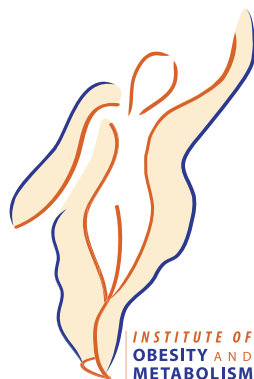


# Healthy Eating after Bariatric Surgery

Information for patients and carers



A practical guide to achieving and maintaining a healthy weight after obesity surgery





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# 1 Introduction

This booklet is a practical guide to help you achieve and maintain a healthy weight after bariatric (obesity) surgery.

It will also help you to make sure that your diet is healthy, balanced, and contains enough protein, vitamins and minerals for life long health.

This dietary advice is to guide you **after you have completed the 3 post-op diet stages** (liquid, puree and solid) and are back to eating normal foods. This is normally after a period of between 6 - 8 weeks but can be longer depending on your individual progress.

## 2 Why is diet important?

A good diet is very important after you have had obesity surgery. The amounts and types of foods that you are able to eat will change, and you need to make sure that your new diet contains enough protein, vitamins and minerals to keep your body healthy.

Having a poor diet after obesity surgery can have serious consequences. Short term effects may include dehydration, nausea and vomiting, or dumping syndrome. If your diet lacks nutrients or is poorly balanced in the long term, you may risk the following health conditions:

- **Anaemia** caused by iron, folate or vitamin B12 deficiency
- **Osteoporosis and osteomalacia** caused by calcium and/or vitamin D deficiencies
- **Wernicke encephalopathy** a rare but serious neurological condition resulting from thiamine (vitamin B1) deficiency
- **Certain cancers** become more likely with some deficiencies
- **Deterioration of vision** caused by vitamin A deficiency
- **Poor immune function** caused by various deficiencies
- **Protein deficiency** symptoms include fatigue, muscle wastage, and alopecia (short term, transient hair loss is normal)

### **3 General guidance for eating and drinking post-op**

Take time to eat your meals (this means 20 – 30 minutes). Rushing your meals may cause food to stick in your ‘chest’ and may cause you to vomit.

You may also need to avoid foods that commonly cause blockages leading to pain and possibly vomiting. These include dry chewy meats, soft white bread, stringy or very fibrous vegetables, sweetcorn, nuts, dried fruit, pips and seeds.

#### **Why do people vomit after eating?**

The main reasons why people vomit are:

1. Eating too quickly
2. Not chewing food well enough
3. Eating too much
4. Drinking with, or too close to meals
5. Eating foods that are difficult to digest

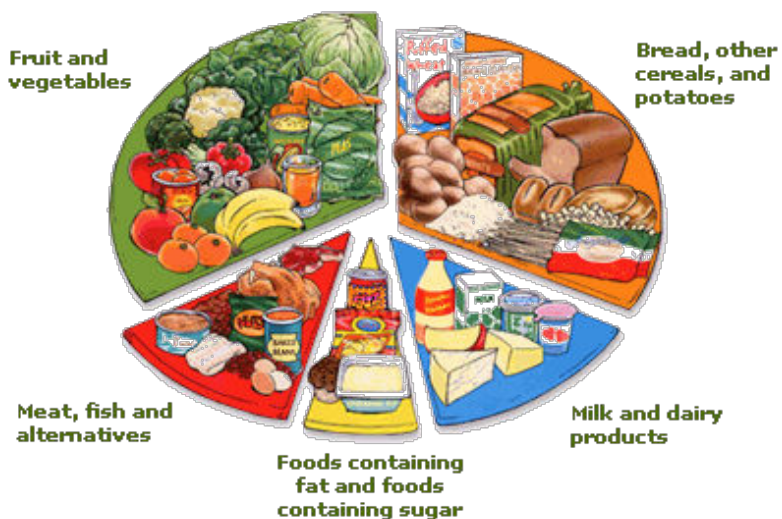
You should not need to vomit. If you find this is happening often, first try changing your eating behaviour and food choices. Frequent, long- term vomiting can mean you are getting insufficient nutrients and cause damage to your oesophagus (food pipe) and teeth.

## 4 Healthy eating - the basics

- Eat regular meals - breakfast, a light meal and a main meal.
- Watch your portions sizes
- Eat less fat and fatty foods
- Eat less sugar and sweet foods and choose low sugar drinks
- Eat more fruit and vegetables
- Drink plenty of fluids
- Drink sensible amounts of alcohol

### Getting the balance right

Eat a variety of foods from the five food groups below for a healthy balanced diet.



## 5 Protein Foods

Meat, poultry, fish and alternatives such as eggs, chick peas, lentils, beans, nuts, Quorn, tofu and soya products are important sources of protein. Protein is essential for the growth and repair of all body tissues and contains important vitamins and minerals such as iron and zinc.

### How much should I have?

- You should have **2 – 3 portions** of these foods a day.

#### What is a portion?

- 40 – 60g cooked lean meat, fish or poultry
- 1 egg
- 60 - 90g Quorn™
- 80g (2 tbsp) cottage cheese\*
- 40g (matchbox size) piece of cheddar cheese\*
- 100 - 150g beans, lentils, chick peas or other pulses
- 100 - 150g tofu

\* these foods count as both protein and dairy



## Tips for Protein Foods

- Aim to finish the protein part of your meal first, before you are full
- Meat is better tolerated when sliced finely (ham or turkey), minced or ground (lamb, beef or turkey mince), or stewed/ casseroleed.
- Beans, lentils and other pulses are excellent, low fat healthy sources of protein. Some people may find the hard skins difficult to digest however. Try pureeing them (as in houmous) or choosing types without skins (split-peas).
- Fish is best steamed, poached or baked. Try adding low fat white sauces (as in Fisherman's pie or Mornay) to aid digestion. Seafood such as prawns, squid or mussels may be difficult to digest as they can be stringy. Chew these well.
- Cheese, milk and yoghurt contain protein and count as one of your dairy portions. They can be high in fat however so choose low fat options.
- Eggs are better tolerated when scrambled, as an omelette or when poached. Boiled eggs may stick unless cut finely or eaten with light mayonnaise.

## Making healthier choices when buying meat & fish

- Some meats are high in fat, particularly saturated fat.
- Buy fresh meat, poultry and fish and cook it yourself. Ask your butcher for a lean cut, or if buying pre-packed meat, check the label and compare the fat content with other products.
- Choose turkey or chicken as these are lower in fat.
- Limit meat products such as sausages, salami, pate and beef burgers as these are high in fat and often salt too.
- Avoid meat products in pastry such as pies and sausage rolls.
- White fish such as cod, haddock, and plaice are very low in fat, so try to use more often.

## Choose healthy alternatives

- Use smaller amounts of meat, and eat less often.
- Use more protein alternatives such as lentils, beans, chick peas and other pulses, Quorn, tofu and soya products.
- Beans and lentils are cheap, low fat alternatives to meat and will keep you full for longer as they are absorbed slowly. Try adding them to stews, casseroles, salads and pasta.

## 6 Starchy food (carbohydrate)

Starchy foods such as potatoes, bread, cereals, rice and pasta are our main source of carbohydrate. They are a good source of energy and also provide fibre, calcium, iron and B vitamins.

### How much should I have?

- You should have **2 – 3 portions** of these foods a day.

#### What is a portion?

- 1 - 2 egg-sized new potatoes or 60-90g mashed potato
- Try to base each meal on starchy foods such as:
- 1 slice of bread, 1 crumpet or half a bagel
- 20g breakfast cereal (Weetabix™, cornflakes, puffed rice)
- 80 – 100g porridge (cooked, with semi-skimmed milk)
- 1 - 2 heaped tablespoons of boiled rice (50 - 90g)
- 60 - 90g well - cooked pasta/ noodles/ cous cous
- ½ dinner plate – sized chapatti
- 3 cream crackers/ Ryvita™/ crispbreads
- 60 – 90g cooked yam
- 1/3 of a medium green banana/ plantain (boiled/ steamed)

## Tips for starchy foods (carbohydrate)

- Some starchy foods can swell in your stomach pouch and cause discomfort. This may happen with undercooked rice or pasta, or doughy bread. Make sure that starchy foods are well cooked and, and try crackers/ crispbreads or toasted wholemeal/ granary bread instead as these may be better tolerated.
- High fibre varieties will fill you up and keep hunger at bay. For example; wholegrain bread, brown rice, wholegrain breakfast cereals and wholemeal pasta. Wholegrain cereals contain more vitamins and minerals too.
- Cooking and preparation - Take care with how you prepare and serve starchy food. It is often the way we cook or what we put on it or with it that can make it high in calories. Avoid adding butter, margarine, oil or high fat spreads/ sauces.
- Are starchy foods fattening? No. They contain less than half the calories of fat. Low carbohydrate diets often involve cutting out most starchy foods. This is bad for your health in a number of ways as you risk missing out on a wide range of essential nutrients.

## 7 Milk and dairy foods

Milk and dairy products are good sources of protein, calcium and vitamins A and D. Calcium is essential for keeping bones strong and healthy, and is particularly important after gastric bypass surgery.

### How much should I have?

- You should aim to have **2 - 3 portions** of these foods a day.

#### What is a portion?

- 1 medium glass semi-skimmed milk (200ml)
- 1 small piece of cheese (matchbox sized, 40g)
- 1 small low fat yoghurt (100g pot)
- 80g (2 tablespoons) cottage cheese

#### Alternatives

- 1 soya yoghurt (125g)
- 1 medium glass soya milk (fortified) (200ml)

## Tips for milk and dairy foods

- The amount of fat in dairy products varies, but much of it is saturated fat, which can raise cholesterol.
- Choose low fat options wherever possible (for example skimmed milk, low-fat yoghurts or fromage frais). They contain the same amount of calcium and vitamins, but less fat.
- Cheese can be very high in fat. Eat it less often and/or decrease the portion size. If flavouring a sauce, try using a smaller amount of a stronger-tasting cheese (for example mature cheddar). Try reduced-fat hard cheeses, low-fat cottage cheese and low-fat cream-cheese.
- Cream and butter are very high in fat, so use them sparingly. Use low-fat plain yoghurt or Crème fraîche instead of cream and low-fat margarine instead of butter.

## 8 Fruit and Vegetables

These are an essential part of any healthy diet, but play an important role after bariatric surgery as they contribute fibre, vitamins and minerals. Including them in your diet helps to prevent nutritional deficiencies and offers numerous health benefits.

### How much should I have?

- You should aim to have **3 - 5 portions** of these foods a day (with at least one fruit and 2 vegetable).

#### What is a portion?

- 1 apple, orange, pear or banana
- 2 plums, apricots or satsumas
- ½ a grapefruit or avocado
- 1 handful of berries or soft fruits
- 1 small glass of fruit juice (150ml)
- 1 small dessert bowl of salad
- 2 - 3 heaped tablespoons of vegetables (raw/ cooked/ frozen)

## Tips for fruit and vegetables

- Skins, seeds and pips may be difficult to digest unless chewed properly.
- Introduce foods with tough skin or pith cautiously. These include oranges, jacket potatoes with skin and sweet corn.
- Limit juice and smoothies to only one small glass a day. While they can count as one of your 5 a day, blending or juicing fruits releases sugars and removes important fibre, making them more concentrated and very easy to drink in large quantities. It is therefore much better to eat fruit and vegetables whole.
- Careful what you put on them! Salad dressings, sauces, dips, oils and butter will all add calories so use very sparingly if at all, and choose healthier alternatives.
- Choose a wide variety. Fresh, frozen, canned or dried are all full of important vitamins and minerals, are low in calories and can help protect against heart disease and cancer.



## **9 Food and drinks high in sugar and fat**

These foods tend to be a problem when trying to lose weight because they contain so many calories. After gastric bypass surgery these food may also cause dumping syndrome. It is therefore important to limit them as much as you can, or even better, cut them out altogether.

- Fat contains more than twice the amount of calories per gram as starchy foods, so eating less fat is the most effective way of eating less calories and losing weight.
- A small amount of fat is essential as it can provide vitamins such as A, D and E. Do not cut out fat altogether but do limit it as much as possible.
- Sugar contains calories and no other nutrients. Eating too much will cause weight gain and tooth decay. Try artificial sweeteners, and diet-drinks.
- Processed foods such as biscuits, cakes, crisps, ice-cream, pies and pastries contain hidden fat, so eat these only occasionally.
- Mayonnaise, salad dressings, cream and rich sauces are all high in fat so use less and choose low fat options.

## 10 Alcohol

Pure alcohol is almost as high in calories as fat, so it's important to cut down on after bariatric surgery. After bariatric surgery you are likely to feel the effects of alcohol sooner, after smaller amounts. It is therefore important that you take great care when drinking alcohol after having bariatric surgery.

- We recommend that you take no more than one unit a day if you are going to drink alcohol.
- One unit is approximately:
  - ½ pint of beer or cider (choose a non-fizzy type)
  - 1 small (125ml) glass of wine
  - 1 pub measure (25ml) spirit

## 11 Fluids

Drinking enough fluid is important in order to prevent dehydration. Dehydration can cause constipation, affect concentration and prevent the body from functioning normally. Aim to have between 1.5 – 2L fluid a day.

- Take fluids between meals (not with). This is because fluid will fill you up and may prevent you from finishing your meal. Eating and drinking together may also cause you to vomit.
- Avoid fizzy (carbonated) drinks as these will fill your stomach pouch with gas. This can be very uncomfortable and can cause stretching of the pouch.
- Always choose low calorie drinks. If you do not like water then choose from the following options:
  - Diet drinks (still)
  - No added sugar squash/ cordial
  - Skimmed or semi-skimmed milk
  - A squeeze of lemon or lime in a glass of water
- Limit tea or coffee to no more than 3-4 cups a day. This is because it can interfere with nutrient absorption from your limited dietary intake. Do not add sugar, try sweeteners instead.

## 12 Supplements

Vitamin and mineral supplements become necessary when you are not getting enough nutrients from the food you eat alone. This is more likely after bariatric surgery as the portions you eat will be very small.

### Gastric Band

It is recommended that you take the following for at least 2 years post-operatively to provide extra nutritional support whilst you are losing weight:

- Multivitamin and mineral supplement (one a day)
- Desunin (Vitamin D) (2 tablets daily)

### Sleeve Gastrectomy

It is recommended that you take the following for at least 2 years post-operatively to provide extra nutritional support whilst you are losing weight:

- Multivitamin and mineral supplement (two a day)
- Adcal D3 (2 chewable tablets daily)
- Desunin (Vitamin D) (2 tablets daily)

## Gastric Bypass

It is essential that you take the following for the rest of your life in order to prevent nutritional deficiencies that can have serious consequences:

- Multivitamin and mineral supplement (two a day)
- Adcal D3 (2 chewable tablets daily)
- Desunin (Vitamin D) (2 tablets daily)
- Ferrous sulphate (1 x 200mg tablet daily)
- Vitamin B12 (1mg injection every 3 months)

## Guidance on taking vitamins and minerals

- In general vitamins and minerals are best taken with food to improve absorption and reduce nausea. The exception is iron which works better on an empty stomach. Try to take iron an hour before or after a meal.
- Take iron at least 2 hours apart from calcium as they interfere with each other.
- Take iron with a source of vitamin C to improve absorption (e.g. small glass of fruit juice).
- Divide calcium doses across the day if you can as this will improve absorption (e.g. one in morning, one in evening).

## 12 Eating out or socially

While eating out is a treat, it doesn't need to be unhealthy. Many social situations are centred around eating and you need to learn how to become more comfortable about choosing food that is best suited to your new eating pattern. Try these tips and suggestions for eating out after surgery:

- BOSPA (British Obesity Surgery Patients Association) provides members with a small card that can be discreetly handed to staff, asking for a small portion, or the freedom to choose from the children's menu.
- Try having starters rather than a main course
- Share large portions with a friend
- Ask to take away any food that you can't finish.
- Ask for sauces or dressings on the side, and use smaller amounts on your meal
- Ask for your meat or fish to be grilled with no oil rather than fried
- Instead of dessert, round off your meal with coffee, or choose a fruit-based dessert and share
- Being more assertive at refusing food will become easier with practice. Try saying 'Thanks, but I've already eaten' or 'I'm not hungry at the moment'.

## **14 Low calorie snack ideas**

- Fruit (one piece)
- Low fat yoghurt
- One or two rice cakes
- One or two wholegrain crackers or crisp breads
- Tea or Coffee (with low fat milk, no sugar)
- Glass of diet squash/ soft drink or diluted fruit juice
- One cereal bar (low calorie option)
- Raw chopped vegetables plain or with low-fat dip
- One or two plain biscuits
- Sugar-free jelly
- Low calorie chocolate drink (40 kcal)
- Mug of low calorie 'slimmer' soup
- Two handfuls unsweetened or salted popcorn
- Sugar free mints
- One small meringue nest
- One slice of toast with reduced fat spread
- One crumpet with reduced sugar jam
- One Jaffa cake, fig roll or garibaldi biscuit
- Small bowl of breakfast cereal (no added sugar, wholegrain varieties are best, with semi or skimmed milk)

## 15 Sample meal plan

### Breakfast

Porridge (80 – 100g) using water or semi-skimmed milk **Or** One small pot of low fat yoghurt with a portion of fruit **Or** Scrambled egg (1 -2 eggs) with 1 slice of toast

### Lunch

Ham or low fat soft cheese on crackers (3 – 4) One portion of fruit  
One small pot of low fat yoghurt

### Evening meal

Meal suggestion as below followed by one small diet yoghurt and/or a portion of fruit

\* Don't forget to take fluid between meals.



## Meal suggestions

For portions see portion size lists above.

- Jacket potato (very small) with beans or grated cheese
- Steamed or grilled salmon steak with boiled new potatoes and salad
- Spaghetti with minced meat and bolognaise sauce
- Chickpeas with Mediterranean roasted or grilled vegetables Add a small amount of feta cheese for extra protein
- Chilli con carne with rice or cous cous
- Shepherd's pie with mashed potato
- Pasta with tuna, vegetables and cheese sauce
- Chunky soup (with meat, beans or lentils) and one slice of toasted bread or 2 - 3 crackers.
- Dahl with one slice of toasted bread, crackers or rice
- One slice roasted meat with gravy, boiled/ roasted potatoes, with vegetables
- Stir-fried chicken pieces with vegetables and noodles

- **Notes**



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