

Dietary advice following gastric band surgery

This information has been given to you to provide dietary advice following a gastric band surgery and has been developed by bariatric dietitians. If you have any further questions or concerns, please do not hesitate to contact the nutrition and dietetics department (contact details given at the end of this leaflet).

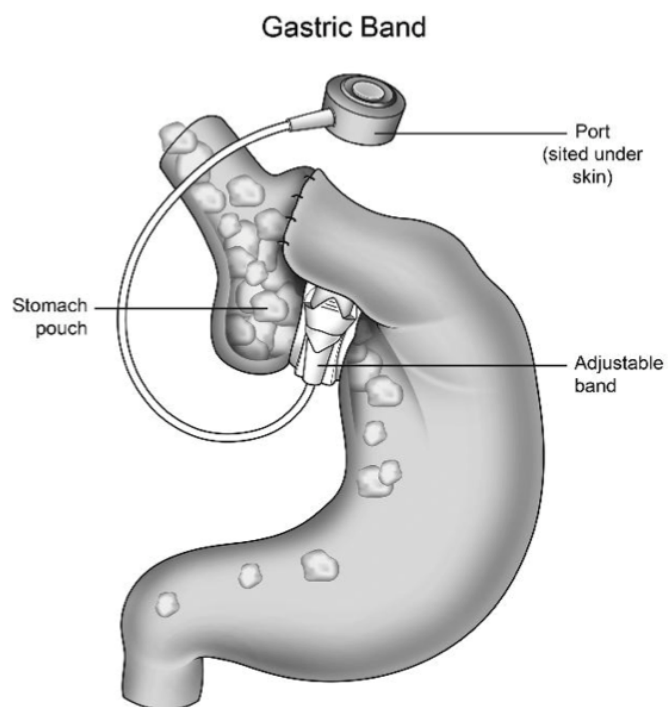
What is a gastric band?

The gastric band 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.

When you learn to work with your band and consume the right types and textures of foods then 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 on in this booklet.

When you have your gastric band placed it will have very little or no fluid inside at first. Once you have fully recovered from surgery you will have your first 'adjustment'. This is a very quick and simple procedure whereby 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 sufficiently tight to reduce hunger, cause early and prolonged satiety, and weight loss.

To learn more about how the band works and how to learn to work with it, follow the link at the end of this booklet to an educational video at Lapband Australia.



What your band can't do

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, or 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 too easily. These foods will pass through your banded stomach easily without creating a feeling of fullness. **You must take care to change your diet and limit the following foods and drinks:**

High calorie liquids	Alcoholic drinks, fruit juice, milk or milky drinks (such as milkshakes, hot chocolate or coffees), sugar-sweetened soft drinks
'Meltable' foods	Chocolate, ice cream, desserts, sweets, foods rich in cream or sugar
Crumbly / Crunchy foods	Biscuits, cookies, cakes, pastry, crisps

Food reintroduction following your gastric band

Following 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. Initially 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 3 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 discuss things further. If you feel that you may need additional support, you can make an appointment to come into the hospital.

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

Stage 1: Liquid diet (week 1 after surgery)

The surgery will cause some swelling around the band so it may initially feel very tight and restrict the amount of fluid you can drink. It is possible that you will not manage much on the first day of the operation.

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 and you should aim to drink around 2 tablespoons per hour.

As the swelling reduces over the next couple of days you should be able to manage to drink a bit more. Liquids are foods that could easily be sucked up a straw (although we don't recommend that you drink using a straw as this could cause you to take in too much air).

- All drinks should be smooth (no bits or lumps) and thin enough to be sucked through a straw (although we do not recommend that you drink using a straw, as this could cause you to swallow air which can be uncomfortable).
- 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 may result in vomiting. Aim for 1-2 small cups of fluid per hour.
- Aim to have a minimum of 2-2 ½ litres (3-4 pints) of fluid each day to avoid becoming dehydrated. *At least 1-1.5 litres of this should be **protein-rich, nutritious liquids** (see below).*
- Avoid all fizzy drinks.
- While it is fine to drink tea, coffee, squash, water etc. you should make sure these are in addition to nutritious liquids, **not instead of**.

Nutritious liquids:

- High protein milk (mix 1 pint of semi-skimmed or skimmed milk with 4 tablespoons of dried skimmed milk powder)
- Meritene shakes and soups (formerly called Build-Up) – available in pharmacies.
- Complan shakes and soups – available in supermarkets and pharmacies
- Slimfast (powders or ready to drink) – available in supermarkets
- Smooth soup (homemade or tinned) fortified with 1-2 tablespoons skimmed milk powder.
- Smoothies. (Fruit blended with milk or yoghurt) Homemade will be best. Shop-bought varieties will be too high in sugar.
- Unsweetened fruit juice (limit to 1-2 small glasses a day and dilute 50:50 with water)

Example meal plan

Breakfast	High protein milk (200ml)
Mid morning	Fruit smoothie (200ml)
Lunch	Homemade or tinned soup fortified with 102 tablespoons dried skimmed milk powder
Mid Afternoon	Slimfast (200ml)
Dinner	Complan or Meritene (shake or soup), or High protein Milk (200ml)
Supper	High protein Milk (200ml)

Additional fluids, such as water, tea, coffee and diluted sugar free soft drinks (non fizzy), to be taken throughout the day between these meals.

Recipes for stage 1

High-protein milkshake

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

½ pint / 250ml high-protein milk

¼ pint / 100ml 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.

Fruit punch (10g protein per serving)

1/3 pint/200ml sugar-free non-carbonated drink (such as Ribena™)

1oz / 30g skimmed milk powder

4 ice cubes

Method: Combine all ingredients in a blender until smooth.

Custard – make as directed on packet using high-protein milk

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

Stage 2: Purée diet (weeks 2 and 3)

- It is still important to avoid lumps at this stage. Make sure foods are blended well using a hand blender or a food processor. A sieve can be used to remove any seeds or pips. Always try to blend lumps into the purée rather than straining them out because the lumps are often rich in protein (for example pieces of meat, fish or beans).
- The texture of your foods at this stage should be like yoghurt. 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, and fruit juice for puréeing fruit and desserts.
- Have 4-6 small meals a day. 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).
- Start with about 2-3 tablespoons per meal and increase this gradually if and when this feels comfortable to about 4-6 tablespoons.
- Chew well and eat slowly. **Stop as soon as you feel full.**
- 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 60g protein per day.
- You can slowly build up to thicker purées if tolerated. By the end of week four you should be able to manage a thick purée such as smooth mashed potato.
- You still need to make sure you drink 1.5 litres (2½ pints) of water or other liquids every day. Take it in small 100–200ml glassfuls and drink between meals, not with your meals.

Meal ideas for stage 2

Remember to purée with a hand blender or food processor first.

Breakfast	Low fat yoghurt or fromage frais
	½ -1 soggy weetabix or ready brek (add warm milk to make runny)
	Homemade fruit smoothie (fruit blended with yoghurt or milk)

Main Meals	<p>Thick, smooth soup (add skimmed milk powder if it doesn't contain meat, fish, chicken or lentils)</p> <p>Puréed baked beans and mashed potato</p> <p>Puréed fish in sauce or fish pie with mashed potato</p> <p>Puréed meat/ chicken/ fish stew with pureed vegetables and mash</p> <p>Puréed Shepherds or Cottage pie</p> <p>Puréed pasta with cheese and vegetable sauce</p> <p>Puréed pasta bolognaise</p> <p>Scrambled egg (very soft and sieved)</p>
Snacks	<p>Blended tinned fruit (unsweetened)</p> <p>Low fat yoghurt or fromage frais</p> <p>Low calorie dessert or mousse</p> <p>Sugar-free custard with stewed apple or mashed banana</p>

If you find it easier you may wish to purchase and purée a low calorie ready meal. Meals that will purée well include fish pie with potato top, stews, casseroles, Shepherds or Cottage pie, cauliflower cheese and bolognaise. Half a ready-meal for one person will usually be plenty at this stage.

Stage 3: Soft diet (weeks 4 and 5)

You should continue to eat the same sorts of foods you were eating during stage 3 (puréed diet), but they no longer need to be puréed. 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 small quantities of these foods, spread out over 3 - 4 meals or snacks. Make sure you still take small mouthfuls and chew each one well before swallowing. Listen to your body and when you feel full, **stop**.

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, but you are aiming for a healthy nutritious eating plan as well. Each person differs in the foods they can eat, but there are **six golden rules** that you should follow if you are dedicated to maximising the benefit of your weight loss surgery.

Golden Rules for eating and drinking with a gastric band

1. **Eat three meals per day** – Have **3 or less** small, regular, healthy balanced meals a day. Avoid snacking between meals unless you really need to due to hunger. If you are often hungry between meals you may need your band adjusted.
2. **Eat healthy, solid food** – soft food slips down easily and whilst this has the benefit of being easier to manage, you will likely end up eating more over the course of the day. Many soft foods are also higher in fat or carbohydrates and as a consequence you may be consuming more calories than you should, causing your weight loss to slow down or stop.

Choose solid foods without lots of sauce (such as a small meal of chicken and vegetables) as these stay in the stomach for longer and are more satisfying. You will therefore eat less overall and stay fuller for longer.

3. **Eat slowly and stop as soon as you feel full (The '20, 20, 20 rule')** – most people who are overweight are used to rushing their meals, which leads to overeating as there is a delay between the stretching of the stomach wall and your brain realising that you are full. Eating too quickly often means you won't be chewing your food properly. Take tiny bites (cut meat up to the size of a pencil-top rubber) and chew each piece at least 20 times or until it becomes a paste. Try to take one mouthful per minute (20 mouthfuls), and meals should last no longer than 20 minutes.
4. **Do not eat between meals** – avoid snacking between meals unless you really need to due to hunger. If you are often hungry between meals you may need your band adjusted. Speak to your dietitian who will advise you.
5. **All drinks should be virtually zero calories** – as liquids pass through your stomach so easily, high-calorie drinks will simply add calories to your daily intake without filling you up. High-calorie drinks include alcohol, fruit juices, smoothies, sweetened (sugar-containing) squash/cordial, non-diet soft drinks, sports drinks, milk and milk-based drinks such as milkshakes. Milk is a good source of calcium and skimmed milk in reasonable quantities is fine, but other high-calorie liquids should be limited. **All carbonated (fizzy) drinks should be avoided as the gas can put pressure on the gastric band which may cause it to move.**
6. **Choose textures carefully** Follow a diet based on 'Healthy Eating' guidelines and remember to choose foods that have a good texture to work with your band. Foods with a good solid texture are usually high in protein or fibre (e.g. lean meat or fish, vegetables, whole grains).

What is a healthy diet?



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

Protein foods (meat, fish, eggs, beans). Include two to three 60–90g (2–3oz) portions of protein per day. You should remember to chew meat, chicken and fish thoroughly before you swallow. The recommended bite size is the size of a pencil-tip eraser.

Milk and dairy (milk, cheese, yogurt). Choose low-fat cheese and limit the amount to 30–60g (1–2oz). Choose skimmed milk and low fat yogurt varieties.

Fruit and vegetables. Try to have four to five portions per day. Salads and vegetables are filling as well as nutritious.

Carbohydrates (bread, rice, pasta, potatoes, cereals). Use wholegrain versions of these where possible, as they are more nutritious. Aim for one small portion (60–90g / 2–3oz) at each meal.

Fats and sugary foods (sweets, cakes, puddings, desserts, chocolate, oils). Use a small amount of olive or vegetable oil for cooking and replace puddings with a low fat yogurt. Beware of soft, calorie-laden foods such as chocolate, sweets or ice cream – these are often higher in fat and less filling than other foods.

For best weight loss, limit the following foods:

- High calorie drinks (full-fat milk, milkshakes, alcohol, fruit squashes, juice)
- Cakes, biscuits and desserts
- Cereals with added sugar
- Fats and fatty foods – butter, oils, snack foods (such as crisps and peanuts), chips
- Creamy soups

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 around six weeks after your operation. Inflations are not painful and take five minutes in an outpatient clinic (see our leaflet **Gastric band adjustments** for more information).

Proper band adjustment is crucial 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 are able to tolerate the free fluids diet, advance to a puréed diet for one day.
- On day four, if you are able to tolerate the puréed 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.

Multivitamins and minerals after a gastric band

Following your surgery you may be prescribed some vitamins and minerals. This is to support your nutritional status while you are losing weight and eating less than you were. Your GP can prescribe these for you. You will usually be prescribed Forceval and additional calcium/vitamin D, but you may receive other prescriptions depending on your individual needs.

It is also important that you have regular blood tests to check your nutritional status and identify deficiencies. Appointments will be made for you at the hospital over the next two years. Following this, you should arrange to see your GP for a blood test once a year. If your blood test indicates a vitamin or mineral deficiency, you may be prescribed additional supplements to resolve this.

Pregnancy after bariatric surgery

Women are advised to avoid pregnancy for the first 12 to 18 months after surgery when weight has stabilised. This is because the effects of rapid weight loss on a developing baby are not yet well 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.

Patients who have had bariatric surgery are at risk of nutritional deficiencies and must take vitamin and mineral supplements as recommended. As part of preconception care 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 weight loss outcome you must limit your intake of 'meltable' or liquid calories as described above under 'What the band can't do'.

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 consume 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 alcohol for the first two months after the operation. It is likely that you will feel the effects of the alcohol much more quickly than before. 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 (also known as 'empty calories'). It can also stimulate appetite, which is another reason not to limit your intake.

Possible problems and solutions with a gastric band

Vomiting

You should not expect to be sick with a gastric band. If you are, it is likely you have either:

- Eaten too much.
- Eaten too quickly.
- Not chewed the food enough – remember to chew to a paste before swallowing.
- Taken a drink very soon before or after a mouthful of food.

Ask yourself if any of these could be likely causes and try to avoid repeating the 'mistake' at the next meal. It can take a number of weeks – months to learn how to adapt your eating to work with the band so try not to panic if you don't get the hang of it straight away.

If you continue to be sick and it cannot be explained by any of the more common causes above, you should contact your surgeon or GP as soon as possible as you may have a problem with your band or it may require adjusting.

Constipation

If you are suffering with this, check you are drinking enough fluid. You should have at least 2 litres a day. Try to choose more high fibre foods such as wholegrain products and include plenty of fruit and vegetables. Regular exercise will also help to alleviate constipation. If constipation persists then you can safely take laxatives such as Resource Optifibre, lactulose, milk of magnesia or Senna. Speak to your pharmacist or GP if you are unsure.

What to do if food gets stuck?

This may happen if you have eaten a food that was too solid, eaten too fast or too much, or as a result of eating more 'challenging' foods. This will feel uncomfortable and you may wretch or vomit.

It usually resolves itself, but you can try repeatedly swallowing small quantities of cold sparkling water or Diet Coke, as the fizz may help to dislodge the lump. We do not recommend drinking fizzy drinks, but small quantities may help in this particular situation. If the trouble persists, please contact your surgeon or GP as soon as possible. In an emergency you should attend your nearest Accident and Emergency department.

Where can I get more information?

The British Obesity Surgery Patient Association

www.bospauk.org

Weight Loss Surgery Information

www.wlsinfo.org.uk

Weight Concern

www.weightconcern.com

British Obesity and Metabolic Surgery Society

www.bomss.org.uk

Lapband Australia – educational video on how to work with the band

www.lapbandaustralia.com.au/eight-golden-rules.html

Contact us

If you have any questions or concerns, please contact the nutrition and dietetics department on **020 7188 4128**. To contact a specific bariatric dietician, please refer to the Bariatric Contacts List you were given at the Bariatric Education group session.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit 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 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) **e:** pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) **e:** complaints2@gstt.nhs.uk

Language Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

t: 020 7188 8815 **e:** languagesupport@gstt.nhs.uk