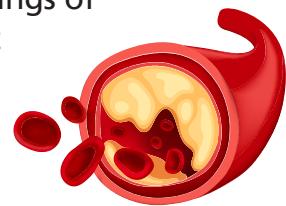


# Cholesterol and Dietary Changes

Information for patients,  
parents and carers

# You have been provided with this leaflet to support you to lower your cholesterol.

Cholesterol is a type of blood fat which is made in the liver. It is also found in some foods. We all need some cholesterol in our bodies as it plays a vital role in the workings of our cells, in digestion and making important hormones and vitamins. However, having too much can clog up your arteries and lead to health problems in the future, including heart disease.



## What is a healthy cholesterol level?

Total (serum) cholesterol	Below 5.0 mmol/L
Non-HDL cholesterol	Below 4.0 mmol/L
LDL cholesterol	Below 3.0 mmol/L
HDL cholesterol	Above 1.0 mmol/L
TC:HDL ratio	Above 6 is considered high risk - the lower this figure is the better
Triglycerides	Fasting: below 1.7 mmol/L
	Non-fasting: below 2.3 mmol/L

Dietary changes can be effective in lowering cholesterol. The following foods have been proven to support reducing cholesterol.

## 1. Soya

Soya foods are made from soya beans. Soya beans are packed full of good quality proteins, healthy fats and a range of vitamins, minerals, and plant nutrients. Foods made from soya beans also tend to be low in saturated fat.



Using soya foods in place of full fat dairy foods, meat and other high saturated fat foods will help you to maintain a healthy cholesterol level.

### How much do I need to eat each day?

It's best to **start with one to two servings** a day, and gradually **build up to three**, of any combination of the food and drinks listed below

- 100g marinated tofu pieces (great in salads, stir-fries or with a dip)
- 100g silken firm tofu (great in stir-fries and curries and can even be made into scrambled "eggs")
- 100g soya mince – use instead of minced meat in recipes. It makes a great spaghetti bolognese, chilli, Shephard's pie, lasagne, cottage pie or meatballs
- 80g shelled young soya (edamame) beans – fresh or frozen. Great as a side vegetable, in salads, as a snack or blended with some soya alternative to yogurt for a great dip

- A handful (35g) roasted soya beans – as a snack or in salads
- A large glass (250ml) soya alternative to milk (calcium fortified), use on your cereals, in cooking in place of dairy, and in teas and coffees Ensure that it is fortified with calcium and vitamin D. Organic varieties tend to not be fortified so be sure to check the label
- 150g Soya yogurt, either plain or Greek style

## 2. Oats, barley and other soluble fibre-rich foods

Fibre is essential for health and is found in all plants – fruits, vegetables and cereals.

Oats and barley contain a special form of soluble fibre called beta glucan, which as part of a healthy diet, can help to lower cholesterol. It works by forming a gel in the gut which can bind with cholesterol rich bile acids and stop them being absorbed into the body. Beta glucan is also found in other grains too – but in much smaller amounts.



### How much do I need to eat each day?

3g is the optimum daily number of beta-glucans to help lower cholesterol, which you can achieve with **three servings** of any of the foods below, in any combination.

- A bowl of porridge (using 30g of porridge oats)
- 13g (1-2 tablespoons) of oat bran – sprinkled onto cereals, or added to casseroles, soups, salads, or smoothies
- 1 oat breakfast biscuit

- 1 30-35g serving of oat breakfast cereal flakes
- 3 oatcakes
- Recipes containing at least 30g of oats per serving, that are also low in saturated fat e.g., oat pancakes, overnight oats
- 75g cooked pearl barley – added to stews, casseroles, in salads, or use instead of rice to make a risotto
- 40g serving of barley flakes



### 3. Nuts



Nuts are packed full of heart-healthy nutrients such as protein, fibre, plant sterols, vitamin E, magnesium, potassium, zinc and copper. They are also naturally rich in unsaturated fats and lower in saturated fat, and therefore can help lower cholesterol as part of a healthy diet.

#### How much do I need to eat each day?

**A handful of nuts (30g)** is about the optimum amount each day. Choose unsalted nuts and, if possible, opt for nuts with their skins still intact and unroasted (rather than roasted varieties) as these contain additional nutrients.

A 30g serve of nuts is equivalent to approximately:

- 20 almonds
- 30 pistachio kernels
- 40 peanuts
- 10 Brazil nuts
- 10 whole walnuts
- 15 pecans
- 15 cashews
- 15 macadamias
- 4 chestnuts
- 2 tablespoons pine nuts
- 20 hazelnuts
- 2 tablespoons of 100% nut butters

***Not advised for people who have or may have a nut allergy.***

## 4. Sterols and stanols

Sterols and stanols are the plant equivalent of cholesterol and are naturally found in a wide range of plant-based foods in very small amounts.

When eaten daily in the right quantity they can help to lower cholesterol. They work by reducing the amount of cholesterol our bodies can recycle.



### How much do I need to eat each day?

You need to eat 1.5-3g of plant sterol or stanols daily, as part of a low saturated fat diet, to lower your cholesterol. There are lots of foods now available in stores that are fortified with plant sterols and stanols. Look out for them.

Eat these foods as part of a meal because they work by mixing with the food you have eaten.

Always read the labels to check that the product is fortified with plant sterols or stanols and how much is provided in one serving (product recipes change often).

Current products will provide anything from 0.54g to 2g sterols or stanols per serving.

***You should not exceed 3g plant sterols or stanols in one day.***

Achieve your daily target of sterols and stanols by choosing just one of the following:

- One sterol / stanol fortified mini drink or mini yogurt drink (70-100g bottle). **Do not confuse these with probiotic yogurt drinks.**
- One 120g sterol / stanol fortified fruit yogurt pot

Or three of the following:

- A large glass (250ml) sterol / stanol fortified skimmed milk
- 2 teaspoons (10g) of sterol / stanol fortified spread

To eat products with plant sterols and stanols safely:

- Only use these products if you need to lower your cholesterol
- These should not be taken by someone living with diabetes (T1 or T2), chronic kidney disease or for primary or secondary prevention of cardiovascular disease.



- They are not suitable for children and women who are pregnant or breastfeeding, unless advised by your doctor
- Eat them as part of a healthy balanced diet, rich in fruit and vegetables
- Don't eat more than 3g per day of sterol and stanols – more than this will not lower your cholesterol any further.

If you would like any help implementing the ideas in this leaflet or need any dietary support, please contact your child's dietitian on **0113 392 0634**

This leaflet was created using information available at [www.heartuk.org.uk](http://www.heartuk.org.uk) with thanks.

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