

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 and aim for a healthy body weight in order to support the functions of your liver.

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 energy when the body needs it fast, e.g. when exercising

Liver damage develops over time. Hepatitis (inflammation) and fibrosis (development of scar tissue) can lead to cirrhosis (when inflammation and fibrosis spread throughout liver), which can cause liver failure or liver cancer.

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



Eating a well-balanced diet

Protein

These are the building blocks of the body and we need them to maintain and repair body tissues. Try to eat foods high in protein three to four times per day, such as:

Meat – fresh or frozen, not tinned	Lentils
Poultry – chicken or turkey	Beans – dried or tinned (labelled “No added salt”)
Fish – fresh, frozen or tinned (avoid tinned fish in brine, as this is salty)	Chick peas – dried or tinned (labelled “No added salt”)
Eggs	Nuts or seeds (unsalted)
Yoghurt	Tofu, Quorn or soya
Milk	

Energy (calories)

This provides fuel for the body. At rest our body requires energy to function. During illness 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, margarine, oils, double cream
- Squash, fizzy drinks (not diet), biscuits, cakes, puddings, honey, jam, sweets, chocolates **

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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 and thick and creamy varieties	125g pot
Fromage frais (not low fat/diet)	2 x 125g pots
Custard	125g pot
Cottage cheese	175g
Cheese spread	50g
Hard cheese e.g. cheddar	Limit to 30g (small matchbox) per day

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. Choose vegetables that are 'tinned in water'. Try to not overcook them as some nutrients will be lost or destroyed.

One portion equals:

- 1 handful of fruit such as 1 large fruit, e.g. apple; 2 small fruits e.g. plums; or a handful of berries
- 3 tablespoons of vegetables
- A bowl of salad
- 150ml glass of fruit juice (this only counts towards your '5 A DAY' once a day)

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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 for your body to use throughout the night. 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 bedtime snack will help prevent this happening.

Example 50g carbohydrate snacks:

- 2 slices of bread with jam/honey with 200ml milk
- 2 cereal bars
- 1 banana and 200ml orange juice
- 4 digestives and an orange
- 50g cereal with 200ml milk
- 1 cheese sandwich with 150ml apple juice
- 1 egg mayo sandwich with 150ml orange juice
- 1 x ham sandwich with a pot of creamy yoghurt
- 1 milk-based nutritional supplement e.g. Fortisip Compact Protein and a banana
- 1 x Fortijuice
- 1 x Meritene soup with a slice of bread and 100ml apple juice
- 500ml fruit juice or fizzy pop (not diet)

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. It is important you eat a well balanced diet to ensure adequate protein intake. Restricting your salt and fluid intake may help to control fluid retention.

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

- Reduce your salt intake gradually so you can get used to eating food with less salt;

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- Do not add salt to cooking or at the table;
- Salt substitutes are available, e.g. LoSalt or Saxa So Low. We do not recommend these as they still contain levels of salt higher than those safe for liver disease. They also contain high levels of potassium which could be harmful;
- You can use herbs, pepper, spices and garlic to flavour your food – see table below;
- Use the traffic light system on food labels to aid your choices. If the food is 'green' for salt then it is a good choice.

Energy	Fat	Saturates	Sugars	Salt
103kJ 24kcal	0.3g	<0.1	3.7g	0.1g
1%	< 1%	< 1%	4%	2%

Most of the salt in our diet is found in processed foods. Try to avoid:

- Stock cubes, yeast or meat extracts, e.g. Marmite or Bovril and soy sauce
- Salted savoury snacks, e.g. salted nuts, crisps, salted biscuits, bombay mix
- Tinned soups, packet soups and cup-a-soup
- Tinned savoury snacks, e.g. baked beans, spaghetti in tomato sauce or 'pot snacks'
- Takeaways, e.g. pizza, Chinese, curry or burger style fast food
- Tins, jars, bottles and packets of sauces
- Ready made meals (unless low in salt, i.e. less than 0.3g salt per 100g)
- Limit hard cheese, e.g. Cheddar or Cheshire cheese to a matchbox sized piece (30g)
- Buy individually wrapped portions of cheese spread, e.g. Dairylea Triangles
- 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 pasties
- Smoked fish, e.g. kippers, smoked haddock (use fresh, frozen or tinned fish in water, oil or tomato sauce instead)

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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 your appetite is poor

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. You may still be having treatment which is affecting your appetite. 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

Cream cheese, cottage cheese and ricotta cheese are lower in salt so use these where possible for 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 varieties
- Add to fruit (fresh, tinned, stewed)

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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

- Try to have smaller portions or snacks more frequently rather than trying to have three larger meals per day i.e. three small meals and three small snacks per day;
- 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;
- Try to have as varied a diet as possible and include favourite foods;
- 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;
 - Build Up 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.

Ideas for high calorie snacks for between meals

- Toast with butter and jam, marmalade or lemon curd **
- Bowl of cereal, e.g. Shredded Wheat, Weetabix, puffed wheat, Sugar Puffs, muesli, Ready Brek
- Toasted tea cake, currant bun, english muffin, crumpet, croissant with butter and jam or honey **
- Unsalted rice cake with butter and jam

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- Sweet biscuits, e.g. cream filled, chocolate digestive, short bread, Jammie Dodger, Hob Nob
- Bagel and cream cheese
- Cream cheese and low salt crackers
- Salt n' Shake crisps (don't add salt sachet) or sweet flavoured Snack a Jacks
- Thick and creamy fruit yoghurt, fromage frais
- Slice of cake, muffin, malt loaf, doughnut, custard tart
- Supermarket mini deserts, e.g., mousse, mini trifle, custard, rice pudding
- Ice-cream or choc ices

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.

**** People with diabetes may need to be cautious when adding extra sugar into their diet. Please discuss this with your Dietitian.**

Alcohol

After drinking alcohol, it is absorbed into the bloodstream and goes through the liver first before circulating around the whole body. Therefore the highest concentration of alcohol is in the blood flowing through the liver. This can accelerate the rate of liver damage and therefore should be avoided in liver disease.

If you need help to stop drinking your GP will be able to direct to appropriate nurse, counsellor or specialist doctor. Alternatively you could contact one of the following agencies:

- Drinkline – National Alcohol Helpline. Tel: 0800 917 8282
- Drinkaware: Tel: 020 7766 9900 Web: www.drinkaware.co.uk
- Alcoholics Anonymous: Tel: 0845 769 7555 Web: www.alcoholics-anonymous.org.uk

Steatorrhoea

Some people with liver disease can suffer from steatorrhoea; a type of diarrhoea that is often pale, greasy and hard to flush. This is caused by insufficient bile, a substance produced in the liver to aid the digestion of fat.

Reducing your fat intake can help improve steatorrhoea. However, **fat is essential and should not be cut out of the diet completely, especially if you also need to gain weight**, so it is advisable to seek advice from a Dietitian. In the meantime here are some tips to reduce your fat intake:

- Use low fat dairy products, e.g. skimmed or semi-skimmed milk, low fat yogurts, low fat spread instead of butter
- Use oil/fat sparingly in cooking
- Avoid frying or roasting, try grilling
- Use lean meat; trim excess fat and drain off excess fat during cooking
- Replace high fat snacks (crisps, nuts, biscuits, cakes) with low fat alternatives, e.g. tea cakes, crackers, rice cakes, low fat crisps/biscuits/cake

Oral care for people on a high calorie diet

You have been advised to increase the calorie content of your diet. This might mean eating more sweet or sticky foods and drinks which are not usually recommended for a healthy mouth and teeth. Keeping your mouth healthy can reduce the risk of other infections, such as a chest infection, from occurring.

The following tips can help you balance the benefits of a high calorie diet with a healthy mouth and teeth:

- Visit the dentist regularly and tell them about the diet and ask about protective treatments for teeth;
- Brush teeth, gums and tongue, twice a day with fluoride toothpaste, especially last thing at night;
- Chewing sugar free gum for 10-20 minutes after eating sweet foods will help to neutralise acid in the mouth;
- If possible drink sweet drinks through a straw and don't swish them around your teeth and if possible keep them to meal times;
- Some sweets which are very sticky such as toffee, fudge, fruit chews, boiled sweets, are best avoided. Those which melt away quickly can be

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used to boost your calorie intake. These are generally better for your teeth too, but again limit to meal times if possible;

- Don't forget medicines can be sugary as well. Try to take them at mealtimes if possible.

**** People with diabetes may need to be cautious when adding extra sugar into their diet. Please discuss this with your Dietitian.**

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.

Contact numbers:

- 024 7696 6161 (University Hospital)
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The Trust has access to interpreting and translation services. If you need this information in another language or format please contact 024 7696 6161 and we will do our best to meet your needs.

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