

SCI and nutrition

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Why is nutrition so important?

Eating a balanced diet following spinal cord injury is very important

With spinal cord injury you are more likely to be at risk of:

- Infections
- Pressure sores
- Bowel problems
- Being over and underweight
- Osteoporosis (brittle bones)
- Heart disease

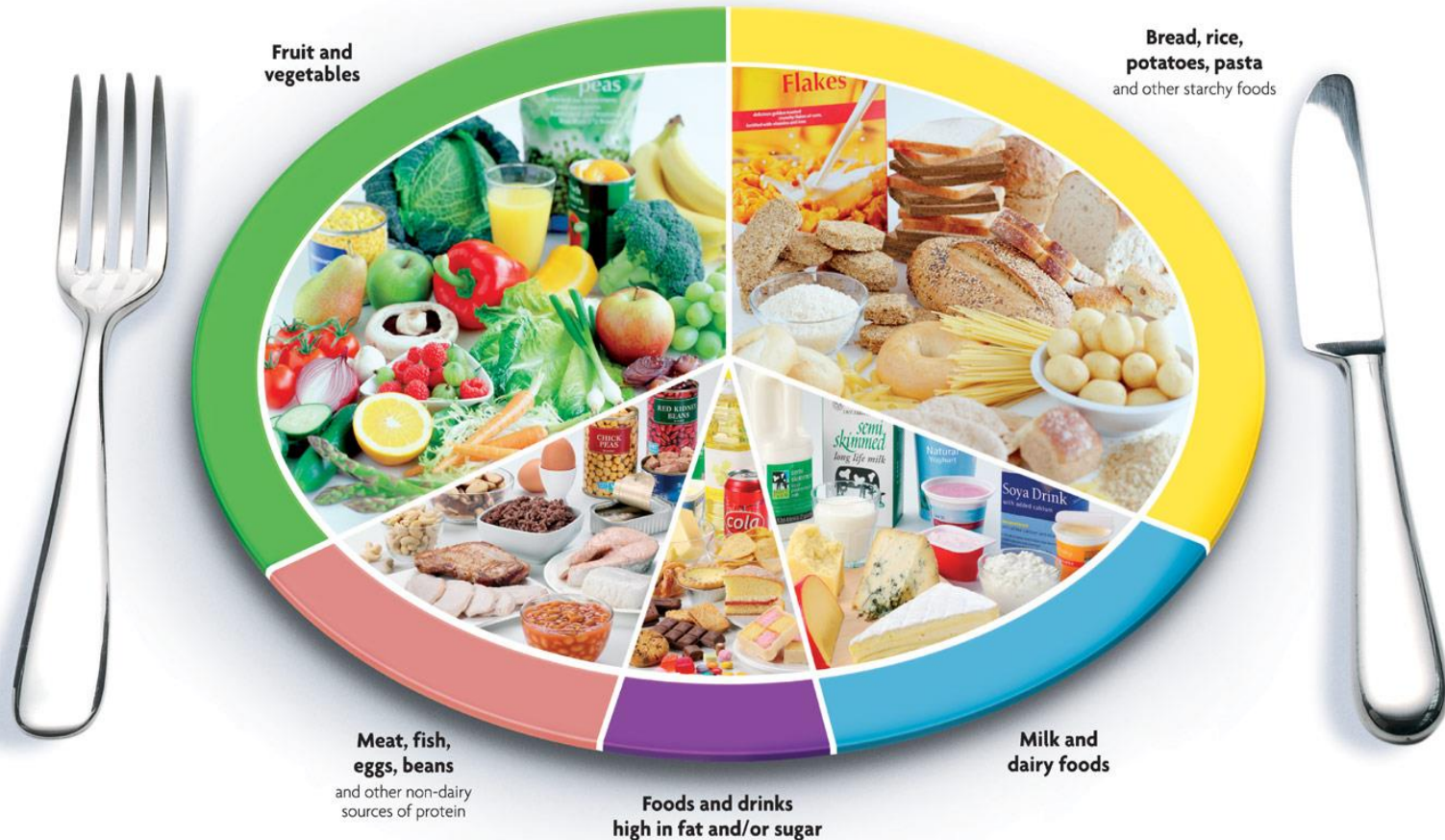
By eating well you can help to maintain a healthy weight and reduce the risk of these nutrition-related complications.

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The eatwell plate

Use the eatwell plate to help you get the balance right. It shows how much of what you eat should come from each food group.



Bread, rice, potato, pasta and other starchy food

1/3 of the food you eat
Eat with each meal
Choose wholegrain
and wholemeal

Milk and dairy foods

Protein and calcium
Needed for strong bones
Lower-fat options
Eat 2-3 portions each day

Fruit & vegetables

5 portions each day
Fresh, frozen, tinned,
dried or juiced

Meat, fish, egg and beans

Protein and minerals
Meat, fish, eggs, beans,
pulses, lentils, peas, nuts
*Needed for the body to repair
and grow, important for rehab*
Include twice each day

Fat & sugar

Try to eat just a
small amount
Limit: cakes, biscuits, butter,
cream, oil, fizzy drinks, chocolate
and sweets
These foods may cause you to gain weight

Portion Size Guide

The hands can be a useful tool to help choose the correct portion size of food



1 portion of vegetables will fill the palm of both hands

1 portion of rice/pasta/potatoes is about the size of your fist

1 portion of meat/fish will fill the palm of one hand

1 portion of fruit is about the size of your fist

1 portion of oil is about half the size of your thumb

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Milk and dairy foods



1 portion is:

- 1/3 pint or 1 glass of milk
- 1 yogurt
- 1 oz/ 30g/ matchbox size of cheese



Salt

Eating too much salt can increase blood pressure, which damages blood vessels and increases the risk of heart disease and stroke.

When reducing salt and sugar intake, tastebuds can take up to 3 weeks to adjust.



Meat, fish, eggs and beans

Include twice a day



Oily Fish

Eat oily fish once each week
Keeps your heart healthy

What is oily fish?

Salmon, trout, mackerel, sardines, pilchards, herring, kipper, fresh (not tinned) tuna, eel and whitebait



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Fibre

- Dietary Fibre
 - ‘roughage’
- Insoluble
 - Wholemeal/wholegrain, bran, cereals
 - Softens and bulks stool
 - Helps pass waste more easily
- Soluble:
 - Oats, rye, beans, peas, lentils, fruit+veg flesh
 - Forms a gel when mixed with liquid
- Gradual introduction
 - 1-2 new fibre foods/week



General population ~ 18g/day

After SCI, aim for 15g after SCI, increase up to
30g/day

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How to increase fibre

- 5-a-Day
- Beans/peas/lentils added to stews, casseroles, soups, lasagne and minced meat
- Sliced banana/apple in cereal
- Dried fruit over cereals
- Wholegrain pasta in lasagne, macaroni cheese
- Mix 50% wholemeal and 50% white flour in baking

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Fibre

- **Slow transit constipation**
 - more water reabsorbed in large bowel
- **Neurogenic bowel**
 - lose sensation that bowel is full, may not feel the urge to empty your bowel, may experience loss of sphincter muscle control
 - Reflex bowel versus Flaccid bowel

Loose bowels or urgency?

Avoid food and drink that stimulates and draws excess fluid into the bowel

For example:

Caffeine - tea, coffee, cola, chocolate

Prunes and figs

Pure fruit juice

Sorbitol (synthetic sweetener)

Alcohol



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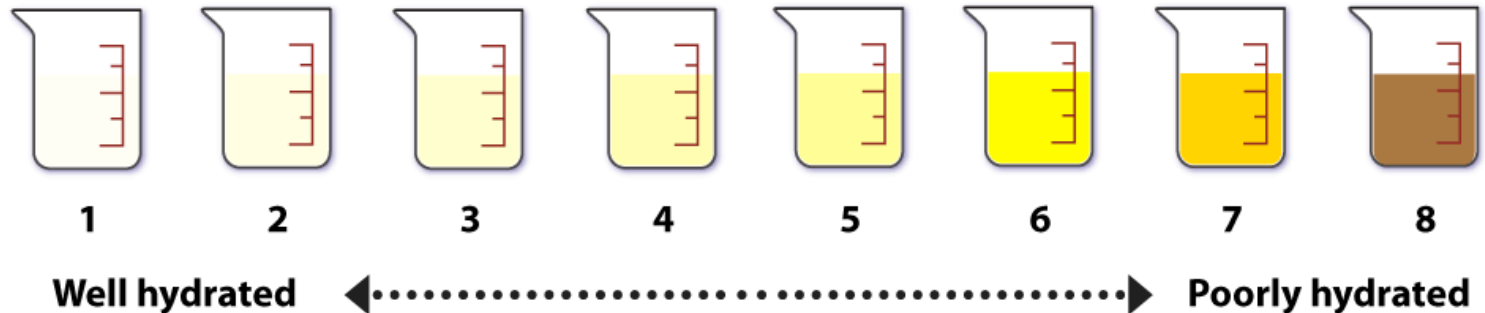
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Fluid



- *Minimum* of 8-10 glasses spread throughout day
- Water, no added sugar squash, tea/coffee

Check your hydration...



Food Labels

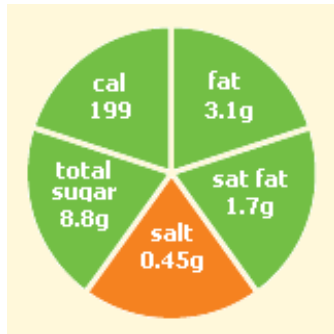
All measures per 100g	Low a healthier choice	Medium ok most of the time	High just occasionally
Sugars	5g or less	5.1 - 15g	More than 15g
Fat	3g or less	3.1 - 20g	More than 20g
Saturates	1.5g or less	1.6 - 5g	More than 5g
Salt	0.30g or less	0.31 - 1.5g	More than 1.5g



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Cereal



Contains wheat gluten & barley gluten

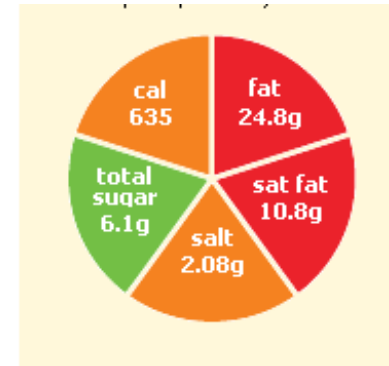
Ingredients

Wholegrain Wheat (95%), Malted Barley Extract, Sugar, Salt, Niacin, Iron, Riboflavin (B2), Thiamin (B1), Folic Acid.

Nutrition

	Per 100g	Per serving	% based on GDA for adult
Energy	1516kJ	841kJ	-
	358kcal	199kcal	10.0%
Protein	11.5g	9.1g	20.2%
Carbohydrate	68.6g	31.9g	13.9%
Total Sugars	4.4g	8.8g	9.8%
Starch	64.2g	23.1g	-
Fat	2.0g	3.1g	4.4%
Saturates	0.6g	1.7g	8.5%
Mono unsaturates	0.2g	0.8g	-
Polyunsaturates	1.1g	0.4g	-
Fibre	10.0g	3.6g	15.0%
Salt	0.65g	0.45g	7.5%
Sodium	0.26g	0.18g	7.5%
Thiamin (Vitamin B1)	0.9mg	0.4mg	81.82%
Riboflavin (Vitamin B2)	1.2mg	0.7mg	85.71%
Niacin	13.6mg	5.0mg	85.00%
Folic Acid	170.0µg	70.2µg	85.00%
Iron	11.9mg	4.4mg	85.00%

Pizza



Nutrition

	Per 100g	Per 1/2 pizza	% based on GDA for adult
Energy	1184kJ	2664kJ	-
	282kcal	635kcal	31.8%
Protein	11.0g	24.8g	55.1%
Carbohydrate	33.8g	76.1g	33.1%
Total Sugars	2.7g	6.1g	6.8%
Starch	31.1g	70.0g	-
Fat	11.0g	24.8g	35.4%
Saturates	4.8g	10.8g	54.0%
Mono unsaturates	4.3g	9.7g	-
Polyunsaturates	1.3g	2.9g	-
Fibre	1.9g	4.3g	17.9%
Salt	0.93g	2.08g	34.7%
Sodium	0.37g	0.83g	34.6%

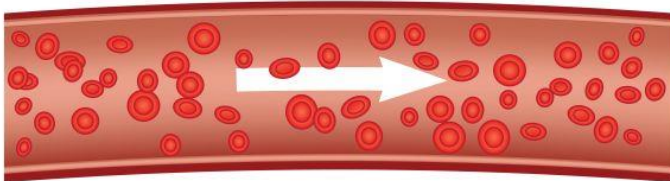
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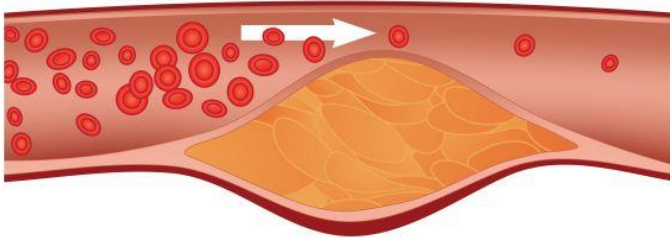
Cardiovascular Disease

Cholesterol

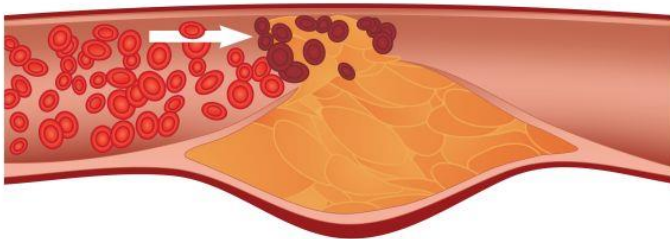
Eating too much saturated fat can cause blockages in blood vessels,
increasing the risk of heart attack and stroke



Healthy blood vessel



Blood vessel with restricted blood flow



Blocked blood vessel leading to heart attack or stroke

Grate cheese, don't slice
you'll eat less!



Eat plenty of
fruit and veg



Eat balanced
meals



Grill, don't fry

Cut back on saturated fat



Choose lean
mince

Use rapeseed,
sunflower or olive oil
instead of butter



Remove the skin
from chicken,
go easy on the sauce

Trim fat off meat



Eat less pastry

Healthy Weight - Energy Balance

You may lose weight immediately after your spinal injury as your body goes into shock

You are more likely to become overweight in the long-term as you are using less energy than before your injury

Try to maintain a healthy weight

Underweight

You may have a poor appetite for a number of reasons.

When you are only eating small amounts, it is important to ensure that the food is as nourishing as possible, e.g.

- **High energy foods:** sweet/sugary and fatty/oily foods.
- **High protein foods:** dairy products (milk, cheese, and yogurts), eggs, meat, fish, nuts and beans

Overweight

You may experience weight gain following your spinal cord injury.

This is because you are using less energy than before your injury

Excessive weight gain needs to be avoided.

Making small achievable changes to your diet can help you to achieve a healthy weight.



Healthy Bones

Any activity or exercise, such as standing once a day, will help to keep bones strong

You need **calcium** for strong bones and **vitamin D** to absorb calcium from your food



Vitamin D is made by the action of sunlight on the skin.

Expose your arms, hands and face to the sun for 15 minutes each day between May-October



Calcium

Dairy products

Tofu & Soya

Sardines and pilchards

Green leafy vegetables

Dried apricots

White flour

Nuts



Vitamin D

Oily fish

Egg yolks

Liver and pate

Fortified margarine

Spread

Breakfast cereal

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Limit Alcohol



14 units
per week



A **modest amount of alcohol** *may* help to protect your heart

However, too much alcohol:

- Increases blood pressure and triglycerides
- Causes weight gain

Spread your drinking over 3 or more days if you regularly drink as much as 14 units a week

Try to have several drink-free days each week

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Need to see a dietitian?

As a hospital patient:

Ask your nurse to refer you to the **spinal dietitians**

When you've been discharged:

Ask your consultant to refer you to the **spinal injury weight management clinic** or **community dietitians**.

Other Resources

NHS eat well

<https://www.nhs.uk/live-well/eat-well/>

NHS food labels

<https://www.nhs.uk/live-well/eat-well/how-to-read-food-labels/>

NHS what is a unit of alcohol

<https://www.nhs.uk/live-well/alcohol-support/calculating-alcohol-units/>

British Dietetic Association Pressure Sore and Diet Fact sheet

<https://www.bda.uk.com/resource/pressure-ulcers-pressure-sores-diet.html>

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Department of Nutrition and Dietetics

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