

## Preparation for surgery – liver-reducing diet

### Other formats

If you need this information in another format such as audio CD, Braille, large print, high contrast, British Sign Language or translated into another language please contact the PALS desk on 01271 314090 or at [ndht.pals@nhs.net](mailto:ndht.pals@nhs.net).

### Why do I need this diet?

For **2 weeks** before your surgery (or as advised by the surgeon), it is recommended that you follow the pre-operative liver-reducing diet. The diet is needed to help reduce the size of your liver to ensure that the operation can be done more easily and using the keyhole method. It is important that you follow the diet unless there are good reasons why you should not. It is needed only BEFORE surgery and should not be continued after surgery.

If the liver is heavy, fatty and immobile, it is much more difficult for the surgeons to see and access the areas they need to. They may abandon the operation, or you will have to have an open operation which means a larger abdominal scar which results in longer recovery and increased risks.

The liver-reducing diet is low in carbohydrate and fat. By following it your body reduces its glycogen stores (glycogen is a form of sugar stored in the liver and muscles for energy). With each ounce (28g) of glycogen, the body stores 3-4 ounces (85-113g) of water, so when you follow this diet your body loses its glycogen stores and some water resulting in the liver reducing in size and softening.

### Medications

We advise that you inform your GP that you will be following this diet so they can check you will be safe to continue on your current medications.

### Special note for patients with diabetes

If you take insulin or other medications that may cause hypoglycaemia or a “hypo” (low blood sugar), you may need to decrease the dose while you are on the liver-reducing diet, as the diet is very low in carbohydrates and there is a risk that your blood glucose levels could drop too low if you continue your normal dose. **Please discuss adjustments to your insulin or diabetes medication with your GP or diabetes nurse before you start.** We also advise that you check your blood glucose levels more frequently while on the liver-reducing diet. Your GP or diabetes nurse can also provide you with more guidance about this.

## Meal plan for the pre-operative liver-reducing diet

As everybody's food preferences are very different, the suggestions below are of types of food and the amounts to eat rather than specific food items. Therefore, you can incorporate the appropriate foods that suit your personal taste. If you are in doubt about a food then it is best to avoid it. It is very important to avoid foods such as cakes, biscuits, chocolate, crisps and sugary drinks because of their high carbohydrate and fat content. You must also avoid alcohol. This diet allows approximately 800kcal-1000kcal per day in total.

### Multivitamin and mineral

It is recommended that you start taking an A-Z complete multivitamin and mineral tablet at this stage, such as Centrum Complete A-Z, Sainsbury's Multivitamins and Minerals, Santogen Gold A-Z or Tesco Complete Multivitamin and Minerals.[Click here and type content]

### Sample Daily Menu:

#### Breakfast

Choose one of the following:

- 3 tablespoons plain (no added sugar) breakfast cereal or dry porridge oats
- 1 Shredded Wheat or 1 ½ Weetabix
- 1 medium slice toast with scraping of margarine.

#### Lunch

Choose one of the following:

- 1 slice medium sliced bread/toast
- 2 crispbreads or ½ bagel or ½ pitta bread

With one of the following (weights are when cooked):

- 2 eggs
- 60g/2oz cheese (2 x match box size) - only have cheese once a day so if you have it for lunch you should not have it at your evening meal and instead choose another food from the list
- 8 thin packet slices of ham, chicken or turkey
- Small chicken breast without skin
- 4 rashers of grilled back bacon
- 100g/4oz meat (with fat cut off)
- 2 grilled sausages
- 100g/4oz fish
- 100g/4oz tofu or quorn

A small cereal bowl amount of vegetables or salad can also be included (try to have mostly the green coloured varieties, such as leafy greens and if using a dressing choose low fat options/vinegar based dressing without oils).

### Evening meal

Choose one of the following:

- 2 average sized old potatoes (boiled or mashed)
- 4 egg sized new potatoes with skin
- 2 tablespoons of cooked rice or 2 tablespoons of cooked pasta

With one of the following (weights are when cooked):

- 2 eggs
- 60g/2oz cheese (2 x match box size) - only have cheese once a day so you can have it at evening meal if you did not have any for lunch. If you had cheese at lunch you should avoid it and choose another food from this list.
- 8 thin packet slices of ham, chicken or turkey
- Small chicken breast without skin
- 4 rashers of grilled back bacon or 2 grilled sausages
- 100g/4oz meat (with fat cut off) or 100g/4oz fish
- 100g/4oz tofu or quorn

A small cereal bowl amount of vegetables or salad can also be included (try to have mostly the green coloured varieties, such as leafy greens and if using a dressing choose low fat options/vinegar based dressing without oils).

### Additional daily allowances

- One third of a pint (200ml) of semi-skimmed or skimmed milk for drinks and cereal
- Two portions of fruit (a portion is one apple, one pear, one small banana, an orange, a handful of berries or 100ml pure fruit juice)
- One small pot (125g) diet/light yoghurt or low fat fromage frais
- Unlimited water, tea, coffee, low calorie/no added sugar squash, low calorie/diet fizzy drinks (but limit fruit juice as above).

**Any of the spices/condiments listed below can be used to add flavour to food:**

Salt, pepper, fresh or dried herbs, spices, mustard, curry powder, lemon/lime juice, vinegar, yeast extract, soy sauce, fish sauce, Worcester sauce, stock cubes, vanilla and other essences.

### Meal replacement drinks as an alternative plan

An alternative to the meal plan (above) is to have a low calorie liquid diet, using meal replacement drinks over the two week pre-operative period. Or you may choose to do a week of the meal plan and a week using the meal replacement drinks. **However we do not recommend combining the 2 plans on the same day as this makes it difficult to get the right balance of nutrition.**

## Which meal replacement drinks can I use?

We recommend that the meal replacement drinks provide a total of 800-900kcal per day (allowing for 100kcal from the milk allowance), 55-60g protein per day and 100g carbohydrate per day.

Examples of meal replacement products:

Name	Directions
Slimfast	4 x 36.5g with 250ml skimmed milk per day
Optifast (available from participating pharmacies)	4 x 54g with water per day
Celebrity Slim Soups	4 x 55g with water per day
The Biggest Loser Shakes	4 x 55g with water per day
USN Diet Fuel Ultralean	4 x 55g made up with water per day

Shops own brands of meal replacement drinks are also available (please contact the dietitians if you need help in checking they are suitable)

### Homemade meal replacement drinks

An alternative to commercial low calorie meal replacement drinks is to create your own meal replacement drink using the recipe below:

Recipe: (will make 3 x 330ml of milkshakes – have this amount each day)

- 1000ml (1 litre) of semi-skimmed drink
- 50g skimmed milk powder (the fortified variety)
- 2-3 tbsp of milkshake syrup (e.g. Crusha)
- 2 servings of fibre powder (4 tsps) (Benefiber / Fibresure, follow packet instructions)

Put all the ingredients in a jug and whisk with a whisk or fork. Store in the fridge and use within 24 hrs.

### Extra fluid

With all plans, you should also drink plenty (1-2 litres total) of extra water or non-calorie containing fluids (for example sugar-free squash, coffee and tea) with no more than 1/3 pint (200ml) of skimmed or semi-skimmed milk per day.

## Can I use the slimming bars and other products or diets as part of my liver reducing diet?

We only advise the use of the meal replacement drinks or the liver-reducing meal plan as this will ensure that you get the right balance of nutrition.

## How will this diet make me feel?

It is common to feel tired and to have a lack of energy. The first few days are usually the hardest and then it can feel easier. We recommend remembering that this is only for the short term and it will help make your surgery possible and safer.

## Further information

Department of Nutrition and Dietetics  
Northern Devon Healthcare Trust  
Telephone 01271 322306

### **PALS**

The Patient Advice and Liaison Service (PALS) ensures that the NHS listens to patients, relatives, carers and friends, answers questions and resolves concerns as quickly as possible. If you have a query or concern call 01271 314090 or email [ndht.pals@nhs.net](mailto:ndht.pals@nhs.net). You can also visit the PALS and Information Centre in person at North Devon District Hospital, Barnstaple.

## Have your say

Northern Devon Healthcare NHS Trust aims to provide high quality services. However, please tell us when something could be improved. If you have a comment or compliment about a service or treatment, please raise your comments with a member of staff or the PALS team in the first instance.

'Care Opinion' comments forms are on all wards or online at [www.careopinion.org.uk](http://www.careopinion.org.uk).

Northern Devon Healthcare NHS Trust  
Raleigh Park, Barnstaple  
Devon EX31 4JB  
Tel. 01271 322577  
[www.northdevonhealth.nhs.uk](http://www.northdevonhealth.nhs.uk)

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Tel: 01271 313970 / email: [ndht.contactus@nhs.net](mailto:ndht.contactus@nhs.net)