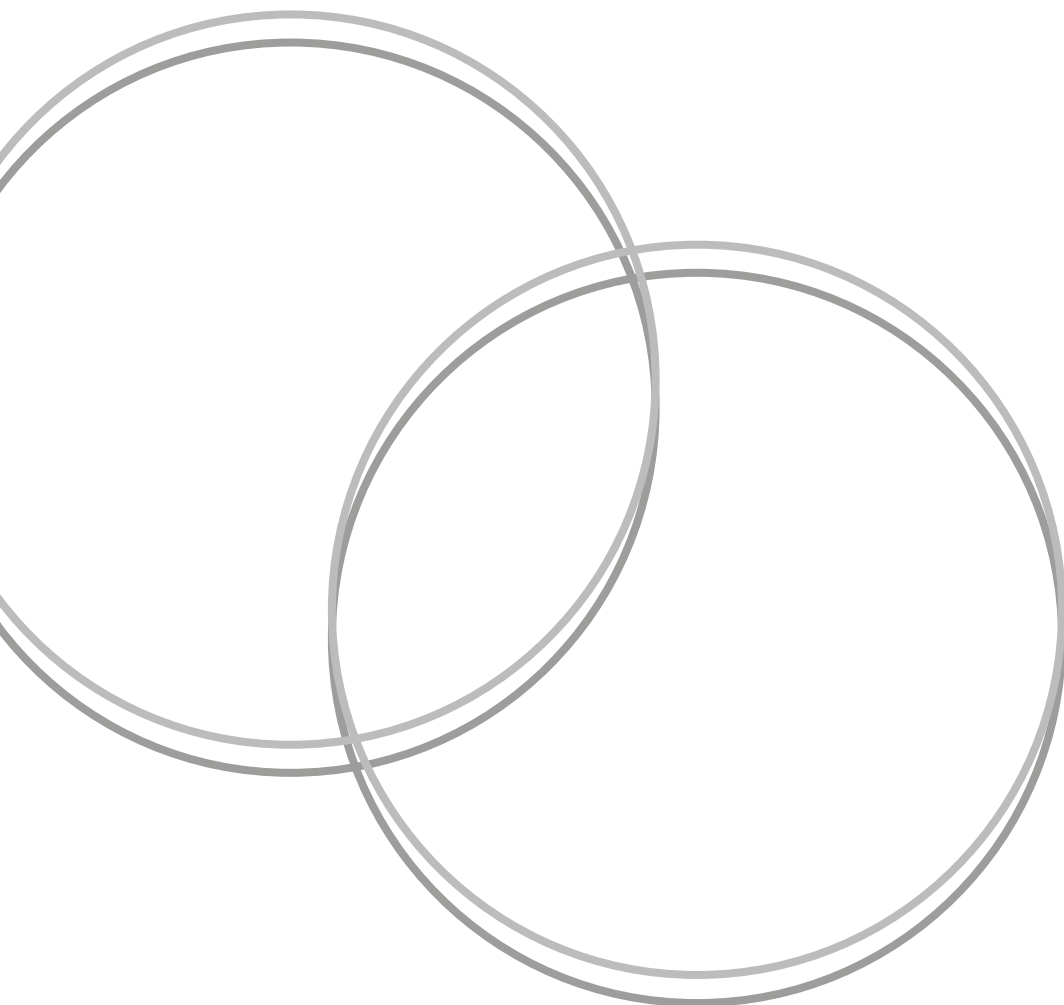


Pre-operative Liver Shrinkage Diet for Surgery

Information for patients



What is the liver shrinkage diet and why do I need to follow it?

This is a diet that is low in calories, carbohydrates and fats. It contains approximately 800-1,000 kcal and 100g carbohydrates. It is a diet that is recommended for people who are undergoing surgery to help reduce the size of their liver and the risk of any complications associated with surgery. Whilst you are following this diet, you may lose up to 5% of your weight.

People who have a body mass index (BMI) greater than 35kg/m² are more likely to have an enlarged or fatty liver due to additional stores of glycogen (stored carbohydrates), fatty deposits and water. As the liver is a large organ that lies over the stomach in the abdomen, it can make access for surgery more difficult. By following this liver shrinkage diet the glycogen stores, fatty deposits and water become depleted, shrinking down the liver, allowing the liver to be moved aside safely for surgery.

How long do I need to follow this diet?

For the diet to be successful, you will be advised to follow the diet for a minimum of two weeks. Occasionally, this maybe longer. It is essential that the diet is adhered to as closely as possible, up until the day of surgery. Do not be tempted to have a special or large meal prior to surgery as this will undo all the benefits of the liver shrinkage diet.

What does the liver shrinkage diet involve?

There are two options you can choose from. Both options have been calculated to ensure that you consume approximately 800-1,000 kcal and 100g carbohydrates a day. It has also been calculated to ensure you are eating an adequate amount of protein and a minimal amount of fat. A set of digital scales and measuring spoons will be useful for measuring portion sizes.

Whilst following the liver shrinkage diet, it is recommended that you take an A-Z vitamin and mineral supplement once a day, to ensure you meet your daily requirements for these. Suitable supplements are:

- Sanatogen A-Z complete
- Tesco Multivitamin and Mineral
- Superdrug A-Z Multivitamin and Minerals
- Asda A-Z Multivitamin and Minerals
- Forceval (prescribable).

Option 1 – Everyday Foods

Breakfast

Choose **one** of the following breakfast options:

- 1 **medium** slice of bread or toast with a scraping of butter or spread. Do not add honey, marmalade or jam.
- 1 wheat biscuit or shredded wheat
- 3 tablespoons (30g) of porridge oats (use milk from allowance – see below)
- 4 tablespoons (45g) of Bran Flakes, Rice Krispies, Cornflakes or All Bran (use milk from allowance – see below)

Lunch and Evening Meal

Choose **one** of the following protein options for **each meal**:

- 125g lean, cooked red meat or chicken (remove all visible fat and skin)
- 125g cooked white fish or tinned tuna (in brine or spring water)
- 2 large eggs – boiled, poached or scrambled
- 100g tofu
- 100g Quorn e.g. pieces or fillets, not sausages
- 100g peas, beans or lentils (including baked beans)

Cook with a minimum amount of fats or oils e.g. bake, steam or grill (see below for allowance)

Choose **one** of the following carbohydrate options for **each meal**:

- 1 **medium** slice of bread or toast with a scraping of butter or spread
- 1 crumpet
- 2 egg-sized old potatoes or 3 new potatoes with skin
- 3 tablespoons (55g) boiled rice (cooked)
- 3 tablespoons (50g) boiled pasta (cooked)
- 2 crispbreads/Ryvita/small oat cakes
- ½ pitta or 1 mini pitta

Fruit and vegetables

Choose **two** portions of fruit and **two** portions of vegetables a day from the following:

- 3 heaped tablespoons cooked vegetables (approx. 100g)
- 1 side salad (cereal bowl size)
- 1 large tomato or 7 cherry tomatoes
- 1 medium sized piece of fruit e.g. apple or pear
- 2 small fruits e.g. plums, satsumas, kiwi fruit
- 150g or a large handful of berries
- 1 small handful of grapes (10-15 grapes)
- 3 tablespoons of stewed or tinned fruit (no added sugar)
- 1 small glass of fruit juice (150ml)

Avoid bananas and dried fruit whilst on the liver shrinkage diet.

Milk and yogurt allowance:

Choose two portions of dairy products or alternatives a day from the following:

- 200ml/(1/3 pt) skimmed or semi-skimmed cow's milk
- 200ml unsweetened soya milk or calcium fortified no sugar almond milk
- 1 pot fat free/diet yoghurt, soya or dairy (up to 125g)

Daily fat allowance:

- 10g butter/spread
- 1 teaspoon oil in cooking

You can use herbs and spices to flavour food.

Avoid salad dressings e.g. mayonnaise, salad cream and vinaigrette.

Option 2 – High Protein Shakes and a Meal Replacement

This is a helpful option for people who may not have the time to plan and weigh out their food on a day-to-day basis.

Only choose the high protein shakes from the list provided by the dietitian. This is predominantly milk based so may not be tolerated by people with a lactose intolerance. There are a limited number of lactose free, high protein shakes available.

Replace 2 main meals with 2 high protein shakes. For example:

Breakfast

- High Protein shake (see separate list)

Lunch

- High Protein shake (see separate list)

Each High Protein shake should **contain no more than 200 kcal and 15g carbohydrates per portion (250 – 330ml)**. Please ask the dietitian for the list of suitable shakes.

Evening Meal

- Choose a suitable low calorie, low carbohydrate ready meal (from the 'Healthy Range') containing **no more than 400 kcal and 50g carbohydrate per portion**. Add one portion of fruit and two portions of vegetables.

OR

- You may want to cook a meal using 'everyday foods'. Choose one carbohydrate option, one protein option and one vegetable option. You may use 1 teaspoon oil in cooking. You may also have a piece of fruit from the list.

You can also have 'a mix' of the 2 options, i.e. option 1 on one day, and option 2 on the following. It is vital that you do not mix up the 2 options within the one day.

What are the side effects of this diet?

Fatigue

You may feel more tired and weak during the first week of the diet as your body adapts to a lower calorie intake. You can minimise this by eating 3 regular meals spaced out evenly over the day, with snacks from your allowance between meals.

Constipation, headaches and poor concentration

Drinking plenty of fluids will also help to prevent constipation, headaches and poor concentration. If the natural remedies do not resolve the constipation, seek advice from a pharmacist for a suitable laxative that can be purchased.

Ensure you drink at least 2 – 2.5 litres of water a day, which can include water, tea or coffee **without sugar**, sugar-free squashes or herbal teas. Avoid all alcohol, even the alcohol-free beers and wines as these tend to be high in carbohydrates.

Constipation may occur because of eating less fibre rich foods. If you become constipated, natural remedies such as flaxseeds/linseeds can be taken. Add 1 tablespoon of either to your cereal or yoghurt, and ensure you have a drink with this to help the fibre work.

Headaches may occur around day 2 as a result in a reduction in carbohydrates. Ensure you are drinking plenty of fluids, and if the headache persists, take pain relief such as paracetamol.

Special Considerations – diabetes and hypertension

If you have diabetes which requires medication to manage, this will need to be adjusted prior to starting the liver shrinkage diet. Please inform us if you have diabetes so your medication can be reduced in line with a lower carbohydrate intake. You will need to test your blood sugar levels more frequently to avoid the possibility of hypoglycaemia (blood sugar level <4 mmol/L).

If you take medication for hypertension (high blood pressure), please inform us as this may also need to be adjusted. You may also need to monitor your blood pressure more regularly during this time.

Contact Details:

Hepatobiliary Secretaries: **01865 235 668**

Hepatobiliary Dietitian: **01865 235 130**

General Dietitians: **01865 235 421**

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Notes

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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