

Department of Nutrition and Dietetics

St Mary's Hospital

Praed Street, London, W2 1NY

Tel: 020 3312 6398

Fax: 020 3312 3377

Diet for Gastric Banding

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Department of
Nutrition and Dietetics

Contents

Pre-operative diet for bariatric surgery

What is the aim of the diet?	3
How long will I have to follow this diet?	3
How much carbohydrate am I allowed?.....	4
Menu plan.....	4-6
Fruit portions list	6

Post-operative diet for gastric banding

Introduction.....	7
What is the aim of the diet?	8
Post-operative eating plan.....	8
Day of surgery	8
Day 1 post surgery	8
The first 6 days – liquid diet.....	9
High protein liquid recipes	10-11
Smoothie recipes.....	12-13
Weeks 2-3—soft diet	14-16
After 2 weeks—normal diet	17-18
Sample meal plan.....	19-20
Problem foods	20-21
Summary	22
Contact information	23

Contact information

If you have any queries or questions regarding the diet, or have started feeling unwell after following it, **please contact**

Imperial Weight Centre

St Mary's Hospital, Praed Street, London, W2 1NY

Tel: 020 3312 6449

Obesity Specialist Dietitians

Joanne Boyle RD

Candace Bovill-Taylor RD

Bariatric.dietitians@imperial.nhs.uk

Tel: 020 3312 5688

Please note this is an answer phone and is checked weekly for any diet related messages will be responded to as soon as possible.

Your dietitian is _____

Useful websites

- www.nhs.uk/Conditions/weight-loss-surgery
- www.imperial.nhs.uk/imperial-weight-centre
- www.bospa.org
- www.wlsinfo.org

Summary

In the long term, to obtain the greatest benefit from your surgery it is important to follow the following **8 rules**.

1. Eat three meals per day. Only eat when hungry and stop when full. It is not unusual for patients with a band to find that they are not hungry or are unable to eat in the morning
2. Follow the rule of 20. Only put food in your mouth the size of a 20 pence piece, chew 20 times and allow 20 minutes for a meal
3. Do not eat in between meals
4. Eat healthy, solid food
5. Eat slowly and stop as soon as you feel satisfied
6. Do not drink at meal times
7. All drinks should be non-carbonated & low in calories
8. Remember the band alone will not make you lose weight, it will only help you to reduce the amount you can eat. You need to eat fewer calories and increase physical activity where possible as this is the only way to lose weight

Pre-operative diet

What is the aim of the diet?

The aim of this diet is to reduce the glycogen stores in the body especially those in the liver. This results in the liver 'shrinking' in size making it easier to move.

During laparoscopic or 'keyhole' surgery, the liver has to be lifted out of the way to access the stomach lying beneath it. If the liver is heavy, fatty and immobile, it is harder for the surgeon to see and gain access to the stomach underneath.

To reduce the glycogen stores in the liver, it is necessary to follow a diet that is low in carbohydrate, low in fat and high in protein. Foods high in starchy carbohydrate include bread, rice, potato, pasta and cereals. You will lose weight by following this diet, but more importantly, your liver will shrink and can be moved more easily making the operation safer.



For the diet to be successful, it is important to stick to it for the full two weeks. There may be a temptation to have a special or larger meal prior to surgery, however, if you do this, this will reverse the liver reducing effects of the diet.

How long will I have to follow this diet?

It is recommended that you follow this diet for two weeks prior to your surgery only. It is not to be continued after the operation.

How much carbohydrate am I allowed?

The diet is designed to give you approximately 100g of carbohydrate per day. It is low in fat (although the extent to which will depend on the foods chosen) and moderate in protein. The energy provided by the diet is approximately 800-1000 kcal.

Menu plan

The following sample menu plan shows you what a typical day's intake may include.

Breakfast (15g carbohydrate)

3 tbsp (20g) of Branflakes™ or Fruit & fibre™
 OR 4 tbsp (15g) of Cornflakes™ or Rice Krispies™
 OR 1 Shredded wheat™
 OR 1½ Weetabix™
 OR 5 tbsp (35g) of All Bran™
 OR 25g of rolled oats
 OR 1 slice medium sliced toast with scraping of margarine



Lunch (15-20g carbohydrate)

1 slice medium sliced bread/toast
 OR 2 crispbreads
 OR ½ bagel
 OR ½ pitta bread
with
 2 eggs (no more than 5 eggs per week)
 OR 50g (1½ oz) (cheese (no more than 3 portions per week)
 OR 8 wafer thin packet slices of ham or chicken or turkey
 OR small chicken breast without skin
 OR 4 rashers of grilled back bacon

Group	Food	Recommendations
<i>Meat and meat substitutes</i>	Steak, hamburger, pork chops, fried or fatty meat, poultry or fish.	White meat and well-cooked fish tend to be better tolerated than red meat.
<i>Starchy foods</i>	Bran, bran cereals, wholegrain or white bread, wholegrain cereals, soups with vegetables or noodles. Avoid overcooking pasta and rice.	Add enough milk to cereals and let it soak to make cereal very soft. Avoid bread. Toast is better tolerated although it is best to remove the crusts.
<i>Vegetables</i>	Fibrous vegetables (asparagus, beans, cabbage, spinach, celery and corn), raw vegetables, mushrooms, leeks, green salad.	Cut up asparagus into small pieces. Remove stalks of broccoli and cauliflower. Chew salad and mushrooms carefully and slowly.
<i>Fruit</i>	Dried fruit, coconut, orange and grapefruit membranes.	Peel all fruit. Avoid oranges, pineapple and dried fruit.
<i>Miscellaneous</i>	Fizzy drinks, heavily seasoned and spicy foods, nuts, popcorn, crisps, pickles and seeds.	Avoid all fizzy drinks. Avoid nuts and popcorn as they may cause a blockage.

Mid afternoon

- Tea/coffee/vegetable juice **with** fruit/low fat yoghurt

Main meal

- Small serving of lean meat/fish/egg/beans/lentils/tofu/quorn **with** serving of vegetables/salad **and**
- Potatoes/wholegrain bread/rice/pasta/chapatti/yam/plantain/cassava

Dessert

- Fruit , low fat yoghurt, low fat low sugar puddings

Problem foods

There are some foods that **may** be difficult to eat after surgery. The table on pg.21 lists these foods and some recommendations. With all the foods it is important to **chew very well** (20-30 times) before swallowing.

If, after eating you experience vomiting, indigestion or nausea, ask yourself the following questions:

- Have I eaten too quickly?
- Did I chew my food well enough?
- Did I eat too much?
- Did I drink with my meal?
- Did I drink within ½ hour after eating?
- Did I lie down too soon after eating?
- Is my band too tight? Indications = difficulty swallowing, reflux/heartburn, night cough, poor eating habits/behaviour

- OR 100g (4 oz) meat
- OR 2 grilled sausages
- OR 100g (4 oz) fish
- OR 100g (4 oz) quorn **or** tofu
- with** plenty of vegetables **or** salad (low fat dressing).

Evening meal (20g carbohydrate)

- 2 average old potatoes (boiled or mashed)
- OR 4 egg-sized new potatoes
- OR 2 small roast potatoes
- OR 2 tbsp cooked rice (any variety)
- OR 2 tbsp cooked pasta (any variety)
- OR 40 strands of spaghetti (count when raw!)

with

- 2 eggs
- OR 50g (1½ oz) cheese
- OR 8 wafer thin packet slices of ham **or** chicken **or** turkey
- OR small chicken breast without skin
- OR 4 rashers grilled back bacon
- OR 100g (4 oz) meat
- OR 100g (4 oz) fish
- OR 100g (4 oz) tofu or quorn
- with** plenty of vegetables/salad (low fat dressing)



Allowances throughout the day (40g carbohydrate)

- Unlimited water, tea, coffee, low-calorie squash, low-calorie fizzy/carbonated drinks
- 1/3 pint (200ml) of milk for drinks and cereal
- 2 portions of fruit or 150ml fruit juice
- One small pot (125g) low fat, low sugar yoghurt per day (diet or 'lite' varieties)

It is important **not** to eat less than the prescribed portions of carbohydrate as this can make you feel unwell. Other foods on the menu will provide you with protein and fat. Eating these foods means that it should not be necessary for you to take any vitamin or mineral supplements.

Fruit portions list

A serving of fruit is 80g

- 2 small fruit e.g. plums, apricots, satsumas
- 1 medium fruit e.g. apple, orange, banana
- 1 slice of very large fruit e.g. melon, pineapple
- ½ a grapefruit **or** avocado
- 1 cupful of berries e.g. strawberries, raspberries or grapes
- 3 heaped tbsp fruit salad (fresh or tinned in fruit juice) or stewed fruit
- 1 heaped tbsp of dried fruit e.g. raisins, sultanas



Sample meal plan

Breakfast

- Wholegrain cereal/porridge/Ready Brek™ made with milk
- OR toast/crackers/crispbread with 1 tsp of butter/margarine/low fat cheese spread/jam/honey
- OR scrambled egg on toast
- OR baked beans on toast

Mid-morning

- Fruit or vegetable juice/tea/coffee

Lunch

- 200ml high protein soup (e.g. chicken/lentil/bean)
- OR 50g fish/skinless chicken/turkey/ground beef/pulses **with** rice/mashed potato/winter squash/pasta **and** ½ cup soft cooked carrots or green beans (no skins or seeds)
- OR baked beans/sardines/poached egg on toast
- OR jacket potato and beans/tuna/cottage cheese
- OR bean and rice salad

Dessert

- 150ml light natural/fruit yoghurt
- OR ½ cup soft/pureed/stewed fruit
- OR 1 scoop sorbet

Starch group—3g protein per serving

1 slice bread (toast may be better tolerated)
4-6 crackers
¾ cup unsweetened dry cereal
½ cup potatoes, winter squash, corn or peas
⅓ cup cooked rice, pasta
1 cup broth based soup

Fruit group—0g protein per serving

½ cup tinned fruit in juice
½ banana or small fresh fruit (avoid skins and membranes)
½ cup unsweetened, diluted fruit juice (limit to ½ cup a day)

Vegetable group—2g protein per serving

½ cup cooked non-starch vegetables
1 cup raw non-starchy vegetables

Fat group—no more than 5 servings per day

1 tsp margarine or oil
2 tsp low fat spread
1 tsp mayonnaise
1 tbs low fat mayonnaise or salad dressing

Post-operative diet

Introduction

After the band has been placed, the aim is to allow the band to settle into the correct position and become secure. This '**settling in**' period can take about two months. Therefore the dietary advice given in this booklet is designed so that the strain on the stomach is minimised.

There are **two main post-operative phases**: liquid and soft. This is then followed by a normal diet.

You should always

- try to identify when you have had enough to eat or drink
- stop eating/drinking **before** you get a feeling of discomfort or nausea or a wish to vomit

Fluids need to be taken slowly so that you can become sensitive to how easily they pass into the stomach area. Clear fluids should pass easily at all times without any difficulty. If you are having any difficulty, then something is wrong. It could be one of the following:

- The band is too tight
- There is a piece of food blocking the opening
- There has been movement of the band through the stomach to cause a problem

Therefore, if you are having difficulty with clear fluids you should contact your doctor.

What is the aim of the diet?

- To provide a balance of nutrients to minimise the risk of vitamin and mineral deficiencies
- To restrict your calorie intake in order to bring about weight loss
- To help develop healthy eating habits
- To minimise pressure in the gastric pouch so as to promote healing and prevent vomiting

Post-operative eating plan

Immediately after the surgery your diet will need to be liquid and taken in small quantities. This will enable the swelling in the tissues to settle and heal. Eating solid foods and any food in large quantities can put a strain on the site of surgery and may cause problems. Therefore it is important to follow the advice on diet immediately post-operatively to minimise the risk of these problems.

Day of surgery

After you awake from the anaesthetic you will be able to have sips of fluid and ice to suck. You will have an intravenous drip in your arm and this will provide all the fluid you need. The fluids you take orally at this stage are just to keep your mouth comfortable.

Day 1 post surgery

Continue to drink slowly in small sips and wait in between sips for a minute or two. Do not drink more than 100ml at once. You can drink tea or still mineral water. You should aim to have at least 2 litres of fluid in these 24 hours.

After 2 weeks—normal diet

At this stage, you may feel ready to progress onto a normal diet. It is also possible that you may not feel ready, in which case you should stick to the soft diet.

Continue to add new foods in slowly. Raw fruit and vegetables can be added in as tolerated. It may be advisable to avoid the skins and membranes on fruit.

You will need to follow a **low fat** diet and avoid simple sugars for life. You should aim to consume about **60g protein** per day and a calorie intake of between **800-1200 kcal per day**. Remember to include **6-8 glasses** of water and low calorie beverages each day.

Protein group—7g protein per serving

- 1 egg, 2 egg whites
- ¼ cup low fat (1%) cottage cheese
- 1 oz (28g) cooked lean meats (chicken, turkey, pork, fish, beef)
- 1 tbsp peanut butter
- 1 oz (28g) lean luncheon meats
- 1 oz (28g) low fat cheese
- ½ cup cooked beans, peas, or lentils

Milk group—3g protein per serving

- 1 cup skimmed or semi-skimmed milk
- 60g low fat/'lite' yoghurt (no added sugar)
- 1 cup sugar free pudding made with skimmed or semi-skimmed milk

Evening meal

- 200ml high protein soup, e.g. chicken/lentil/bean
- OR 50g fish/chicken/turkey/ground beef
- OR 40g low fat mild cheese
- OR 1 scrambled egg **with**
- ½ cup mashed potato/sweet potato/winter squash
- OR 4-6 crackers/1 slice toast **and**
- small mixed salad/½ cup soft cooked vegetables

Dessert

- 150ml low fat, low sugar natural or fruit yoghurt
- OR ½ cup soft/pureed/stewed fruit
- OR 1 scoop sorbet

Make sure you drink enough to keep yourself hydrated. Aim to drink 6-8 cups of water and low calorie drinks in between your meals. Do not drink with your meal or 30 minutes before or after your meal.

Tips

- Avoid using fat when cooking, instead use healthy cooking methods (i.e. bake, grill, boil or poach meats) and use herbs and spices to flavour foods
- Add chicken, beef or vegetable stock, fat-free gravies or low fat cream soups to moisten meats
- Chew meats well
- Add 1 tablespoon of a new food at a time, if you feel nauseated or bloated after eating then you are not ready for this food. Wait a few days before trying this food again.

The first 6 days—liquid diet

You will still need to drink **slowly** in small sips, no more than 230ml/1 cup/8 oz per hour. The following provides a suggested plan for a day's intake for the first week after the operation. The important thing to remember is to listen to your body and let it guide you.



See over-page for **high protein liquids**. You should aim to get in about **60g** protein each day.

Breakfast

200ml high protein liquid

Mid-morning snack

200ml fruit/vegetable juice OR 200ml tea or coffee

Lunch

200ml soup (clear or creamed with no solid pieces) AND
200ml high protein liquid

Mid-afternoon snack

200ml fruit/vegetable juice OR 200ml tea or coffee
200 ml high protein liquid

Evening meal

200ml soup (clear or creamed with no solid pieces) AND
200ml high protein liquid

Snack

200 ml high protein liquid
200ml = 8 fluid ounces

Additional fluids can be taken throughout the day if needed.

Vitamin and mineral supplements

It is important to now start taking a multivitamin and mineral supplement every day, e.g.

- Forceval™ OR
- Centrum Select 50+™ OR
- Sanatogen Gold™

You may find it easier to tolerate if you crush the tablet.

High protein liquids recipes

High protein milk

40g protein per pint (14g protein per 200ml serving)

2 oz (60g/4 tbsp) skimmed milk powder (21g protein)

1 pint (570ml) cold skimmed milk (19g protein)

Vanilla extract/unsweetened cocoa powder (optional)

Mix milk powder with a little of the milk to form a paste. Stir in a pint of cold skimmed milk.

Fruit smoothie

Makes 2 servings—12g protein per serving

½ pint (50ml) high protein milk (18g protein)

¼ pint (100ml) low fat yoghurt (6g protein)

3 oz (100g) fresh fruit e.g. bananas or strawberries

Combine all ingredients in a blender and blend until smooth. Serve chilled on ice.



The following provides a sample menu for this period

Breakfast

- 1 Weetabix™ or 3 tbsp porridge or Ready Brek™ made with milk
- OR 1 slice toast with 1 tsp of butter/margarine/low fat cheese spread/jam/honey
- OR scrambled egg on toast
- OR beans on toast

Mid-morning

- 150ml low fat, low sugar, natural/fruit yoghurt
- OR 200ml semi-skimmed milk
- OR 200ml unsweetened fruit/vegetable juice

Lunch

- 200ml high protein soup, e.g. chicken/lentil/bean (fresh or tinned)
- OR 50g cooked fish, skinless chicken/turkey/ground beef/pulses **with**
- 2 teaspoons rice/mashed potato/winter squash
- ½ cup soft cooked carrots/green beans

Dessert

- 150ml low fat/low sugar natural/fruit yoghurt
- OR ½ cup soft/pureed/stewed fruit
- OR 1 scoop sorbet

Weeks 2-3—soft diet

After a week on the liquid diet you can add soft foods. Focus on the high protein foods, ensuring that you include these foods at every meal and eat them first.

It is very important to chew foods well to avoid blockage or nausea. Try 1-2 tbsp of food at a time to see if tolerated. Each meal should only consist of only 2-4 tbsp ($\frac{1}{8}$ - $\frac{1}{4}$ cup of food).

Keep yourself hydrated, but remember to drink slowly in small sips, waiting in between sips for a minute or two. Drink about 5-15 minutes before eating and wait for about an hour after eating before you drink again. You will feel fuller if you eat your food 'dry'. Overall, you should aim to drink about 1½ litres (2½ pints) of fluid per day.

Some people who have a gastric band find it difficult to eat first thing in the morning. If this is the case, try drinking something and wait until your stomach feels ready for food.

At all times you should seek to identify when you have had enough to eat or drink. Stop any food or fluid intake **before** you feel any discomfort or nausea or a wish to vomit.



Fruit punch

10g protein per serving

$\frac{1}{3}$ pint (200ml) sugar free non-carbonated beverage
1 oz skimmed milk powder
4 ice cubes

Combine all ingredients in a blender and blend until smooth.

Custard (made with fortified milk)

18g protein per 250ml serving

Homemade custards and commercial custards are suitable so long as they are liquid enough to pass through a straw.

Commercial products (available from your chemist or supermarkets)

- **Build-up shakes™** - 15g protein per serving
(made with 200ml milk)
- **Build-up soups™** – 7g protein per serving
(made with 150ml water)
- **Complan™** – 16g protein per serving
(made with 200ml milk)
- **Slimfast™** (ready to drink)– 15 g protein per serving
(325ml bottle)
- **Slimfast™** (powder) – 14g protein per serving
(made with 250ml milk)

Aim to consume **60g protein each day** using a combination of the above high protein liquids.

Smoothie recipes

To ensure variety, please see the smoothie recipes below. Please note that they are lower in protein than the 'high protein list' above.

To make up all the following recipes, combine all ingredients in a blender and blend until smooth.

Breakfast smoothie

Makes 2 – 3g protein per serving

*1 pot low fat low sugar vanilla yoghurt
1 cup unsweetened orange or apple juice
1 medium banana
1 cup frozen strawberries*

Pear and apple smoothie

Makes 2 – 3g protein per serving

*400ml unsweetened apple juice
2 pears (peeled)
1 pot low fat/low sugar vanilla yoghurt*

Melon and banana smoothie

Makes 2 – 4.5g protein per serving

*½ melon
2 pineapple rings in natural juice
2 medium sized bananas
½ pint semi-skimmed/skimmed milk*

Kiwi smoothie

Makes 2 – 6g protein per serving

*3 ripe kiwi fruit
1 pot low fat/low sugar yoghurt
100ml semi-skimmed/skimmed milk*

Carrot and orange smoothie

Makes 2 – 3g protein per serving

*100ml unsweetened orange juice
2 lbs (900g) carrots
1 pot low fat low sugar yoghurt*

Carrot and celery smoothie

Makes 2 – 0g protein per serving

*1lb (454g) carrots
1 bunch celery
½ pint unsweetened tomato juice
Worcester sauce to taste*

Coffee cooler

Makes 2 – 7g protein per serving

*1 tsp coffee
200ml fortified semi-skimmed/skimmed milk
4-6 ice cubes*