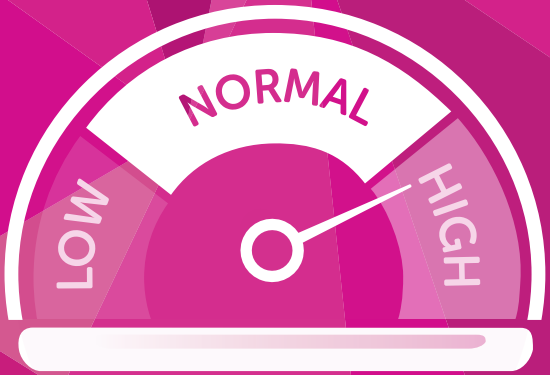
Chest Heart & Stroke Scotland

CHOLESTEROL



ESSENTIAL GUIDE

This Essential Guide is about cholesterol.

It explains:

- What cholesterol is.
- The difference between high-density lipoproteins (HDLs) and non-high-density lipoproteins (non-HDLs).
- Why too much non-HDL cholesterol is harmful.
- What you can do to reduce your cholesterol level if it is too high.

What is cholesterol?

Cholesterol is a fatty, waxy substance mainly produced in your liver. Your body can also get cholesterol from some foods, like red meat and full-fat dairy products.

Your body needs cholesterol to make stable cells and organs. Cholesterol is also needed for digestion, and helps to make important hormones and chemicals like vitamin D.

There are two types of cholesterol, "good" and "bad".

To be carried around the body, cholesterol combines with proteins in your blood. "Good" cholesterol combined with proteins makes **high-density lipoproteins (HDLs)**. "Bad" cholesterol combined with proteins makes **non-high-density lipoproteins (LDLs)**.

Cholesterol is measured in millimoles per litre (mmol/L).

Types of cholesterol

The main difference between "good" and "bad" cholesterol is what kind of lipoprotein they form in your blood.

HDL cholesterol is beneficial to your body. It helps you break down and recycle your non-HDL cholesterol. For men, above 1.0mmol/L is a healthy level. For women above 1.2mmol/L is a healthy level.

Too much non-HDL cholesterol can build up along the walls of your arteries. These patches can narrow or block your arteries. This makes it difficult for blood to pass around your body. Depending on which arteries are affected, this can lead to a heart attack or stroke. Below 4.0mmol/L is a healthy level of non-HDL. After a heart attack or stroke below 2.6mmol/L is a healthy level.

You should aim to have a low level of non-HDL and a higher level of HDLs.

HDL

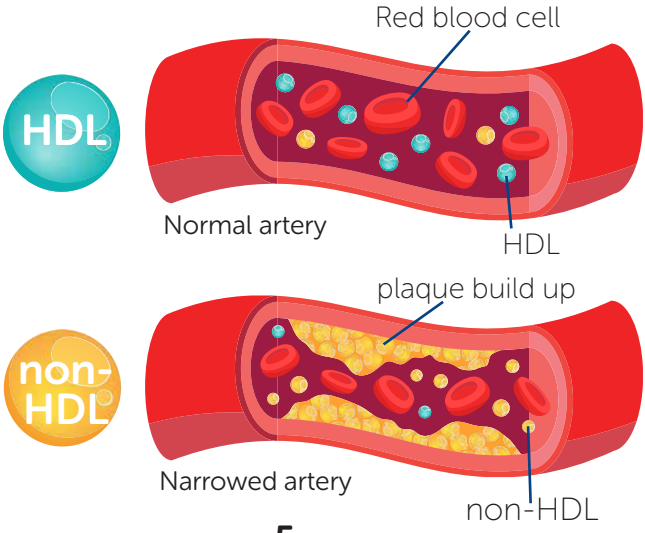
High-density lipoprotein

"Good cholesterol"

non-HDL

Non-high-density lipoprotein

"Bad cholesterol"



What causes a build-up of non-HDL cholesterol?

Some people naturally produce too much cholesterol, or a high proportion of non-HDL cholesterol. This is more common if there is a family history of high cholesterol (familial hypercholesterolaemia).

Cholesterol naturally rises during pregnancy and menopause. It is recommended that your cholesterol levels are re-evaluated during these periods.

Cholesterol is also found in food. HDL ("good") cholesterol is found in foods like eggs, liver, and fish. Non-HDL ("bad") cholesterol comes from foods high in saturated fat. These include: fatty meats, bacon and sausages, peanuts, dairy products, palm and coconut oil, and processed foods.

How do I know if I have high cholesterol?

If your doctor is concerned about your cholesterol level, you will need a blood test. This measures the levels of HDL and non-HDL cholesterol, as well as other fatty substances (called triglycerides), in your blood.

The doctor might also look at other risk factors like your age, sex, weight, blood pressure, family history, and whether you smoke. Along with your blood test results, this information helps indicate whether your risk of heart disease or stroke is high, medium, or low.

If you have a high risk of heart disease or stroke, your doctor may prescribe you medicine to lower your cholesterol.

Medication

If you do have high cholesterol, your doctor may prescribe you a medicine called **statins**. Statins reduce the amount of cholesterol made by your liver, and therefore help to reduce the overall level of cholesterol in your blood.

Some food, drinks, medications or supplements can negatively interact with statins. For example, grapefruit juice. Always check the patient information leaflet or get advice from your pharmacist if you're unsure.

If your cholesterol levels are normal, you may still be at risk of developing heart problems or stroke for other reasons. If this is the case, your doctor may recommend you take medication to keep your cholesterol low and further reduce the risk.

Taking action

There are plenty of actions you can take to help reduce your cholesterol.

1 Eat well

Try to cook food from scratch with fresh ingredients.

Choose foods low in saturated fats: fish, nuts, olive oil, lean meat like chicken, beans, lentils or tofu.

Increase your Omega 3 intake: salmon, mackerel, anchovy, sardines, herring, and walnuts.

Yoghurts, especially probiotic yoghurts, can lower your cholesterol.

Cut down foods high in saturated fat: fatty meats like pork, lamb, and beef, full-fat dairy, coconut oil, cakes, and hard cheese like cheddar.

Cut down on highly processed foods: ready meals, cured meats (like chorizo, salami, and pancetta), and crisps.

2 Be active

Aim for at least **30 minutes of moderate activity** (exercise that increases your breathing and heart rate) on **5 or more days a week**. This could be 30 minutes in one go, or broken up into shorter sessions.

You can replace this moderate activity with **75 minutes of vigorous activity a week** instead.

Aim to do **strength exercises** (like using weights, carrying groceries, or stretching) on **2 or more days a week**.

It can be easier to keep active if you choose activities you enjoy. This might be anything - for example, walking, gardening, yoga, or dancing.

3 Stop smoking

Smoking increases the level of "bad" non-HDLs in your blood, and lowers the level of "good" HDLs.

Smoking also increases your risk of heart disease, stroke, and lung damage in other ways.

It doesn't matter whether you smoke cigarettes, roll-ups, cigars, or a pipe: the impact of smoking tobacco is the same regardless.

Cholesterol levels may also be increased by e-cigarette use.

Free support is available to help you quit. Ask your doctor or nurse for information, call Quit Your Way Scotland on **0800 84 84 84** or visit their website.

4 Be Alcohol Aware

Alcohol increases the level of "bad" non-HDLs in your blood.

Stay within the recommended limit of no more than 14 units of alcohol per week, spread over 3 or more days.

Try to have at least two alcohol-free days every week.

For advice on how to reduce your alcohol intake, go to **www.alcohol-focus-scotland.org.uk** or phone Drinkline for free on **0300 123 1110**.

One unit of alcohol is equal to:

218ml

Standard
4.5% cider

76ml

Standard
13% wine

25ml

Standard
40% whisky

250ml

Standard
4% beer

250ml

Standard
4% alcopop

Myths and facts

MYTH: Using margarine instead of butter helps to lower cholesterol.

FACT: Margarine contains trans-fats which can increase the level of "bad" cholesterol in your blood.

MYTH: Only older people or people who have overweight have high cholesterol levels.

FACT: Anyone can have high cholesterol - it doesn't matter how old they are, or how much they weigh. Having overweight does increase the risk of high cholesterol. However, you can have high cholesterol without having overweight, especially if you have a family history of coronary heart disease.

MYTH: I feel fine, so my cholesterol level must be okay.

FACT: High cholesterol often has no symptoms. Some people don't know what is wrong with them until they have a heart attack or stroke. It is important to have regular check-ups with your nurse or doctor.

MYTH: Cholesterol is always bad and I should avoid it totally.

FACT: While too much cholesterol is bad, especially too much non-HDL cholesterol, your body needs some cholesterol to work properly. You should consult with your health professional before going on a strict low-cholesterol diet.

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