



**Diet and  
Liver Disease**

**SAMPLE**

high-protein, healthy-eating

## Introduction

When your liver is not working well or when you have liver disease, your body needs extra energy (calories) and protein. This is because sometimes your body cannot digest and absorb its food properly and therefore is unable to store and use energy.

## Malnutrition (weight loss and muscle wasting) is common in people with liver disease.

Malnutrition has many causes, including decreased food intake due to liver disease symptoms such as:

- loss of appetite
- nausea and vomiting
- feeling full easily which maybe due to ascites (fluid collecting around your middle)
- unnecessary or inappropriate dietary restrictions.

Good nutrition is vital to overcome symptoms of liver disease, by:

- stopping muscle wasting and feeling weak
- maintaining strength and mobility
- reducing hospital admissions
- helping wounds heal more quickly
- speeding up recovery from operations and infections
- helping to prevent ascites and encephalopathy (confusion caused by liver disease) getting worse.

## Carbohydrate

When you eat starchy carbohydrate it is broken down into sugar (glucose). This is your body's main energy source. Some of this energy is stored in your muscles and liver as a starch called glycogen. This is a back-up energy store to be used later when it is needed, between meals, if you have missed a meal or during a long fast such as overnight.

The liver coordinates the release of this energy until you next have something to eat; these energy stores are then replaced at your next meal. If your liver is not working properly and you develop liver disease symptoms, it cannot replace this store.

The energy from the food you eat only lasts for 2 hours. If you have liver disease and have no energy stores, your body must find an alternative source of energy after this time. Fat tissue is hard to break down quickly, so instead your body will break down its own muscles for energy. If this continues, your muscles will get weaker and waste away.

**It is important that you try and eat regular meals and snacks containing carbohydrate every 2-3 hours.**

To prevent muscle being used for energy and to keep you strong, it is important to 're-fuel' your body regularly. Eating meals and snacks containing starchy carbohydrate every 2-3 hours provides enough energy to stop your body breaking down its own muscles.

**Each meal should include a good source of starchy carbohydrate for slow-release energy.**

### **Starchy carbohydrate foods include:**

- bread, for example white, brown, wholemeal, rolls, pitta
- potato, for example boiled, baked, mashed
- high-fibre breakfast cereal, for example bran flakes, Weetabix, All Bran
- pasta
- rice, basmati and brown varieties are best
- chappatti, brown or wholemeal are best
- naan. This can be high in calories, so have a small naan and serve with more rice.

## Examples of carbohydrate snacks for between your meals include:

- fruit
- glass of skimmed or semi-skimmed milk
- plain biscuits, for example rich tea, ginger nut, digestive
- plain cakes
- crackers or crisp bread with low-fat cheese
- 1 tea cake or scone with low-fat spread
- malt loaf with/without low-fat spread
- crumpet
- cereal bar.

## Bedtime snacks

You will need a large bedtime snack containing carbohydrate for your body to use overnight as it is a long time until breakfast!

You should aim to have 50g of carbohydrate in your bedtime snack; this equals 10 carbohydrate points.

Choose your bedtime snacks from the table below and make sure your food adds up to 9 or 10 points.

Food	Carbohydrate point
200ml semi-skimmed milk	2
300ml semi-skimmed milk	3
Horlicks/hot chocolate	3
Fortisip/Ensure Plus	7
Fortimel	4
1 slice of bread/toast	3

Food	Carbohydrate point
Breakfast cereal with milk	6
1 biscuit	2
1 cracker/crisp bread	1
1 packet of rice cake snack	5
1 rice cake	2
1 banana	4
1 apple/pear/orange	3
1 slice of fruit cake	7
1 slice of plain cake	6
1 slice of Swiss roll	4
1 scone	5
1 tea cake/toasted muffin	6
1 slice of malt loaf	3
1 crumpet	3
1 Scotch pancake	3

## Protein

Protein is essential to build and repair body tissue.

When your liver is not working properly your body needs more protein than usual. Extra protein in your diet can help to prevent further muscle breakdown and re-build lost muscle.

**Try to include a good source of protein with at least 3-4 meals every day.**

### Examples include:

- meat and poultry
- fish
- cheese
- eggs
- pulses such as peas, beans (including baked beans) and lentils/dhal
- meat alternatives such as tofu, soya and Quorn.

## Fruit and vegetables

Fruit and vegetables are important for vitamins and minerals, but they are not a good source of carbohydrate or protein.

Fruit can be a good snack. Try to have a couple of portions of fruit, vegetables or salad everyday. If your appetite, food intake and weight (without fluid) are normal, aim for 5 portions per day.

If your appetite and food intake are poor or you need to gain weight or muscle, try not to fill yourself up on these foods or have them as snacks.

### Examples of 1 portion of fruit or vegetables include:

- 1 large fruit, for example apple, orange, banana
- 2 small fruits, for example plums, satsumas, apricots
- 1 dessert-size bowl of salad
- 2-3 tablespoons of vegetables
- a handful of grapes or berries.

## Fat and sugar

A healthy diet should try and limit the amounts of fat and sugar.

### Tips to cut down on the fat in your diet

- Use low-fat alternatives, for example semi-skimmed milk, low-fat margarine, low-fat yoghurts, low-fat mayonnaise.
- Avoid high-fat takeaways, for example fish and chips, creamy curry. Only have these occasionally.
- Grill, bake or steam instead of frying.
- Cut down on the amount of oil you use in your cooking.
- Cut off visible fat and skin on meat.
- Choose plain biscuits and cakes instead of chocolate or cream varieties.
- Cut down on pies and pastries.

## Tips to cut down on the sugar in your diet

- Use sugar-free, no-added-sugar or low-calorie squash and fizzy drinks.
- Try using artificial sweeteners in drinks instead of sugar.
- Cut down on sugary sweets.

## Supplement drinks

Sometimes you will not be able to meet your energy and protein requirements by diet alone. It may be necessary for you to take nutritional supplement drinks to help prevent muscle wastage and to keep you well nourished.

On days when you don't feel well and you can't manage food, having a supplement drink or a small snack is better than going for long periods of time without food.

### High protein drinks (milky type)

- Fortimel.
- Fortisip Protein.
- Build Up.
- Resource Protein Extra.

Your dietitian may suggest trying:

### Supplement tips

- Take the supplement drinks between meals so that you do not spoil your appetite for your meals.
- Keep supplements in the fridge or serve with ice as they taste better when served chilled.
- Add ice cream to the milk-based supplements to make thick milkshakes.
- Freeze supplements to eat them as an ice cream, sorbet or ice lolly.

## Suggested meal plan

Choose one from each section.

### Breakfast

- Breakfast cereal and milk.
- Toast and jam.
- Baked beans on toast.
- Egg with/on toast.

### Mid morning snack

- 1 or 2 plain biscuits.
- Fruit.
- A 300ml glass of milk.

### Lunch

- Sandwich with meat, fish, egg or cheese.
- Jacket potato with beans, cheese, tuna or meat.
- Beans, cheese or fish on toast.
- Salad with bread or potatoes and meat, fish or cheese.
- Pasta or noodles with meat, fish or cheese.

### Dessert

- Yoghurt or rice pudding.
- Fruit and custard.

### Mid afternoon snack

- 1 or 2 plain biscuits.
- Crackers and low-fat cheese.
- Malt loaf.
- A glass of milk/supplement.



This information has been developed by the D-LIVER Group of the British Dietetic Association with the support of SNDRI. At the time of publication the information contained within the leaflet was, to the best of our knowledge, correct and up-to-date. Always consult a suitably qualified dietitian and/or your GP on health problems. SNDRI cannot be held responsible for how clients/patients interpret and use the information within this resource.

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Dietitian

Telephone number

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