

# Dietary advice after gastric band surgery

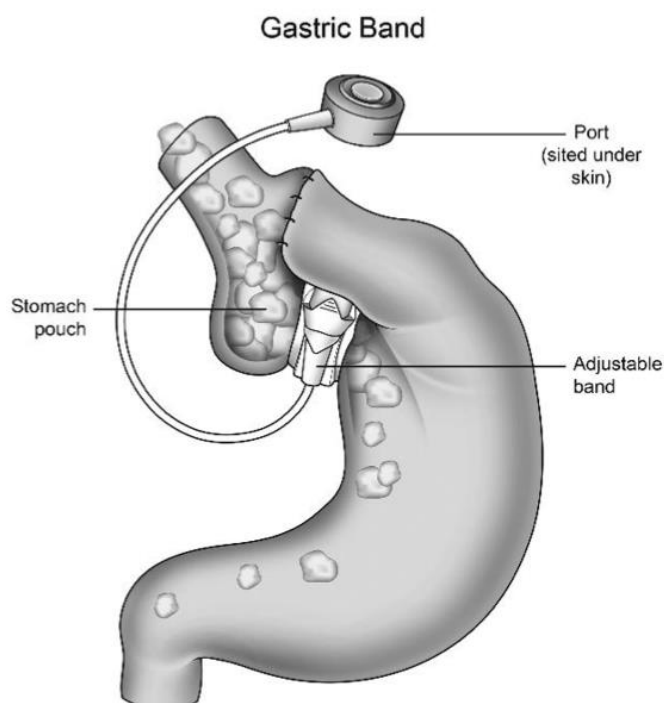
This leaflet gives dietary advice for after gastric band surgery and has been developed by bariatric dietitians. If you have any more questions or concerns, please contact the nutrition and dietetics department (details at the end of this leaflet).

## What is a gastric band?

A gastric band is a tube of silicone (like rubber) in a loop. It is positioned at the top of the stomach, just below the point where the oesophagus (food pipe) meets the stomach. When correctly adjusted, the band creates pressure around the area as food passes through, causing you to feel fuller earlier, and for longer after eating. The band can be made tighter using a port that is under your skin.

When you learn to work with your band and consume the right types and textures of foods, you will feel satisfied with only very small portions of food. The texture of your food choices is very important if you want to achieve a good level of weight loss with a gastric band. This will be covered in more detail later in this leaflet.

When you have your gastric band placed it will have very little or no fluid inside. Once you have fully recovered from surgery you will have your first 'adjustment'. This is a very quick and simple procedure where the port is accessed with a needle so that fluid can be added to the band, making it tighter around your stomach. You will need a few of these adjustments before your band is correctly adjusted to the point where it is tight enough to reduce hunger, make you feel full for a long time, and cause weight loss.



## Changing the way you think about food

It is important to realise that we don't always eat because we are hungry. We might eat out of habit, or because we have learned to turn to food as a comfort when we are bored, upset, or even happy. This 'head hunger' does not disappear with surgery and you must learn to overcome this if you want to be successful with your weight loss.

The gastric band works well at reducing your calorie intake from foods that require plenty of chewing. However, it does not make it difficult for you to drink high calorie liquids or eat foods that melt or crunch down to a paste. These foods will pass through your banded stomach easily without creating a feeling of fullness. You must make sure you change your diet and limit the following foods and drinks:

<b>High calorie liquids</b>	Alcoholic drinks, fruit juice, milk or milky drinks (such as milkshakes, hot chocolate or coffees), sugar-sweetened soft drinks
<b>'Meltable' foods</b>	Chocolate, ice cream, desserts, sweets, foods rich in cream or sugar
<b>Crumbly / Crunchy foods</b>	Biscuits, cookies, cakes, pastry, crisps
<b>High fat savoury snacks</b>	Crisps, pastries and nuts.

## Food reintroduction after your gastric band

After your surgery you will need to go through several stages, slowly progressing from liquids through to solid food. This is important to allow your band to settle into the correct position. At first, you will find that you feel full very quickly and do not feel hungry, so only want to eat very small amounts. Over the next few weeks you should progress to be able to eat three small meals a day.

**Important:** If you find you are having difficulty tolerating the texture of the foods at any stage, go back to the previous stage for a couple more days, then try again. Everyone heals and progresses at different speeds.

If you are concerned at any time, contact one of the dietitians to talk about it. If you feel that you need additional support, you can make an appointment to come into the hospital.

<b>Stage</b>	<b>Time</b>	<b>Diet type</b>	<b>Definition</b>
<b>1</b>	Weeks 1	Liquid diet	Can easily be sucked through a straw
<b>2</b>	Weeks 2 and 3	Pureed diet	Completely smooth with no lumps
<b>3</b>	Weeks 4 and 5	Soft diet	Can be mashed with fork
<b>4</b>	After 6 weeks	Normal diet	All textures, but low in fat and sugar

## Clear fluids

Once you are in recovery you will be encouraged to have small sips of water. Most people only manage a few sips at a time and it's not uncommon to feel some discomfort and gas on the first day. It is important to stay well hydrated (drinking plenty) and you should aim to drink around two tablespoons of clear fluids each hour. As well as water, you can drink black tea/coffee, and diluted, no-added-sugar cordial or squash. When you feel full, **stop**, as drinking too much can cause vomiting (being sick). Once the surgical team have given authorisation, you can move onto stage 1 (liquids).

## Stage 1: Liquid diet (week 1 after surgery)

- Start with sips and, if these feel comfortable, gradually increase the amount you take in one go. Be careful not to gulp your drinks as this can cause vomiting. Aim for 1-2 small cups of fluid per hour.
- It is fine to drink (for example, tea, coffee, squash, water), but you should make sure these are in addition to high protein liquids and not **instead of** them.

### High protein liquids:

- Milk with added milk powder (make at home by mixing 1 pint of semi-skimmed or skimmed milk with 4 tablespoons of dried skimmed milk powder).
- Meritene™ shakes and soups (available in pharmacies).
- Complan™ shakes and soups (available in supermarkets and pharmacies).
- Meal replacement shakes
  - Slimfast™ (powders or ready to drink - available in supermarkets)
  - Tesco Slim™ or Asda Great Shape™
  - Exante™ or Lighter Life™ (available online).
- Smooth soup (homemade or tinned) with an added 1-2 tablespoons skimmed milk powder or unflavoured protein powders. Avoid instant cup-a-soups.
- Smoothies (fruit or vegetables blended with milk with added milk powder, high protein yoghurt or protein powder). Homemade will be better as shop-bought varieties may be high in sugar. See example recipe below.
- High protein milkshakes (such as, Ufit™, Arla™, For Goodness Shakes™, Urban Active™).
- Protein water (such as, Asda™, Vievé™, Upbeat™ or +PW™).
- Whey, soya or pea protein powders, made into a shake as in instructions (available in health food shops and some pharmacies).

## Recipes for stage 1

### Milk with added milk powder – makes 3 servings (14g protein per serving)

2oz / 60g / 4 tablespoons skimmed milk powder

1 pint / 570ml cold skimmed milk

Vanilla extract or unsweetened cocoa powder (optional)

**Method:** Mix the milk powder and flavouring (if using) with a little of the milk to form a paste. Stir in a pint of cold skimmed milk, and serve.

### Fruit smoothie – makes 2 servings (15g protein per serving)

½ pint / 285ml milk with added milk powder

¼ pint / 140ml low fat yogurt

3oz / 100g fresh soft fruit, such as bananas, berries, peaches

**Method:** Combine all ingredients in a blender and blend until smooth. Add extra milk or water as needed. Serve chilled on ice, or freeze to make an ice lolly.

### **Fruit punch** (10g protein per serving)

1/3 pint/170ml sugar-free non-carbonated drink (such as no-added-sugar squash)

1oz / 30g skimmed milk powder

4 ice cubes

**Method:** Combine all ingredients in a blender until smooth.

### **High protein custard** (10g protein per serving)

Make as directed on the packet using milk with added milk powder.

Homemade and ready-made custards are also suitable as long as they are thin enough to pass through a straw. Add extra milk as needed.

## **Stage 2: Puree diet (weeks 2 and 3)**

- The texture of your foods at this stage should be completely smooth (no lumps) and runny enough to be poured off a spoon (like a thin, smooth yoghurt).
- Blend foods until smooth using a hand blender or a food processor. You may need to add extra liquid to achieve the right texture. Try using stock, gravy, cooking water from vegetables or low fat sauces for savoury foods. A sieve can be used to remove any seeds or pips after blending.
- Have 4-6 small meals a day. Start with about 2-3 tablespoons per meal and increase this gradually, if and when this feels comfortable to about 4-6 tablespoons. If you can only manage very little (less than 4 tablespoons) then try to have something every 2 hours (this is at the beginning only). Chew well and eat slowly. **Stop as soon as you feel full/satisfied.**
- Make sure you include a **protein** source at each meal. This is important to help your recovery and to keep you feeling full. You should aim for 60-80g protein per day.
- You can slowly build up to thicker purees if tolerated.
- You still need to make sure you drink a minimum of 1.5-2 litres of water or other low calorie liquids every day. Take it in small 100–200ml glassfuls and drink between meals, not with your meals.

You should aim to balance your meals according to the 'Bariatric plate' (page 6), with half of your meal being protein, a quarter vegetables/fruit and a quarter carbohydrate.

Good high protein meal options are:

- pureed minced beef/turkey/ Quorn™/soya mince with tomato sauce or gravy
- pureed casseroled/stewed/curried meat in a sauce or gravy
- pureed fish in sauce or fish pie
- pureed pulses (such as baked beans)
- pureed lentils/dahl
- pureed scrambled egg
- soup from stage one
- light cream cheese/pureed cottage cheese
- thin high protein yoghurt (Skyr™) or mousse (such as, Arla™, Isey™, Graham™, Siggis™)
- low fat custard made with milk with added milk powder
- hummus or bean dips.

Serve these with small amounts of pureed vegetables, and carbohydrate (such as smooth mashed potato) to make a complete meal.

### Stage 3: Soft diet (weeks 4 and 5)

Foods at this stage should be soft enough that they will fall apart when pressed with a fork or spoon. You should continue to eat the same sorts of foods you were eating during stage 2 (pureed diet), but they no longer need to be pureed.

You should continue to eat small quantities of these foods, spread out over 3-4 meals or snacks. Start to establish a regular meal pattern now and avoid grazing throughout the day. Make sure you still take small mouthfuls and chew each one well, before swallowing. Listen to your body and when you feel satisfied, **stop**.

You should aim to balance your meals according to the 'Bariatric plate' (page 6), with half of your meal being protein, a quarter vegetables/fruit and a quarter carbohydrate. Choose a high protein option and add small amounts of soft vegetables and carbohydrate – see examples below.

By the end of week four you should be able to manage a thick puree such as smooth mashed potato.

### Stage 4: Regular diet (after 6 weeks)

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 – you should also be aiming for a healthy nutritious eating plan. Each person differs in the foods they can eat, but there are eight rules that you should follow if you want to get the best results from your weight loss surgery:

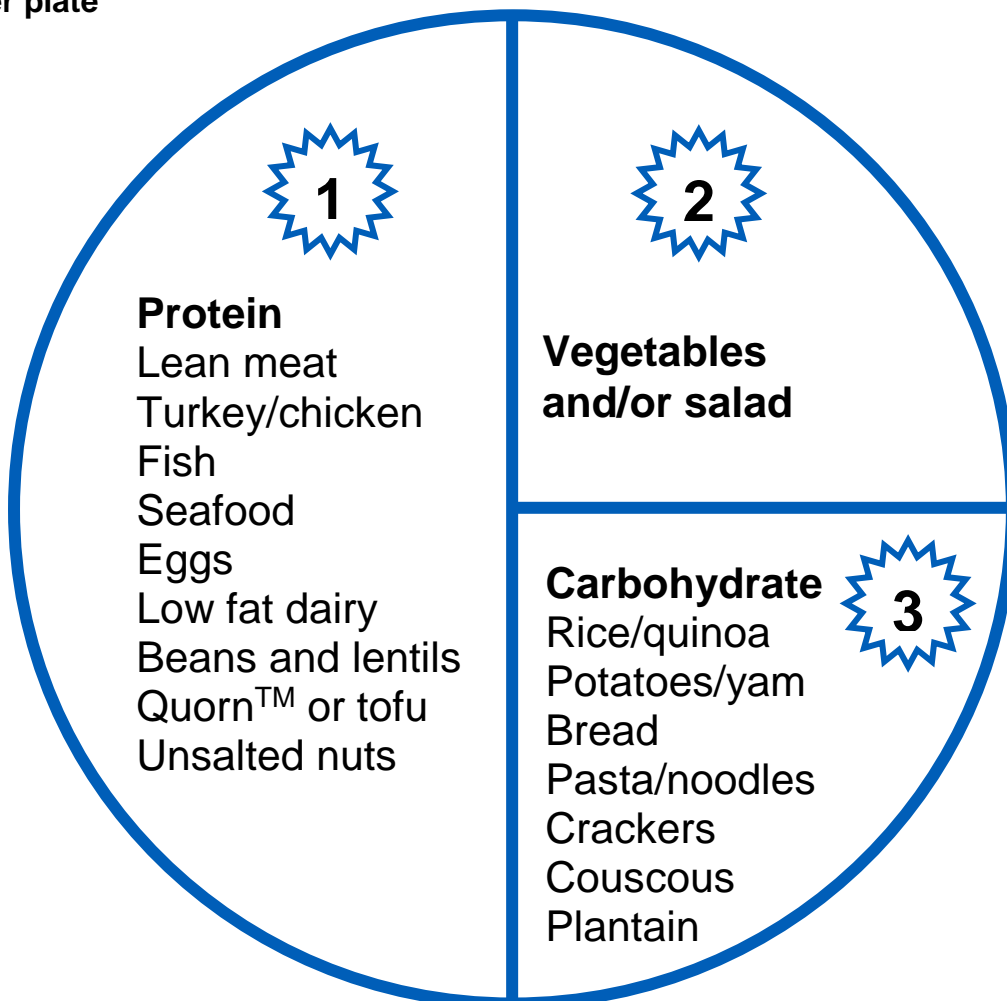
- 1 **Eat three meals each day.** Your new smaller stomach size and the reduction in hunger hormones should mean you are satisfied by eating three meals a day. Avoid skipping meals, even if you don't feel hungry, as going for long periods without eating can actually slow down weight loss.
- 2 **Eat slowly and stop as soon as you feel full.** Rushing your meals can lead to overeating as there is a delay between eating and your brain realising that you are full. Eating too quickly often means you won't be chewing your food properly.
  - a. Take small bites (the size of a 20p).
  - b. Chew each bite at least 20 times or until it becomes a paste.
  - c. Aim to wait one minute between mouthfuls.
  - d. Try putting cutlery down between mouthfuls.
  - e. Eat at a table without distractions.
- 3 **Protein, vegetables, carbohydrates.** This is the order in which you should eat from your plate. Protein is the most important part so eat that first in case you become full before you clear the whole plate. Carbohydrates are least important so eat these last and don't worry if you cannot finish them.
- 4 **Eat a healthy, balanced, solid diet.** Choose solid foods (such as lean meat or fish with vegetables) as these stay in the stomach for longer and are more satisfying. You will eat less overall and stay fuller for longer. Follow a diet, based on **Healthy Eating, guidelines** that is low in fat and sugar, and rich in lean protein and fibre.

- 5 **Small portions.** Your meals should be no larger than the size of a 'side plate' or 'tea plate'. We suggest that you switch to using one of these plates long-term to help you control your portions. Use the Bariatric plate diagram to guide you.
- 6 **Be cautious of unplanned snacking.** Try not to develop a 'grazing' pattern of eating small meals throughout the day.
- 7 **Avoid eating and drinking at the same time.** Try to drink half an hour before and after meals but not at the same time. There is not enough room in your new stomach for food **and** drink, and this may make you feel sick and mean you cannot finish your meal. Aim to sip fluids throughout the day between meals instead.
- 8 **Choose low calorie drinks (non-carbonated).** Liquids pass through your stomach quickly and easily, and high-calorie drinks will add calories to your daily intake without filling you up. Milk is a good source of calcium and low fat milk in reasonable quantities is fine, but other high-calorie liquids should be limited. **Avoid all** fizzy drinks as these can create pressure in the stomach and cause discomfort and possibly lead to the band slipping.

## Bariatric plate

The picture below shows you how to balance your main meals.

### Small dinner plate



For best weight loss, limit the following foods:

- High calorie drinks (alcoholic drinks, fruit juice or smoothies, full-fat milk or milky drinks such as hot chocolates, milky coffees or milkshakes, sugar-sweetened soft drinks, energy drinks).
- Chocolate, ice-cream, cakes, sweets, biscuits and desserts rich in sugar or fat.
- Added fats and fatty foods – butter, oils, cream, full fat dairy, fried foods, fatty meats.

## Cooking tips

- Remove all fat and skin from any meat or chicken **before** cooking.
- Use low fat cooking methods such as grilling, baking (wrap in foil to keep things moist), steaming or boiling.
- Limit oil or butter to vegetables or salads. If you need extra flavour, add seasoning or a little bit of low calorie dressing or vinegar.
- If you need to use oil to stop food from sticking, use a spray oil.
- Add flavour using herbs, spices, seasonings, lemon juice, ginger, onions, and garlic.
- Do not add any oil or butter to carbohydrates – keep them simple.
- Choose high fibre carbohydrate options wherever possible as these will keep you fuller for longer and help to prevent constipation (try wholegrain bread, pasta, rice, crackers and keep skins on potato).

## Multivitamins and minerals

After your surgery, it is unlikely that you will be able to get all the vitamins and minerals essential for good health from your food alone. So it is important that you take multivitamin and mineral supplements every day, for the rest of your life. You will need to take multivitamin and mineral, and a vitamin D supplements.

### Multivitamin and mineral (A-Z)

Choose from:

- Forceval™ (available on prescription) - one capsule daily  
**or**
- Over-the-counter supplement (2 tablets daily) such as Sanatogen A-Z™, Centrum A-Z™, Tesco A-Z™, Lloyds A-Z™

### Vitamin D

- Desunin™ (2 tablets daily)

It is also important that you have regular blood tests to check your nutritional status and identify deficiencies (you not having enough in your body). Appointments will be made for you at the hospital over the next two years. After this, you should arrange to see your GP for a blood test once a year.

If your blood test shows a vitamin or mineral deficiency, you may be prescribed extra supplements to resolve this.

## Band adjustments

When your band was fitted it was either empty, or filled with a very small amount of fluid. The surgeon will inflate your band with saline about six weeks after your surgery. Inflations are not painful and take five minutes in an outpatient clinic (see our leaflet, **Gastric band adjustments** for more information. If you don't have a copy, please ask for one).

Proper band adjustment very important to your long-term success. If the band is too tight you will not be able to tolerate enough food and fluid. If it is too loose, you will be able to tolerate too much.

It takes time to get the band adjustment just right and the amount of fluid that the band is inflated with will depend on:

### 1. the variety/amount of food that you can eat

If you are feeling hungry and needing to eat a large amount of food your band may need an adjustment.

### 2. if you are vomiting or regurgitating often

If you are not tolerating food (and are following the advice in this leaflet) it could mean that your band is too tight and will need to be deflated.

### 3. your weight loss/maintenance

If your hunger is controlled and your weight loss is steady, your band should be at the right place. If you do not lose weight for three consecutive weeks you may need an inflation.

## After a band adjustment

After a band adjustment follow these guidelines:

- Follow the free fluids diet for the rest of that day and the following day.
- If you can tolerate the free fluids diet, move on to a pureed diet for one day.
- On day four, if you can tolerate the pureed diet, and are not vomiting or uncomfortable, continue eating the foods you were enjoying before your band adjustment.
- You may be more comfortable taking chewable vitamins and crushing medications for the first few days after your band adjustment.
- Remember to include protein-containing foods every day.

## Pregnancy after bariatric surgery

Women are advised to avoid pregnancy for 12-18 months after surgery, when weight has stabilised. This is because the effects of rapid weight loss on a developing baby are not yet understood. However, many women do become pregnant during this time and go on to have a successful pregnancy. Pregnancy in women who have had bariatric surgery is thought to carry less risk than pregnancy in women with morbid obesity.

It is important to remember that as you lose weight your fertility may increase, so you should make sure that during this time you are taking appropriate contraceptive precautions. If you do become pregnant after bariatric surgery you should undergo nutritional screening every trimester and have more regular appointments with your obstetric team to monitor the growth of your baby.



As part of preconception planning, women are advised to avoid vitamin and mineral preparations which contain vitamin A (retinol form) in the first 12 weeks of pregnancy. Your bariatric team can advise you on a multivitamin that is safe to take during pregnancy. Women with obesity or diabetes should also take a higher dose of folic acid than is usually recommended. Please discuss this with your health professional.

If you do become pregnant at any point after bariatric surgery you should:

- tell your midwife you have had bariatric surgery
- contact the bariatric surgery team as soon as possible.

## Frequently asked questions

### **Are there any foods I should avoid with a gastric band?**

You should be able to eat most foods with a gastric band, and the diet we recommend you follow in the long-term is a healthy, balanced diet with plenty of lean protein and fibre. To get the best results you must limit your intake of 'meltable' or liquid calories as described earlier in this leaflet.

The only other item we would recommend you avoid is fizzy drinks of any kind as much as possible as they can create pressure in the stomach causing the band to slip or move. As explained above, some foods will be more challenging to eat than others. This does not mean you should avoid them. As much as possible, try to eat solid textures that require plenty of chewing to get maximum effect from your band.

### **Can I drink alcohol with a gastric band?**

It is not recommended that you drink over the 14 units of alcohol per week. It is likely that you will feel the effects of the alcohol much more quickly than you did before surgery. Take special care when driving as it may affect your legal limit and your reaction speed.

Remember that alcohol is very high in calories (particularly alco-pops and stronger wines or lagers) and contains few other nutrients (so is known as 'empty calories'). It can also stimulate appetite, which is another reason to limit your intake.

### **Possible problems and solutions**

It is normal to experience some difficulties with eating and drinking after weight loss surgery. These problems usually happen during the early stages after surgery as you are healing and adapting to a new way of eating which can take time.

Important – If you are vomiting all foods or fluids, or have tried the tips below and continue to vomit, contact your surgeon or GP as soon as possible. In an emergency you should go to an Emergency Department (A&E).

Complaint	Common causes
Pain or discomfort	<ul style="list-style-type: none"> <li>• Eating or drinking too fast or too much at one time. Try taking smaller mouthfuls (size of a 20p), avoid gulping, and wait for each mouthful to go down before taking the next.</li> <li>• Failing to chew food to a paste before swallowing.</li> <li>• Eating or drinking beyond the point of feeling full. Stop as soon as you feel full, but before you become uncomfortable</li> </ul>
Vomiting or regurgitation	<ul style="list-style-type: none"> <li>• Eating or drinking too fast or too much at one time (see point above).</li> <li>• Failing to chew food to a paste before swallowing (see point above).</li> <li>• Eating or drinking beyond the point of fullness (see point above).</li> <li>• Moving on to the next stage too soon, before you are ready.</li> <li>• Eating and drinking too close together. Try to avoid drinking 30 minutes before and after eating.</li> </ul>
Constipation	<ul style="list-style-type: none"> <li>• Not getting enough fluids and becoming dehydrated. Aim for 2 litres of fluid each day.</li> <li>• Eating less than your body is used to (this is unavoidable).</li> <li>• Eating less fibre than normal. Speak to your dietitian or healthcare provider if you want more information on how to increase your fibre intake.</li> <li>• You may need to have medication (stool softener or laxative). Use as directed by your surgeon.</li> </ul>

## Further sources of information?

**British Obesity and Metabolic Surgery Society**, [w: www.bomss.org.uk](http://www.bomss.org.uk)

### Contact us

If you have any questions or concerns, please contact the bariatric dietitians, Nutrition and Dietetics, 1<sup>st</sup> Floor, Tower Wing, Guy's Hospital, London SE1 9RT, [t: 020 7188 4128](tel:02071884128), Monday to Friday, 9am-5pm, [e: BariatricDietitians@gstt.nhs.uk](mailto:BariatricDietitians@gstt.nhs.uk).

Out of hours, contact NHS 111, and in an emergency dial 999.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [w: www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

### Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

[t: 020 7188 8748](tel:02071888748), Monday to Friday, 9am-5pm

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