into a small tube. It works by restricting the amount of food you can eat and by changing the hormones that affect appetite and satiety (fullness) but it does not stop you absorbing the food that you eat. This leaflet contains all the information you need to maximise your success following weight loss surgery. It includes information on:

- The liver shrinkage diet prior to surgery.
- Food reintroduction after surgery.
- Guidelines for success following surgery.

Liver shrinkage diet for patients having weight loss surgery

To enable your liver to shrink so that your surgeon has better access to your stomach, the following diet should be started two weeks prior to your operation date.

Every day choose one of the following options:

Option 1:

- 4 cans of low calorie soup such as Weight Watchers (295g) or supermarket own brand (usually 400g cans so have 3 per day).
- 4 low fat yogurts (175g) such as Muller Light or Sainsbury's Be Good To Yourself.
- 1 pint of semi-skimmed milk.

Option 2:

- 4 servings of meal replacement drinks such as Slimfast or supermarket own brand (made up with skimmed milk if in powder form).

Plus for Option1:

- 1 multivitamin tablet such as Forceval, Centrum Complete A-Z or Sanatogen Gold A-Z.

The following items are allowed freely:

- Tea/coffee without sugar and remember that the milk comes out of your allowance.
- Sugar free squash, jelly and low calorie fizzy drinks.
- Water.

Please note: If you are taking medication for diabetes you may need to adjust your quantities. Please check with your nurse, GP or consultant.

If you have any questions, please contact your dietitian.

Food reintroduction after surgery

Following your surgery you will need to go through several phases, slowly progressing from liquids through to solid food. It is important to take your time progressing through each phase in order to reduce the possibility of complications. It is important to keep to the diet and not rush or skip stages in order to allow your pouch and intestines to heal as well as to reduce discomfort, the risk of vomiting. Your diet will progress from fluid to liquid foods.

Post-op diet:

- Stage 1: Fluids only (for 3 weeks).
- Stage 2: Puree (for 2 weeks).
- Stage 3: Soft / mashed foods (for 2 weeks).
- Stage 4: Normal healthy eating.

Stage 1 – Fluids only (3 weeks)

Immediately after surgery clear fluids only - e.g. water, dilute squash, tea (including herbal, fruit, green), clear broth, apple juice diluted 50:50 with water, sugar free jelly, sugar free ice lollies, ice cubes.

- Drink very slowly by taking small sips. Try not to gulp.
- Avoid carbonated drinks and drinking through a straw as these can introduce air to your pouch, making you feel uncomfortable.
- Avoid having only drinks containing caffeine as these act as a diuretic and can contribute to dehydration.

Liquid diet - these liquids must be smooth and able to be sucked through a straw, although it is not recommended that you actually take these through a straw. It is important that you get as much nutrition as possible with each meal. It is also important to get a variety of liquids at this stage rather than sticking to just one type.

The types of suitable liquid foods are:

- Milk (skimmed or semi skimmed)
- Fortified milk (2 tbsp skimmed milk powder added to 1 pint milk)
- Tomato juice
- Fruit juice (diluted 50:50 with water)
- Tea
- Smooth broths
- Creamed soups
- Yoghurt and yoghurt drinks (add milk if too thick)
- Meal replacement drinks, e.g. Slimfast / Complan / Build Up.

Sample menu plan for liquid diet:

Breakfast	Meal replacement drink or glass of fortified milk.
Mid morning	1 glass fruit juice or tomato juice or milk.
Lunch	Meal replacement drink or glass of fortified milk or creamy soup.
Mid afternoon	1 glass fruit juice or tomato juice or milk.
Evening	Meal replacement drink or glass of fortified milk or creamy soup.
Supper	1 glass fruit juice or tomato juice or milk.

Stage 2 – puree diet (2 weeks)

At this stage you can start to introduce pureed or blended foods into your diet. This should be smooth and the consistency of baby food.

The following types of food can be included:

- Thick creamy soups, rice pudding, custard.
- Smooth yoghurts.
- Softly cooked and blended vegetables, mashed potato.
- Cereals such as Ready Brek, Weetabix, ground rice.
- Blended fruits.
- Blended meats with gravy.
- Blended casseroles and soups.

Sample menu plan for puree diet:

Breakfast	Weetabix or Ready Brek with milk <u>or</u> yoghurt and fruit juice.
Mid morning	Low calorie yoghurt <u>or</u> smooth rice pudding.
Lunch	Blended creamy soup or blended macaroni cheese or cauliflower cheese.
Mid afternoon	Mashed banana or pureed stewed fruit.
Evening	Blended chicken casserole, <u>or</u> fish in white sauce, with mashed potato and, blended carrots.

Stage 3 – soft/mashed diet (2 weeks)

At this stage you no longer need to blend your food but can progress to a soft consistency diet. These are foods that can be mashed easily or cut with a fork.

Sample menu plan for soft diet:

Breakfast	Weetabix or Ready Brek with milk <u>or</u> toast and low fat spread.
Mid morning	Low calorie yoghurt or rice pudding.
Lunch	Scrambled egg <u>or</u> macaroni cheese <u>or</u> cauliflower cheese.
Mid afternoon	Banana <u>or</u> tinned soft peach or pear without skins.
Evening	Shepherds pie, <u>or</u> fish pie, with soft vegetables.

Stage 5 – week 6 onwards

Normal diet - you are now ready to continue on your long term eating plan. Remember, you are not just eating small amounts to reduce your calorie intake and lose weight, but you are also aiming for a healthy nutritious eating plan. It is critical that the food you eat is of good quality and has a high nutritional value.

A healthy diet

There are five main food groups and a healthy diet comprises a mix of them:

- Protein foods – such as meat, fish, eggs, beans – include 2-3 60-90g (2-3oz) portions per day. You must be particularly careful to chew meat, chicken and fish thoroughly before you swallow – the recommended bite size is the size of a 20p piece. Eat the protein part of your meal first.
- Milk and dairy – choose low-fat cheese and limit amount to 30-60g (1-2 oz). Choose skimmed milk and low fat yogurt varieties.
- Fruit and vegetables – try to have 4-5 portions per day. A small glassful of unsweetened fruit or vegetable juice counts as one portion.
- Carbohydrates – bread, potatoes and cereals. One small portion of 60-90g (2-3oz) at each meal will be fine.
- Fatty and sugary foods – use a small amount of olive oil for cooking and replace puddings with a low fat yoghurt or stewed fruit. As mentioned before, beware of the soft calorie-laden foods such as chocolate, sweets or ice cream (see section on dumping syndrome).

Fluids

- Choose non-carbonated fluids. Avoid diet and/or regular fizzy drinks. These make you feel uncomfortable and the gas produced by these can stretch the pouch.
- Your best choices for fluids are water (try squeezing some lemon into water), artificially sweetened, non-carbonated flavoured waters, coffee or tea, herbal teas, clear soups, and diluted 100 percent unsweetened fruit juices.
- Read labels carefully to be sure your healthy sounding drinks do not contain lots of calories.
- Do not forget that alcoholic drinks can be high in calories, so moderate your intake.
- Aim for 10 glasses of fluid a day.

Meal ideas for normal diet:

Breakfast

Coffee or tea or 200ml skimmed milk or 200ml vegetable or fruit juice.

1 slice brown bread or roll (toasted) or 50g breakfast cereal.

10g butter/margarine or 20g low fat spread.

1 portion jam, honey or low fat cheese spread or 50g lean meat or 1 egg.

Lunch

50g poached fish or 50g meat or 50-75g chicken/ Quorn/ tofu-based product.
1 tablespoon risotto or rice or 1 tablespoon mashed potato or 1 small boiled potato.
1 peeled grilled tomato or 2 tsp broccoli or carrots or a small mixed salad.

Evening meal

100g boiled spaghetti with Bolognese sauce, 1 teaspoon Parmesan cheese and 1 peeled grilled tomato.

Or 3 small slices of low-fat cheese, 1 slice brown bread and a small, non leafy, mixed salad (tomato, cucumber).

Or 1 tablespoon tuna or egg salad with diced, pickled vegetables, 1 slice brown bread.

Or 50g baked potato with cheese and ham with 1 tablespoon of tomato salad.

Steps to success:

1. Limit portion sizes for meals to a side plate or about half of a normal portion. Using measuring tools such as food scales to check your portion sizes can help initially. Eat the protein part of your meal first followed by the carbohydrate and the vegetables. Do not eat more for fear of getting hungry later. Remember that it will take time to get used to what your smaller portion looks like. Eat slowly and if you do get hungry later on have a ready-prepared snack such as a piece of fruit or a low-calorie yoghurt.
2. Stop eating as soon as you are no longer hungry. You have to listen to your body's feeling of satisfaction and fullness; otherwise there is a great risk of you stretching the pouch.
3. Eat slowly, taking 20-30 minutes to complete your meal. Most obese people are used to rushing their meals and, as there is a time delay from stretching the wall of your stomach and it telling your brain you are full, you need to be careful with this one. Try placing your knife and fork down between mouthfuls.
4. Chew foods thoroughly, aiming for 15-20 chews per mouthful. Swallow the food once you have achieved a smooth puree consistency in the mouth. Take tiny bites (cut meat up to the size of a pencil-top rubber) and chew each piece 10–25 times. Stop eating after about 20 minutes and if you are hungry again a few minutes later have a little more.
5. Eat three small meals per day – you should be satisfied eating three meals a day without getting hungry in between meals. Beware of developing 'grazing' eating patterns of small snacks throughout the day.
6. Eat healthy, solid food – many soft foods are high in fat or carbohydrates and as a consequence you may be taking more calories than you should and your weight loss will slow down or stop. Choose solid foods without lots of sauce (e.g. small meal of chicken and vegetables) and you will eat less overall and stay full for longer.
7. Do not drink while eating as you could feel full too soon before you have eaten the right amount of food. So avoid fluids for half an hour before your meals and for one hour afterwards.

8. Do not eat or graze between meals as this will slow down the weight loss. You should not need to eat between meals because of hunger if you are eating three sensible meals per day.
9. Only eat good quality nutritious food (see above).
10. All drinks should be zero calories – calorie laden drinks, including alcohol, will simply add calories to your daily intake. Women need calcium and this can be obtained from skimmed milk. You should avoid juice, squashes, milkshakes and fizzy drinks (the gas can also cause considerable pain). Drink adequate fluid between meals as mentioned before.

Constipation

After surgery, you may experience some change in the frequency of your bowel habits. This is because the quantity of food you are now eating is considerably smaller than before the operation. Initially you might find your bowels open less frequently i.e. every two or three days, due to the change in your diet. By including some of the foods listed below, your bowel movements should become more regular.

- Whole wheat breakfast cereals for example, All Bran, Shredded Wheat, Weetabix, porridge oats.
- Pulses e.g. baked beans, kidney beans, lentils, chick peas.
- Whole wheat crackers for example, Ryvita, wholemeal crisp-breads.
- Fruit and vegetables for example, cauliflower, broccoli, carrots, salad, green beans, peeled fruit, tinned fruit in juice.
- It is also important to drink plenty of fluid between meals, aim for at least 2 litres per day.
- If constipation persists, try taking a laxative such as lactulose, available from your local pharmacy.
- If this does not help, talk to your GP or one of the team.

Alcohol

Alcohol can irritate the stomach. It is high in calories (almost as many calories as fat) and can slow down weight loss. Alcohol is an appetite stimulant so you may find that you are tempted to snack or eat more when you drink. After weight loss surgery you will feel the effects of alcohol much more.

Hair loss

Hair loss after bariatric surgery is quite common. It tends to happen about three to four months after surgery and can carry on for up to one year. You will not lose all your hair but you may notice it thinning around the parting and coming out when you brush or you're washing your hair. The hair loss does stop and the hair will re-grow. Hair loss is due to rapid weight loss, it is not related to any vitamin and mineral deficiencies. It is important you take your vitamin and mineral supplements as suggested but you do not need any extra vitamins and minerals. You must also ensure you are having plenty of protein in your diet (e.g. meat, chicken, fish, beans, pulses, eggs, cheese, milk or yoghurt).

Dumping syndrome

This can occur if you eat too much sugar. The body will produce an excessive amount of insulin which means your blood sugar can drop down too low. You may feel light headed, sweaty, shaky, nauseous and sometimes, abdominal pain. An advantage of this is it means you may have an in-built aversion to sugar. If this happens to you, lie down and stick to fluids (sugar free) until the feeling passes. Dumping syndrome can also happen if you eat too much fatty food, if you eat too quickly or if you don't chew your food properly. It is not dangerous but can be very unpleasant. You will need to review your eating habits to determine what caused this, so you can avoid it happening again. Look at labels for food that contains 5g or less of sugar per 100g.

Vitamin and mineral supplements

You will need vitamin and mineral supplementation for the rest of your life. The table below summarises what you will need:

Supplement	Example of Brand/Type	Where to get it?	How much to take?	How often?
Complete A-Z multivitamin and mineral.	Forceval, Holland and Barrett ABC Plus, Healthspan MultiVitality 50 Plus, Some brands, e.g. supermarket own brands, have lower levels of copper; 2mg per day is recommended. Check the label as you may need to take 2 tablets per day or ask your GP to check your blood copper levels annually.	Buy from e.g. Boots, Holland and Barrett, chemist (may be prescribed by your GP).	One a day (2 may be needed if copper levels are less than 2mg per tablet).	Every day, for life.
Calcium + vitamin D3 combined supplement	Cacit D3. (Adcal or Calcichew D3 Forte may also be prescribed but may not be absorbed as well as Cacit D3 – please discuss with your GP)	Prescribed by your GP.	1000/1200mg calcium and 20/22µg Vit D3 per day - usually 2 tablets/sachets per day	Every day, unless advised otherwise.
Vitamin B12 injection.	Hydroxocobalamin.	Prescribed by your GP and administered by a medical professional.	1mg injection.	Every 3 months. (1 st injection usually given at 6 months post op)
Iron supplement.	Ferrous fumarate.	Prescribed by your GP.	1 tablet (210mg) Daily Or 1 tablet twice daily (420mg) for pre menopausal women.	Every day, unless advised otherwise

Contact us

If you have any questions, please contact your Bariatric Dietitian: 0118 322 7116

Useful websites

British Obesity Surgery Patient Association: www.bospauk.org

Weight Loss Surgery Information: www.wlsinfo.org.uk

For more information about the Trust, visit our website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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