Ultimate Cholesterol Lowering Plan®

The smart way to actively lower cholesterol by 5 - 24%

This evidence-based resource has been brought together in partnership with HEART UK – The Nation's Cholesterol Charity – and in collaboration with expert health professionals in the field of heart health.

- Linda Main, Registered Dietitian, Dietetic Adviser to HEART UK
- Dr Sarah Jarvis, General Practitioner
- Jaqui Walker, Registered Nurse
- Sue Baic, Registered Dietitian and Lecturer
- Dr Frankie Phillips, Registered Dietitian and Public Health Nutritionist

www.heartuk.org.uk • www.alpro.com

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This tool introduces the Ultimate Cholesterol Lowering Plan© (UCLP©) to your patient in a step-by-step manner.

The flip chart should be used when consulting the patient and in conjunction with the patient UCLP© information sheet (tear off pad).

- The pages offering the detail and references should always face the health professional.
- The pages with pictorial and photographic images and marked with in the bottom right hand corner should face the patient.

The UCLP© flipchart has been designed to be fully flexible, providing the health professional with the option to share a few specific or all pages of the flipchart depending on the consultation time available and the individual needs of each patient.

All UCLP© components will lower cholesterol and improve heart health. Therefore the UCLP© should be presented to the patient as an array of options from which they can choose. They decide which and how many parts of the UCLP© components they are willing to take on board.

Stage 1 – Motivational Interviewing
Helping your patient understand their needs, motivators and barriers to change. To help empower and motivate them to improve their diet.

Stage 2 – Cholesterol Basics
Cholesterol facts and figures.

Stage 3 – Diet History
Assessing your patient’s current dietary intake and identifying areas requiring most attention.

Stage 4 – Getting the Foundations Right
Low saturated fat diet, oil-rich fish and 5-a-day.

Stage 5 – The UCLP© Foods
A step-by-step introduction to each food component of the UCLP© and what this means in practical terms.

Stage 6 – Goal Setting
Helping the patient make their decision as to which UCLP© component/s they will adopt and how they might do this.

Ultimate Cholesterol Lowering Plan®

The smarter way to lower your cholesterol
**MOTIVATIONAL INTERVIEWING**

### Beginning the Consultation

- **Ask** the patient *why* they have come to see you – e.g. “*Please can you tell me your reasons for coming to see me today?*”
- **Ask** if there is anything *they would like to discuss* in particular – e.g. “*Would you like to talk about your diet/cholesterol levels or is there another topic you would like us to discuss?*”
- **Ask open-ended** questions – e.g. “*What do you feel would happen if you do not change your eating habits/lower your cholesterol?*”
- **Guide** the direction of the consultation but allow the patient *to do the talking* – e.g. “*I would like to talk about ways we can help lower your cholesterol, but what would you like to discuss first?*”

### Patient’s Motivational Tips

Direct the patient to the scale on the facing page then ask the following questions.

- On a scale of 1 – 10, with 10 being the most important, how important is it for you to lower your cholesterol level? **Think** about why it is at this number and *not lower*?
- On a scale of 1 – 10, with 10 being the happiest, how happy would it make you feel to lower your cholesterol level?
- On a scale of 1 – 10, with 10 being the happiest, how happy will you feel if you *don’t lower your cholesterol level?** Think** about why it is at this number and *not higher*?
- On a scale of 1 – 10, with 10 being the most confident, how confident do you feel that you can lower your cholesterol?

### During the Consultation

- **Ask them** to think about **TWO positive things** about lowering their cholesterol
- **NOW** – Provide the patient with their own patient UCLP© information sheet from the tear off pad and ask them to turn over and write down their response
- **Ask them** if they can think of any good reason why they should NOT make changes to their diet
- **Ask** them to write this down on their copy of the patient UCLP© information sheet
- **FINALLY** – **ASK THEM** – “*Now, think about where this leaves you feeling!*”

BEFORE GOING TO THE NEXT STAGE – **Ask permission** before offering your advice or information e.g. “*Do you mind if we discuss ways of helping you lower your cholesterol level and why it’s important now? I will offer you lots of ideas and options which can help lower your cholesterol – but which options you choose to adopt will be totally up to you.*”

### Patient’s Motivational Tips

Direct the patient to the scale on the facing page then ask the following questions.

- On a scale of 1 – 10, with 10 being the most important, how important is it for you to lower your cholesterol level? **Think** about why it is at this number and *not lower*?
- On a scale of 1 – 10, with 10 being the happiest, how happy would it make you feel to lower your cholesterol level?
- On a scale of 1 – 10, with 10 being the happiest, how happy will you feel if you *don’t lower your cholesterol level?** Think** about why it is at this number and *not higher*?
- On a scale of 1 – 10, with 10 being the most confident, how confident do you feel that you can lower your cholesterol?

### During the Consultation

- **Convey empathy** e.g. “*I understand there are many barriers to making changes to your diet, why don’t you talk me through the ones that are important to you?*”
- **Practise reflective listening** e.g. “*You feel that changing your diet will not help?*”
- **Amplify negative reflection** e.g. “*So you have no concerns with your cholesterol level being raised and not changing your diet?*”
- **Elicit self-motivational** statements e.g. “*So you do feel it is difficult to change your diet but at the same time you don’t feel you have tried as hard as you could have*”
- **Let the patient decide** what, how and why they will make a change e.g. “*It will be up to you to decide where to make changes but how do you see yourself making these changes?*”

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CHOLESTEROL BASICS

High cholesterol is the number one modifiable risk factor for heart disease.¹

- Heart disease is the UK’s number one killer
- Every 4 minutes an adult in the UK has a heart attack

What is Cholesterol?

- Cholesterol is a type of fat (lipid) essential to human life
- Essential for producing all the body’s cells (building blocks) & hormones
- The body makes its own cholesterol (in the liver), and a small amount comes from the diet

Cholesterol is carried around the body by proteins – there are two main types:

- **High Density Lipoprotein Cholesterol / HDL-C** = ‘Good cholesterol’
- **Low Density Lipoprotein Cholesterol / LDL-C** = In EXCESS ‘bad cholesterol’

The right balance of BOTH types is ESSENTIAL.

- **LDL** transports cholesterol from the liver around the body to repair old cells, build new cells and make hormones
- **HDL** picks up cholesterol from around the body and transports it back to the liver, where it is broken down and recycled

Too much **LDL-C** (bad cholesterol) increases risk of heart and circulatory diseases.

- Excess LDL-C is deposited inside the arteries and as this fatty material builds up, it narrows the arteries restricting the amount of blood flow to the heart and brain
- If this continues, the fatty material can completely block arteries leading to a heart attack or stroke

1) British Heart Foundation Statistics Database www.heartstats.org

Cholesterol Numbers²

Cholesterol levels represent the quantity of cholesterol (in mmol) present in one litre of blood (l).

<table>
<thead>
<tr>
<th>Cholesterol Type</th>
<th>Primary prevention</th>
<th>Secondary prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>Less than 5 mmol/l</td>
<td>Less than 4 mmol/l</td>
</tr>
<tr>
<td>LDL - Cholesterol</td>
<td>Less than 3 mmol/l</td>
<td>Less than 2 mmol/l</td>
</tr>
<tr>
<td>HDL – Cholesterol</td>
<td>No threshold set</td>
<td>&gt;1mmol/l for men and &gt;1.2mmol/l for women</td>
</tr>
</tbody>
</table>

6 out of 10 UK adults have high cholesterol levels i.e. above 5 mmol/l³

Risk Factors for High Cholesterol

- Diet – too much animal (saturated) fat and too few foods, that can lower cholesterol
- Excess body fat – especially central obesity
  
  **Ideal waist circumference should be:**
  - Less than 94cm/37in for a man
  - Less than 90cm/35.5in for a South Asian man
  - Less than 80cm/31.5in for a woman
- Inactivity
- Genes passed down from our parents – inherited

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1) British Heart Foundation Statistics Database www.heartstats.org
Cholesterol Basics
A type of sticky fat – essential for life

The right balance of both is essential

Your Cholesterol Numbers
Amount of cholesterol in millimoles (mmol) in one litre of your blood (l)

<table>
<thead>
<tr>
<th>Healthy Cholesterol Levels</th>
<th>For the majority</th>
<th>Diabetes, heart problems, high blood pressure, at high risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>Less than 5 mmol/l</td>
<td>Less than 4 mmol/l</td>
</tr>
<tr>
<td>LDL - Cholesterol</td>
<td>Less than 3 mmol/l</td>
<td>Less than 2 mmol/l</td>
</tr>
</tbody>
</table>

What increases our cholesterol levels?
- **DIET**
  - Too much animal (saturated) fat
  - Not enough foods that can lower our cholesterol
- Too much body fat – especially around our waist
- Not being active enough
- Genes passed down from our parents
Diet & Lifestyle Basics

A diet history should be taken now

The UCLP® builds on the basic principles of a healthy diet.

1. 5 portions of fruit & veg every day – fresh, frozen, dried, canned and juice all count (will go through in more detail later)

2. Starchy foods should contribute to all meals.
   - Potatoes – sweet potatoes – yam
   - Whole grain cereals should be chosen wherever possible
   - Whole grain breakfast cereals e.g. Shredded Wheat, porridge, muesli
   - Brown pasta/rice
   - Wholemeal/rye breads, rolls and crackers

3. Dairy and plant-based dairy alternatives fortified with calcium – 3 servings a day. Low-fat / reduced-fat varieties should be chosen.
   - One serving is:
     - 200ml semi-skimmed, 1% or skimmed milk or calcium fortified plant-based alternatives: soya, almond or hazelnut
     - 125-150g pot low-fat yogurt or soya yogurt alternative with added calcium
     - Match box size (30g) lower-fat hard cheese e.g. reduced-fat cheddar
   - Alternative options: sardines/pilchards (if bones eaten), almonds, sesame seeds, white and brown bread

4. Meat, poultry, fish and vegetarian options
   - Cut down on fatty and processed meat – high in saturated fat
     - Red meat no more than 70g cooked lean weight (a deck of cards) a day
     - Try and avoid processed meat e.g. pies, sausages, tinned meat
     - Eat more chicken and white meat

   - Have meat-free days, instead try:
     - Beans and pulses
     - Soya mince/chunks, soya burgers/sausages, quorn
   - Remove all visible fat and skin from meat and poultry
   - Choose healthier cooking methods e.g. grilling, dry roasting

   - Eggs and Shellfish – do not have to be restricted except for familial hyperlipidaemias or those with an already exceptionally good diet yet still have high cholesterol

Oil-rich fish – 1 to 2 (140g) servings per week

- A rich source of unsaturated fats and especially omega-3 fats with heart protective benefits

   - NOTE: Girls under 16 years and all women of child-bearing age should not consume more than 2 servings of oil-rich fish a week

   - NOTE: Boys and girls under 16 years and all women of child-bearing age should avoid marlin, shark and swordfish

5. Fat and sugary foods – have less often

Cakes – savoury and sweet biscuits – butter – lard – rich breads e.g. croissant, brioche – frying / roasting – sugary drinks – chocs and sweets. Healthier options:

- Fruit and nuts
- Diet / sugar-free drinks
- Low-fat dairy yogurts or soya yogurt alternatives

1) www.eatwell.gov.uk
2) Scientific Advisory Committee on Nutrition, Committee on Toxicity (2004). Advise on Fish Consumption: Benefits and Risks. London; TSO.
3) www.nhs.uk/Livewell/Goodfood/Pages/eatwell-plate
Eating for Good Health

FRUIT & VEG
5-a-Day

STARCHY FOODS
Include whole grains

MEAT, FISH, EGGS, BEANS/PULSES, and TOFU

Salmon
Pilchards
Trout
Mackerel
Sardines
Herring

1 – 2 Servings
Oil-Rich Fish weekly
140g = a serving

Foods and drinks HIGH IN FAT and/or SUGAR

MILK, DAIRY FOODS and PLANT-BASED ALTERNATIVES

Watch your Portions

www.nhs.uk/Livewell/Goodfood/Pages/eatwell-plate
SATURATED FAT

Saturated fat = MAINLY from animals = increase cholesterol levels

- Butter, ghee, lard/dripping
- Visible fat on meat and fatty cuts of meat
- Processed meat – tinned meat, sausages
- Full-fat dairy milk and yogurts
- Cream
- Pastry
- Most cheeses
- Biscuits – sweet & savoury
- Cakes, chocolates

Some plant fats are also high in saturated fat = palm oil, coconut oil, cocoa butter

Consuming no more than 10% energy from saturated fats – circa 20g per day for adults – can result in a 5-10% drop in LDL-C\textsuperscript{1,2}

UNSATURATED
mainly from plants = maintain healthy cholesterol levels

MONO-UNSATURATED – POLY-UNSATURATED FAT
Vegetable oils and products made from – corn, olive, soya, rapeseed, sunflower, groundnut/peanut oils, nuts and seeds, avocados

Reading food labels – per 100g of product\textsuperscript{3}

<table>
<thead>
<tr>
<th>Saturated fat</th>
<th>LOW</th>
<th>MODERATE</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5g or LESS</td>
<td>Between 1.5g and 5g</td>
<td>More than 5g</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{1} Jenkins DJ, Kendall CW, Marchie A. et al. (2003). The effect of combining plant sterols, soy protein, viscous fibers, and almonds in treating hypercholesterolemia. Metabolism 52 (11), 1478-1483.


\textsuperscript{3} http://www.nhs.uk/Livewell/Goodfood/Pages/food-labelling.aspx


Swaps\textsuperscript{4}

Use the diet history to identify which saturated fat foods the patient should focus on most or where most change is needed.

<table>
<thead>
<tr>
<th>High saturated fat</th>
<th>g sat fat per serv.</th>
<th>Lower saturated fat</th>
<th>g sat fat per serv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamb chop with fat (raw) 140g with bone</td>
<td>11.5</td>
<td>Lamb chop with fat removed (raw) 120g with bone</td>
<td>5.6</td>
</tr>
<tr>
<td>2x75g Sausages</td>
<td>13.8</td>
<td>Grilled chicken breast – skin removed (130g – medium)</td>
<td>0.4</td>
</tr>
<tr>
<td>Individual pie with puff pastry top &amp; bottom e.g. steak and kidney 160g</td>
<td>13.4</td>
<td>Pie with potato topping 320g</td>
<td>7.7</td>
</tr>
<tr>
<td>Slice of bread thickly spread with butter (15g)</td>
<td>7.8</td>
<td>Slice of bread with poly-unsaturated spread (15g)</td>
<td>2.6</td>
</tr>
<tr>
<td>Cheese sandwich with mayo 2 slices white bread – 60g butter on both slices – 30g mayo – 25g cheddar cheese – 45g</td>
<td>30</td>
<td>Ham salad sandwich 2 slices wholemeal bread – 60g, poly-unsat spread – 30g, 2 slices honey roast ham</td>
<td>6.1</td>
</tr>
<tr>
<td>Latte (200ml) full-cream dairy milk</td>
<td>5.2</td>
<td>Latte (200ml) soya milk altern.</td>
<td>0.6</td>
</tr>
<tr>
<td>Pasta with cheese sauce</td>
<td>13.8</td>
<td>Pasta with tomato sauce</td>
<td>0.4</td>
</tr>
<tr>
<td>2 chocolate-covered digestives</td>
<td>4.4</td>
<td>2 rich tea type biscuits</td>
<td>0.7</td>
</tr>
<tr>
<td>Chicken korma</td>
<td>14</td>
<td>Chicken dopiaza</td>
<td>2</td>
</tr>
<tr>
<td>Apple pie with 50ml dairy single cream</td>
<td>9.1</td>
<td>Apple crumble with soya cream altern.</td>
<td>4.8</td>
</tr>
</tbody>
</table>
Reducing Saturated Fat

Using food labels per 100g of product

<table>
<thead>
<tr>
<th>LOW</th>
<th>MODERATE</th>
<th>AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated fat</td>
<td>1.5g</td>
<td>1.5g – 5g</td>
</tr>
</tbody>
</table>

- **Lamb Chop**
  - with fat: 11.5g SAT FAT
  - fat trimmed off: 5.6g SAT FAT

- **Lamb Chop**
  - fat trimmed off: 6.1g SAT FAT

- **Ham Salad Roll**
  - unsaturated marg + no mayo: 6.1g SAT FAT

- **Cheese Sandwich with Mayo**
  - with dairy cream: 5.2g SAT FAT
  - soya milk alternative: 0.6g SAT FAT

- **Medium Latte**
  - full cream dairy milk: 30g SAT FAT
  - soya milk alternative: 0.6g SAT FAT

- **2 Pork Sausages**
  - Medium Chicken Breast skin removed – grilled: 0.4g SAT FAT

- **Medium Chicken Breast**
  - skin removed – grilled: 0.4g SAT FAT

- **Chocolate Éclair**
  - cream sauce: 14.5g SAT FAT

- **Hot Cross Bun**
  - tomato sauce: 0.9g SAT FAT

- **Pasta in a creamy cheese sauce**
  - with dairy cream: 9.1g SAT FAT
  - with soya cream alternative: 4.8g SAT FAT

- **Pasta in a tomato sauce**
  - 0.6g SAT FAT

- **Chocolate Éclair**
  - cream sauce: 14g SAT FAT

- **Chocolate Éclair**
  - tomato sauce: 2g SAT FAT

- **Lamb Chop**
  - fat trimmed off: 0.4g SAT FAT

- **2 Pork Sausages**
  - Medium Chicken Breast skin removed – grilled: 0.4g SAT FAT

- **Ham Salad Roll**
  - unsaturated marg + no mayo: 0.6g SAT FAT

- **Cheese Sandwich with Mayo**
  - with dairy cream: 5.2g SAT FAT
  - soya milk alternative: 0.6g SAT FAT
BIG UP FRUIT & VEG PORTIONS

Consumption of at least 400g of fruit & vegetables per day has been associated with lower incidence of:

- Heart disease
- Elevated cholesterol levels
- Blood pressure
- Cancers
- Obesity

Heart health benefits of fruit & veg:

- **Low in calories** whilst being high in vitamins, minerals and phytonutrients – Phytonutrients – naturally-occurring bioactive compounds associated with improved vascular reactivity and lower incidence of heart disease
- **Soluble fibre** – the high viscosity (gel-like consistency) of soluble fibre reduces cholesterol levels by adhering to cholesterol in the gut and by so doing interferes with absorption of cholesterol and bile acids
- **Antioxidants** – vitamin C and E associated with vascular health
- **Lycopenes** – red fruit and vegetables especially tomatoes, tomato purée/ketchup/sauces – reduces oxidation of LDL-C and this is associated with reduced atherosclerosis and heart disease
- **Individuals with higher fruit & vegetable intakes are more likely to follow healthier lifestyles**
- **Potassium** in fruit & vegetables actively lowers blood pressure – another risk factor for heart disease

What counts?

**FRESH – FROZEN – DRIED – CANNED – JUICED – SMOOTHIES**

<table>
<thead>
<tr>
<th>FRUIT</th>
<th>VEGETABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DRIED – 30g</strong></td>
<td></td>
</tr>
<tr>
<td>• 1 tbsp. currants, raisins, cranberries</td>
<td></td>
</tr>
<tr>
<td>• 3-4 prunes, apricots, apple rings, pear halves, dried figs, sundried tomatoes</td>
<td></td>
</tr>
<tr>
<td><strong>FRESH/FROZEN/CANNED – 80g</strong></td>
<td></td>
</tr>
<tr>
<td>A HANDFUL blackberries, gooseberries, strawberries</td>
<td></td>
</tr>
<tr>
<td><strong>FRESH – FROZEN – DRIED – CANNED – JUICED – SMOOTHIES</strong></td>
<td></td>
</tr>
<tr>
<td><strong>FRUIT</strong></td>
<td><strong>VEGETABLES</strong></td>
</tr>
<tr>
<td><strong>DRIED – 30g</strong></td>
<td>HALF courgette, pepper, avocado</td>
</tr>
<tr>
<td><strong>FRESH/FROZEN/CANNED – 80g</strong></td>
<td>ONE MEDIUM turnip, parsnip, sweet potato, leek, tomato, carrot</td>
</tr>
<tr>
<td>A COUPLE OF HANDFULS blueberries or raspberries</td>
<td>TWO TO THREE cauliflower/broccoli florets</td>
</tr>
<tr>
<td>A GOOD SLICE melon, fresh pineapple, papaya, mango</td>
<td>THREE MEDIUM beetroot – cooked or raw</td>
</tr>
<tr>
<td>ONE MEDIUM apple, pear, banana, orange, tomato</td>
<td>3 TABLESPOONS peas, carrots, tinned sweetcorn, okra/lady’s fingers, ackee</td>
</tr>
<tr>
<td>TWO clementines, satsumas, kiwi, plums</td>
<td>A SMALL BOWL of salad</td>
</tr>
<tr>
<td>THREE TABLESPOONS canned fruit IN JUICE</td>
<td>A HANDFUL mange-tout, sugar-snap peas</td>
</tr>
<tr>
<td>150ml pure fruit juice – only counts ONCE.</td>
<td>A THIRD aubergine</td>
</tr>
</tbody>
</table>

Particularly high in soluble fibre

1) www.5aday.nhs.uk
5-a-Day – Big Up Fruit & Veg


- 16 medium lady’s fingers/okra
- A slice of mango
- 1 medium sweet potato
- 1 medium
- 3 tbsp. peas
- 3 tbsp. sweetcorn
- 1 tbsp. dried small fruit
- A bowl of salad
- A handful of strawberries
THE UCLP CHOLESTEROL-BUSTING FOODS

The UCLP© has been designed to actively lower LDL (bad) cholesterol beyond the effect of low saturated fat. Maximum compliance i.e. adopting all the four key UCLP® food components in conjunction with a low saturated fat diet, has the potential to lower LDL-C by as much as 24%1,2

In addition to a low saturated fat diet rich in fruit and vegetables, the UCLP® contains four foods proven to lower cholesterol.

Each food element, on its own and in conjunction with a low saturated fat diet, will lower cholesterol levels significantly. The more food elements one introduces to a low saturated fat diet the greater the cholesterol reduction.

INTRODUCE THE UCLP® FOODS TO THE PATIENT AS A CHOICE OF FOODS THAT CAN HELP TO LOWER CHOLESTEROL. IT IS UP TO THEM TO DECIDE WHICH THEY WISH TO TAKE ON BOARD. WHICHEVER UCLP® FOOD GROUP THEY ADD TO THEIR LOW SATURATED FAT DIET, A SIGNIFICANT LDL-C REDUCTION WILL BE ACHIEVED. THE MORE UCLP® FOODS THEY INCLUDE THE BIGGER THE IMPACT.

Use the diet history to help guide the patient towards the UCLP® foods that would be most beneficial for them.

<table>
<thead>
<tr>
<th>Plant Sterols/Stanolsa</th>
<th>1.5-2.4g daily</th>
<th>Lower cholesterol by 7-10% by interfering with biliary and dietary cholesterol absorption from the gut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutsb</td>
<td>30g a handful daily</td>
<td>Nuts, with their positive nutrient profile of mono-unsaturated fat, fibre and flavonoids, have been shown to lower cholesterol by 2.7-7.5% and reduce CHD risk by 37%</td>
</tr>
<tr>
<td>Soluble Fibre,7,8</td>
<td>15-20g per day can lower LDL-C by 5-10% • Oat Beta-Glucan • Other Whole Grain • Beans &amp; Pulses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3g daily</td>
<td>16-32g 1-2 servings daily</td>
</tr>
<tr>
<td></td>
<td>80-100g daily</td>
<td>Oat Beta-Glucan9,9 Lowers LDL-C by up to 5%. The high viscosity of these soluble fibres reduces cholesterol levels by interfering with its absorption in the gut</td>
</tr>
<tr>
<td>Other Whole Grain</td>
<td>The complex nutrient profile of whole grain, especially polyphenolic compounds, soluble fibre, unsaturated fat and oligosaccharides</td>
<td></td>
</tr>
<tr>
<td>Beans &amp; Pulsesc</td>
<td>15-25g 1-3 servings daily</td>
<td>Soya foods can lower LDL-C by up to 10%. 4% of the effect is attributed to soya protein directly interfering with liver LDL-C synthesis. The remaining impact has been attributed to the displacement of saturated fat within the diet</td>
</tr>
</tbody>
</table>

3) Jenkins DJ, Mirrahimi A, Srichaikul K et al. (2010). Soy protein reduces serum cholesterol by both intrinsic and food displacement mechanisms. J Nutr 140(12), 2302S-2311S.
The Ultimate Cholesterol Lowering Foods

Oat Beta-Glucan
Other whole grain Beans & Pulses
Soluble Fibre
Nuts
Soya Foods
Sterols and Stanols

Which Would You Like To Try?

LOW SATURATED FAT
5-A-DAY

The smarter way to lower your cholesterol
Starting with just 15g soya protein daily
1-2 servings soya foods

Any ONE of the following options will provide at least 15g soya protein

- Image on patient facing page
- 500ml (two large glasses) soya milk alternative
- 28g (a handful) soya nuts
- 30g soya mince or chunks
- 50g marinaded tofu
- 90g (3-4 tablespoons) cooked dried soya beans
- 250ml (a large glass) soya milk alternative + 85g (3-4 tablespoons) young soya beans (Edamame beans)
- 250ml (a large glass) soya milk alternative + 200ml carton soya shake
- 1 soya burger + 150g serving soya plain yogurt alternative
- 25g soya mince + 125g pot soya dessert
- 85g (3 tablespoons) young soya beans (Edamame beans) + 150g serving soya plain yogurt alternative or 200ml soya custard
- 85g (3 tablespoons) young soya beans (Edamame beans) + 250ml soya milk alternative
- 150ml (a small glass) soya milk alternative + 150ml serving soya custard + 150g serving soya vanilla yogurt alternative
- 250ml (a large glass) soya milk alternative + 125g pot soya fruit yogurt alternative + 125g pot soya chocolate dessert
- 150g serving soya plain yogurt alternative + 200ml carton soya shake + 125g pot soya dessert
- 250ml (a large glass) soya milk alternative + 125g pot soya fruit yogurt alternative + 150g serving soya custard

Consumption of 15-25g soya protein daily, has been scientifically proven to lower LDL-C by 4.3-10%

- 4.3% by the direct action of soya protein on LDL-C receptors in the liver – where it down-regulates LDL-C synthesis
- 6% by the displacement of saturated fat-containing foods

Patients already consuming 1-2 servings soya foods daily, should be encouraged to increase consumption to 25g soya protein daily. Simply suggest any of the following options to add another 7-10g soya protein to their current intake:

- 250ml (large glass) soya milk alternative
- 200ml soya pouring yogurt
- 200ml carton soya shake
- 2 x 125g pots soya yogurt alternative
- 1 x 125g pot soya yogurt alternative + 1 x 125g pot soya dessert
- 1 x 125g pot soya yogurt alternative + 150g serving soya custard
- 75g (3 tablespoons) young fresh/frozen soya beans (Edamame)
- Half a handful soya nuts
- 50g (2 tablespoons) cooked dried soya beans
- 15-20g soya mince/chunks
- 1 soya/tofu burger or sausage
- 30g marinaded tofu pieces
- 50g hard tofu

1) Jenkins DJ, Mirrahimi A, Sirichaikul K et al. (2010). Soy protein reduces serum cholesterol by both intrinsic and food displacement mechanisms. J Nutr 140(12), 2302S-2311S.
Choose any of the following options daily

- 25g Soya mince
- 125g Soya dessert
- 1 Handful soya nuts
- Soya burger
- 80g Edamame beans
- 200g Soya custard
- 50g Marinaded tofu pieces
- 160g Soya plain yogurt alternative
STEROLS/STANOLS

1.5 to 2.4g per day (1–3 servings)

Plant sterol and stanol esters are compounds naturally found in small quantities in plants such as nuts, seeds, grains, fruit and vegetables.

- They lower cholesterol by up to 10% at quantities of around 1.5-2.4g per day
- To obtain the effective dose by consuming foods naturally containing sterols/stanols will not be possible – therefore a more convenient way is to consume products that have been fortified with these compounds.

Any of the following food options will provide the patient with the effective dose of 1.5-2.4g sterols or stanols per day:

**1 mini-yogurt / milk drink (65g-100g)**
(dairy/non dairy based)
fortified with sterols/stanols

**OR**

2-3 daily servings of any of the following products fortified with sterols/stanols:

- 2 tsp. (10g-12g) margarine/spreads
- 1 small (120g) pot yogurt
- 1 large glass (250ml) milk
- 4 tsp. (40g) cream cheese spread

How to use effectively

- Plant sterol/stanol products should be spread out through the day and always taken with meals to optimize impact.
- If the fortified mini-yogurt drink option is chosen (only one serving a day) then this should be taken with a main meal.

NOTE: Sterol/Stanol containing products

- Should only be used for those needing to lower their serum cholesterol and daily intake should not exceed 3g.
- Should be used as part of a diet, which includes plenty of fruit and vegetables to help maintain carotenoid levels.
- Are not appropriate for pregnant and breastfeeding women and children unless advised by a health professional.
- Can be used with patients on statins.

NUTS

2,3 (unsalted)

Just a handful (30g) of nuts; almonds, pecans, pistachios, walnuts and peanuts, through their complex positive nutrient profile of mono-unsaturated fat, soluble fibre and phytochemicals have been proven to:

- Significantly lower cholesterol by up to 7.5%
- Significantly reduce coronary artery risk by up to 37%

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Sterol/Stanol Fortified Foods

Always take with meals

Once a Day:
- 1 mini sterol/stanol fortified drink

Any two to three of the following daily:
- 2 tsp. spread fortified with plant sterol/stanol
- 1 pot (120g) sterol/stanol fortified yogurt
- A large (250ml) glass sterol/stanol fortified milk
- 4 tsp. cream cheese fortified with sterol/stanol

NUTS
Just a daily handful – unsalted
- walnuts
- pecans
- almonds
- pistachios
- peanuts
Soluble fibre can help lower cholesterol by increasing viscosity in the gut, which interferes with gut absorption of dietary cholesterol and bile acid re-absorption.

There are many ways of including soluble fibre in your patient’s diet:

- **5-a-day** – Soluble fibre will be automatically increased
- **Oat beta-glucan**
- **Other whole grain**
- **Beans and pulses**

**Oat Beta-Glucan**

*Oats* are a whole grain food especially rich in a soluble fibre known as *beta-glucan* – scientifically proven to lower cholesterol.

Achieving 3g oat beta-glucan daily

The patient should ultimately aim to consume **ANY THREE** of the following servings (each serving provides 0.75g-1g oat beta-glucan) **DAILY**:

- Image on patient facing page
- 2 tbsp. (13g) oatbran
- 3 tbsp. (30g dry) porridge oats or 1 sachet (27g) microwavable porridge oats
- 1 oat breakfast biscuit e.g. Oatibix
- 2 slices Hearty Oat bread
- 3 oatcakes
- A bowl (30-35g) oat-based breakfast cereals e.g. Kellogg’s Optivita, Momflake’s Oatbran Flakes
- 2 (30-38g each) Oat-based cereal bars – where oats make up over 40% of the ingredients e.g. Jordan’s crunchy, Quaker’s oat bars

**How to incorporate...**

- Use oat-based breakfast cereals
- Oatbran – sprinkled on fruit salads, favourite cereals, in soups. Use when baking bread, cakes and biscuits
- Snack on oatcakes

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Oat Beta-Glucan

2-3 servings daily

- 2 tbsp. oat bran
- 3 tbsp. porridge oats or 1 sachet instant / microwavable porridge
- 2 slices Hearty Oat bread
- 1 oat breakfast biscuit e.g. Oatbix
- Oat based breakfast cereals e.g. Kellogg’s Optivita, Momflake’s Oat Bran Flakes
- 3 oatcakes
SOLUBLE FIBRE from OTHER WHOLE GRAIN and BEANS & PULSES

Other Whole Grain Foods¹

In addition to soluble fibre, whole grain foods also provide other heart protective nutrients especially those found in the germ – the most commonly removed part of the grain in processed cereals: unsaturated fats, phytochemicals, minerals such as iron and zinc as well as E and B vitamins.

Spotting a whole grain

- Look for the word “whole” in the name e.g. wholemeal granary bread, wholewheat cereal, whole grain cereal
- Ingredients list: Check that whole grain is the main ingredient i.e. it should appear at the top of the ingredients list. Sometimes a combination of grains may be used for example – whole grain wheat & oats

The patient should aim for one to two single servings a day (in addition to any oats they may take)

Single whole grain servings:
- Small bowl whole grain breakfast cereal
- 2 rye crispbreads
- 1 slice wholemeal bread/roll
- 1 small wholewheat tortilla/pitta bread
- 1 wholemeal scone
- 2 tablespoons brown rice
- 3 tablespoons cooked wholewheat pasta
- 2-3 handfuls plain popped corn (unsalted/unsweetened)

Beans & Pulses – 80-100g serving per day

Significant quantities of soluble fibre can be achieved by consuming beans and pulses. Patients should be encouraged to consume 80-100g of beans and pulses daily – this may be an easier option to suggest with Asian and vegetarian groups.


Easy and simple – There are now many varieties available, ready cooked with no need for soaking/boiling. Encourage your patient to use canned varieties or frozen versions:
- Baked beans on toast
- Canned beans in:
  - Stews
  - Soups – encourage them to make their own
  - Salads
  - Use as a vegetable accompaniment to main meals
  - Purée with mashed potatoes
  - Bean or humous dips
- Retailers’ ready-meal sections are now full of bean salad varieties
- Frozen broad beans, Edamame (soya beans) are now readily available
- Bean or lentil based soups

**Other Whole Grain**

1-2 servings of other whole grain daily

- A small bowl of whole grain cereal
- 2 rye crispbreads
- 1 roll/slice wholemeal bread
- 2-3 handfuls plain popped corn

**Beans & Pulses**

One 80-100g serving daily

- Daal
- Baked beans on toast
- A mixed bean soup
- Mixed bean salad
WRAPPING UP & SETTING GOALS

Once the patient has chosen which UCLP© food/s they would like to try, ask them to make a note on their copy of the patient UCLP© information sheet - by ticking the appropriate box.

Then, discuss with the patient the various food options and servings available to them of the chosen food/s – refer back to the flip chart for ideas and reminders. Once the patient decides which food serving options they would like to try, ask them to record this on the patient UCLP© information sheet in the appropriate section.

- If you will not be seeing the patient again, suggest further changes they might want to try once they become familiar with their patient UCLP© initial choices.

- Encourage the patient to keep a food and drink diary for 3 days and especially prior to revisiting you. THEY CAN PHOTOCOPY THE DIARY ON THE BACK OF THEIR PATIENT UCLP© INFORMATION SHEET.

If the patient feels it would be helpful, fill in their cholesterol and weight details on the back of their patient UCLP© information sheet (cholesterol, weight, waist circumference).

- Where appropriate, book a follow-up appointment for 8-12 weeks time with a phlebotomist to re-check cholesterol levels.

- Remind them to refer back to their motivational triggers to re-inspire them.

For further on-line support for cholesterol lowering go to: www.heartuk.org.uk • www.alproplus.com

Or to order the UCLP report email ‘UCLP Report’ to: info@nutrilicious.co.uk
ABOUT HEART UK AND THE UCLP® EXPERT ADVISERS

HEART UK – THE CHOLESTEROL CHARITY

HEART UK – The Cholesterol Charity is the specialist advisor on issues related to cholesterol and lipid conditions. They campaign for better identification, treatment and cutting edge clinical practice/treatment of raised cholesterol and related conditions.

Our Strategic Priorities

Better training and support for those working with people with raised cholesterol.
• Better screening, identification and treatment of people with raised cholesterol.
• Better support and care for people with high cholesterol and their families.
• Better public awareness of cholesterol and its impact.

Our Vision:
• To prevent avoidable and early deaths caused by high cholesterol.
• We want the majority of UK adults to know their cholesterol levels, understand the impact and to be taking any necessary action.

Our Services
• Helpline: 0845 450 5988
• Website: www.heartuk/healthunlocked
• Patient Community: heartuk.healthunlocked.com
• Membership: keeping patients and healthy professionals informed.
• Publications: impactful, informative and evidence based.
• Product approval: working with the food industry to reassure consumers about produce choice.
• Educational events: keeping patients and health professionals informed.
• Career progression: for health care professionals to help improve patient outcomes.
• Campaigning: working with partners to improve health policy.
• Fundraising and challenge events: raising funds to support our work.
• Networks: developing clinical networks to benefit patients.

For more information about HEART UK call us on 01628 777 046 or visit www.heartuk.org

THE UCLP® EXPERT ADVISERS

Linda Main BSc RD Registered Dietitian and Nutritionist

Linda Main has over 25 years of experience in the field of nutrition, diet and health in both the NHS and industry. Linda now works freelance and as nutrition adviser to HEART UK – The Cholesterol Charity. Linda maintains a special interest in heart health, vitamin and mineral supplementation and infant feeding and enjoys working with the media.

Dr Sarah Jarvis MA BM BCh FRCGP General Practitioner

As well as being a General Practitioner (GP), Dr Jarvis is also a GP trainer, Fellow of the Royal College of General Practitioners (RCGP) and Women’s Health spokesperson for the RCGP. Dr Jarvis is past chair of the Health Care Committee of HEART UK - The Cholesterol Charity, and is a member of the advisory board for the British Journal of Cardiology. Dr Jarvis is also an active medical writer and broadcaster. She has been a regular contributor to a variety of medical journals including Update, Doctor, Practice Nurse and the British Journal of Cardiology and newspapers such as The Sunday Telegraph and The Guardian.

Jaqui Walker BSc (Hons) RGN Registered Nurse

Jaqui Walker is a general practice nurse with an interest in health promotion, diet and nutrition. She has experience of working both in the NHS and the pharmaceutical industry. As a practice nurse she is regularly involved in advising patients on diet, especially in relation to cholesterol management and also obesity. She was recently involved in a pilot study looking at the effectiveness of a low-calorie liquid diet in patients with a BMI over 40 in general practice. Jaqui works part-time as a practice nurse and part-time as a freelance medical writer undertaking various writing and medical educational projects.

Sue Baic MSc RD RNutr Registered Dietitian, Nutritionist and Lecturer

Sue Baic has worked in the NHS as a community dietitian and in private practice. Sue’s research focuses on heart health and she has previously worked as a specialist dietitian in a lipid clinic. She is currently Programme Director for the Master of Science in Nutrition, Physical Activity and Public Health at the University of Bristol.

Dr Frankie Phillips BSc (Hons) RD MBDA RPHNutr Registered Dietitian and Public Health Nutritionist

Dr Phillips has over 15 years’ experience in the NHS, research and public health. She has featured on national TV and radio discussing topical food and nutrition issues and has written extensively for health professionals. Frankie has a keen interest in heart health and cholesterol-lowering after examining the effect of a vegetarian diet on lipids for her PhD.

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Alpro is the leading European manufacturer of plant-based alternatives. Its scientific department is dedicated to providing up-to-date evidence-based scientific and practical support to health professionals.
For further information on the UCLP® visit: www.alpro.com or email: info@nutrilicious.co.uk
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