

Department of Nutrition and Dietetics

Liver disease and diet

This leaflet provides information for people with liver disease. It is important to eat a balanced diet rich in energy and protein to prevent unintentional weight loss and loss of muscle mass.

Introduction

The liver plays an important role in a number of vital body functions, such as:

- Fighting infection and disease
- Getting rid of toxins and drugs
- Breaking down nutrients by aiding digestion
- Storing energy
- Releasing stored energy when the body needs it fast, e.g. when exercising

Liver damage can cause symptoms of, nausea, poor appetite, weight (fat and muscle) loss and fluid retention. A specialised diet can help improve these symptoms.

The main principles of diet in liver disease are:

- Eat once every 2-3 hours whilst awake
- Include a daily carbohydrate based (50g) snack in the late evening
- Include a source of protein at every meal
- Do not choose low fat food options (unless advised by your Dietitian or Doctor)
- Do not add salt to meals when cooking or at the table
- Mention any pain or diarrhoea associated with eating to your Doctor or Dietitian



Patient Information

This advice Sheet consists of 5 sections:

1. Guide to a well-balanced diet
2. Changing the eating pattern
3. Diet tips in the presence of ascites
4. Suggestions for a poor appetite
5. Nutritional supplements

Guide to a well-balanced diet

Protein

These are the building blocks of the body and we need them to maintain and repair body tissues. Patients with decompensated liver disease have higher protein requirements of 1.2-1.5g per kilogram of your body weight per day e.g. 84-105g in a 70kg adult. Patients with renal disease should limit to 1.2g per kg. Try to include a source of protein at each meal, such as:

	Approximate serving	Protein (g)
Chickpeas	½ can	8
Kidney beans	½ can	9
Baked beans	½ can	10
Walnuts	20g	4
Whole almonds	20g	6
Cashew nuts	20g	5
Chicken	1 chicken breast	34
White fish e.g. cod	1 small fillet	23
Oily fish e.g. salmon	1 small fillet	25
Canned tuna	½ can	14
Prawns	80g or 25 small	14
Beef mince	125g	26
Pork	100g e.g. palm sized	17

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Lamb	100g e.g. 1 chop	18
Milk	200ml	7
Yoghurt	125g pot	5-7
Cheddar cheese	30g e.g. small matchbox	8
Cottage cheese	100g or 3 tablespoons	9
Eggs	1 medium egg	7
Hummus	3 tablespoons	4
Tofu	80g	7
Quorn mince	100g	14
Soya milk	200ml	6
Oat milk	200ml	1-2

Energy (calories)

This provides fuel for the body. At rest our body requires energy to function. If you have liver disease your body needs more energy than normal to help recovery and to prevent muscle breakdown.

Foods high in energy

Bread	Cereals
Chapatti	Potato
Rice	Pasta
Butter	Ghee
Oils	Cream
Biscuits	Cakes
Chocolates	Pastries
Puddings	Honey
Jam	Sweets

Wholegrain or 'brown' varieties of carbohydrates can help with constipation.

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Milk and dairy foods

These are an important source of protein, energy and calcium. Try to eat three portions of these foods per day, including:

Food item	One portion
Silver top, full cream milk (blue top), channel island	200ml
Yoghurt (natural or fruit) especially Greek yoghurt, high protein and thick and creamy varieties	125g pot
Fromage frais (not low fat/diet)	2 x 125g pots
Custard	125g pot
Cottage cheese	175g
Soft cheese (full fat)	50g
Cheese spread	50g
Hard cheese e.g. cheddar	30g

Fruit and vegetables

These provide a good source of vitamins and minerals, which are needed by the body to function properly. They also contain fibre which helps your bowels to open regularly. You can use fresh, frozen or tinned varieties. Try to choose vegetables that are 'tinned in water' to reduce the salt content.

One portion equals:

1 large fruit e.g. apple, orange, banana	2 small fruits e.g. plums, kiwis
A handful of fruit e.g. berries or grapes	3 tablespoons of vegetables e.g. carrot, peas or sweetcorn
A bowl of salad	150ml fruit juice

Changing the eating pattern

It is recommended that people with liver disease try to eat a meal or snack once every 2-3 hours, including a 50g carbohydrate late evening snack.

One of the main functions of the liver is to release energy during starvation. The longest period we all have without food is when we are asleep.

When your liver is not working as well, your body will break down your muscles for energy. Eating a 50g carbohydrate late evening snack will help prevent this happening.

Example 50g carbohydrate snacks:

2 slices of bread with jam/honey and 200ml milk	2 cereal bars
1 banana and 200ml orange juice	4 digestives and a orange
50g cereal with 200ml milk	A sandwich with 150ml fruit juice
A sandwich with a pot of creamy yoghurt	A milk-based nutritional supplement e.g. AYMES Shake and a biscuit
A juice based supplement e.g. Fortijuce	A Meritene soup with a slice of bread and a glass of fruit juice
500ml fruit juice or Coca-Cola (not diet)	

Diet tips in the presence of ascites

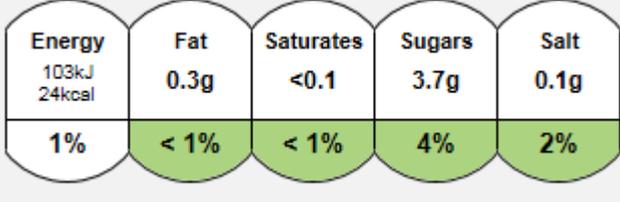
Ascites is a build up of fluid in the abdomen, which develops due to damage to the liver and can put pressure on your stomach and reduce your appetite.

You may find your stomach expands and swells with this excess fluid. Restricting your salt may help to control fluid retention. We would advise a salt intake of approximately 5g per day.

- High salt foods contain more than 1.5g per 100g (red).
- Medium salt foods contain 0.3-1.5g per 100g (amber).
- Low salt foods contain less than 0.3g per 100g (green).

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Here are some tips to help you cut down on salt:

Do not add salt to cooking or at the table	<p>Use the traffic light system on food labels. 'Amber' or 'green' are better choices.</p>  <table border="1" data-bbox="805 548 1425 750"> <thead> <tr> <th>Energy</th> <th>Fat</th> <th>Saturates</th> <th>Sugars</th> <th>Salt</th> </tr> </thead> <tbody> <tr> <td>103kJ 24kcal</td> <td>0.3g</td> <td><0.1</td> <td>3.7g</td> <td>0.1g</td> </tr> <tr> <td>1%</td> <td>< 1%</td> <td>< 1%</td> <td>4%</td> <td>2%</td> </tr> </tbody> </table>	Energy	Fat	Saturates	Sugars	Salt	103kJ 24kcal	0.3g	<0.1	3.7g	0.1g	1%	< 1%	< 1%	4%	2%
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Low salt stock cubes e.g. Kallo Organic Low Salt	Unsalted nuts and crackers															
Plain crisps	No added salt baked beans or spaghetti hoops															
Reduced salt jars or bottles of sauce																

Salt substitutes are available, e.g. LoSalt or Saxa So Low. We do not recommend these as they contain high levels of potassium which could be harmful

Most of the salt in our diet is found in processed foods. Try to eat the below foods less often:

- Tinned soups, packet soups and cup-a-soup
- Takeaways, e.g. pizza, Chinese, curry or burger style fast food
- Ready-made meals (unless 'amber' or 'green' on the traffic light system)
- Tinned, smoked and processed meats, e.g. bacon, ham, sausage, luncheon meat, corned beef, tongue, beef burgers, meat paste, pate (use fresh or frozen meat, e.g. beef, lamb, pork and poultry instead)
- Pies, sausage rolls or savoury pastries
- Smoked fish, e.g. kippers, smoked haddock (use fresh, frozen or tinned fish in water, oil or tomato sauce instead)

Suggestions for flavouring foods without using salt:

Pepper or peppercorns	Sprinkle, crush or grind over any savoury dishes
Vinegar	Good with chips, fish or mix with mustard and olive oil to make salad dressing
Garlic	Use fresh cloves or salt free garlic puree in meat, chicken or pasta dishes. Do not use garlic salt.
Mixed herbs, oregano or basil	Use fresh, dried or frozen in meat, chicken, fish, soups or pasta dishes.
Mint or chives	Serve with potatoes or vegetables
Parsley	Use fresh or dried, add to fish
Rosemary	Add to chicken, lamb or pork before roasting
Bay leaf or bouquet garni	Use in stews, casseroles and soups
Lemon juice	Squeeze over fish and chicken dishes
Ginger or Lemongrass	Chop finely and add to stir fries, Chinese dishes or curry
Chillies, chilli powder or crushed chillies	Use to make chilli con carne, spicy pasta dishes or in curries
Curry powder, turmeric, cumin, coriander, garam masala, paprika	Use in curries to produce a variety of flavours
Mint sauce	Serve with lamb dishes
Horseradish sauce	Serve with beef
Cranberry sauce or jelly	Serve with poultry
Mustard	Serve with pork or beef. Try French, English or wholegrain varieties

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If you are finding it difficult to enjoy food without salt then discuss this with your Dietitian.

Suggestions if you have a poor appetite

You should not find it too difficult to increase the protein and calories in your diet if you have a good appetite. However, there may be times when your appetite is not so good, particularly if you are not well or recovering from treatment. If so, here are some ideas which may help.

How to enrich your food:

Fortified milk

1 pint full cream milk

2 – 4 tablespoons milk powder

Whisk together and refrigerate for up to 24 hours

Fortified milk can be used in place of milk or water to make coffee, hot chocolate, milk puddings, custard, cereals and sauces.

Double cream, evaporated milk, dairy ice cream

- Add ice cream to milkshakes
- Use cream or evaporated milk in sauces, cereals, custard, homemade soups, puddings, mashed potato, scrambled eggs, or on fruit or jellies

Cheese

Add to sandwiches, on toast, low salt crackers or in mashed or jacket potatoes

Sugar, syrup, honey, jam **

Add to cereals, puddings and scones or spread on toast

Yoghurt

- Use thick and creamy or high protein varieties
- Add to fruit (fresh, tinned, stewed)

Margarine (mono or polyunsaturated), butter and oil

- Melt over cooked vegetables or into mashed potato
- Use olive oil or other flavoured oils as salad dressing

Other helpful hints for a small appetite

- Keep fluids to a minimum at meal times, as they will fill you up. Try to drink after your meals;
- If you do not feel you can manage a pudding after your meal, save it for later and have it as a snack;
- If your appetite is better at certain times of the day, e.g. in the morning, make the most of these times and try to increase your intake by having a bigger breakfast or mid-morning snack;
- Fry foods where possible, or if you grill, brush oil over your portion before and during grilling;
- If you feel tired, make larger quantities and freeze individual portions or try frozen lower salt ready meals from your supermarket;
- Choose nourishing drinks rather than tea and coffee made with water. Sip them between your meals. Nourishing drinks include:
 - Fortified full cream milk, on its own or as a milky coffee, hot chocolate, Ovaltine, Horlicks or milkshake;
 - Meritene or Complan shakes are available at most chemists and supermarkets. Make them up with either cold or warmed full cream milk (or fortified milk – see above) rather than water.

Prescribable nutritional supplements

If you continue to lose weight or are unable to increase your intake, please contact your Dietitian. Nutritional supplements are available on prescription and your Dietitian will discuss these with you.

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Further Information

This leaflet was produced by Coventry Dietitians, University Hospitals Coventry & Warwickshire NHS Trust. If you would like further information or have any questions, please contact the team on the numbers below.

Your Dietitian is:

Contact numbers:

- University Hospital Coventry: 024 7696 6161
- Hospital of St Cross, Rugby: 01788 663473

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Document History	
Department	Dietetics
Contact Tel	26161
Updated	October 2021
Review	October 2023
Version	4
Reference	HIC/LFT/1598/13