CHOLESTEROL & PREVENTION

Cholesterol-lowering treatment Which option is right for me?

The short answer

The aim of treatment is to reduce your chance of a future heart attack, stroke or other problem caused by atherosclerosis - the build-up of plaque in arteries. Lowering **LDL cholesterol** is an important part of prevention. The right plan depends on your overall risk, the reduction needed, the evidence for each medicine and what you can tolerate. [1,2]

Why offer treatment if my cholesterol is “normal”?

A laboratory reference range does not define your personal treatment goal. Someone with established artery disease may benefit from further lowering even when the result falls within that range. A good result while taking treatment usually shows that it is working; it does not mean the underlying risk has disappeared. [1]

Primary prevention

Treatment aims to prevent a first cardiovascular event. The decision considers risk factors and your circumstances, rather than the cholesterol result alone. [1]

Secondary prevention

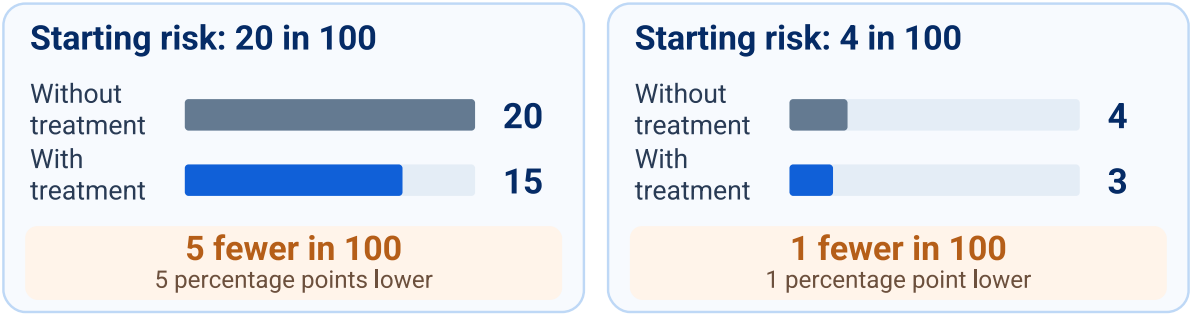
You already have established cardiovascular disease, such as a previous heart attack or a stroke caused by a blocked artery. The risk of another event is generally higher, so the potential absolute benefit is often greater. [1]

Understanding the size of the benefit

Imagine a treatment that reduces **relative risk by 25%** over 10 years. The number of events prevented depends on the risk before treatment:

Same assumed 25% relative reduction

100 people / over 10 years



Illustrative numbers, not a forecast for you or a promise about a particular medicine. Both examples assume a 25% relative reduction over the same 10 years. Actual benefit depends on your risk, the LDL reduction and the evidence for the treatment.

Make the benefit personal

Ask what treatment is expected to achieve for you, how the benefit compares with possible downsides, and how the response will be checked. [1]

CHOLESTEROL & PREVENTION

What do statins do, and how are they used?

Statins reduce cholesterol production in the liver and help it remove LDL from the blood. They have substantial evidence for preventing cardiovascular events and are usually the first medicine considered. They are prescribed alongside measures such as stopping smoking, a healthy diet, activity and blood-pressure control. [1,2,5]

Why this statin and this strength?

Statins differ in how much they lower LDL. The choice takes account of the reduction needed, other medicines, kidney or liver problems and previous side effects. The number of milligrams does not directly compare the strength of different statins. Ask what the prescription is expected to achieve and whether the intended dose is suitable for you. [1,2,5]

The aim is a treatment you can take consistently. If the preferred dose causes difficulty, a lower tolerated dose may still be useful, sometimes combined with another medicine. Treatment need not be an all-or-nothing choice between a high-dose statin and no prevention. [1,2,3]

Taking the medicine regularly

Take it according to the label. Some statins are best taken in the evening; others can be taken at a convenient, consistent time. Ask your pharmacist if you are unsure. If you miss a dose, follow the instructions for that medicine rather than taking an extra dose to make up for it. [5]

You will usually not feel your cholesterol falling. Blood tests show the response. Lipid treatment is generally long term because LDL commonly rises again if treatment stops. Arrange a review if you want to change it, rather than assuming a reassuring blood result means it is no longer needed. [1,5]

What is checked before starting?

Your clinician reviews cardiovascular risk and medical history, current medicines, any previous muscle symptoms and relevant blood tests. These usually include a full lipid profile, liver enzymes, kidney function and assessment of diabetes status. Thyroid testing or a muscle enzyme test may be useful when the history suggests a reason. [1,3]

Lifestyle still matters

A heart-healthy diet, replacing some saturated fat with unsaturated fats, regular activity, avoiding smoking and addressing excess weight help reduce overall risk. Medicines and lifestyle changes can work together. Needing a tablet does not mean lifestyle efforts have failed; inherited cholesterol levels and existing artery disease may make additional treatment worthwhile. [1,2]



A plan you can follow

Tell your clinician about practical barriers, including remembering tablets, swallowing difficulties, cost or worries about side effects. A workable plan is more useful than a prescription you cannot follow. [1]

CHOLESTEROL & PREVENTION

What if I develop side effects?

Most people tolerate statins. Muscle symptoms can occur, but aches also have many other causes. Trials show that the additional risk of muscle symptoms caused by statins is small; severe muscle injury is rare. New symptoms should still be taken seriously and assessed. [1,3,4]

A useful review asks four questions

What changed?

Note the medicine, dose, start date and when symptoms began. Explain whether the problem is pain, cramp, tenderness or weakness, and which muscles are affected. Mention a recent dose increase or new prescription. [3]

Could something else contribute?

Unaccustomed exercise, illness, thyroid problems and interactions with other medicines can be relevant. Bring a full list, including supplements, inhalers and medicines bought without a prescription. [1,3,5]

Is there evidence of muscle injury?

Your clinician may check **creatine kinase (CK)**, a blood marker released from muscle. CK helps assess injury but does not, by itself, explain every ache. Recent strenuous exercise can affect the result. Routine CK testing is not needed when there are no muscle symptoms. [1,3]

Which approach preserves prevention?

Depending on the findings, your clinician may plan a brief pause and reassessment, then try a lower dose, another statin or a different schedule. If only a small dose is tolerated, it can sometimes be combined with a non-statin medicine. If statins remain unsuitable, there are other options. [1,2,3]

One difficult prescription does not settle every option

Being unable to tolerate one statin or one dose does not automatically mean that all statins will cause the same problem. A structured review helps find a sustainable regimen and avoids repeatedly stopping and restarting without a plan. Agree who will review the symptoms, what to do meanwhile and how cholesterol lowering will continue. [1,3]

Other effects to discuss

Digestive symptoms, headache or sleep problems may occur. Liver enzymes can rise, which is one reason for scheduled blood tests. A mildly abnormal result does not automatically mean serious liver damage or that treatment must end. Statins can also slightly increase blood glucose or the chance of diabetes; when treatment is appropriate, its cardiovascular benefit usually outweighs this risk. Discuss the result rather than stopping on your own. [1,5,6]

Symptoms that need urgent advice

Severe unexplained muscle pain or weakness, especially with red or brown urine, needs urgent medical advice. Stop the statin and contact your prescriber or NHS 111. Yellow skin or eyes also needs urgent advice. Do not wait for a routine blood test or appointment. Check the medicine's leaflet for its specific warnings. [6]

CHOLESTEROL & PREVENTION

When a statin is not enough or is unsuitable

Several medicines lower LDL through different mechanisms. They may be added to a tolerated statin or used when a statin is unsuitable. The choice depends on the reduction needed, clinical evidence, side effects, practicality and access criteria. [1,2]

Ezetimibe - a daily tablet

Ezetimibe reduces the absorption of cholesterol from the intestine. It is commonly added when a statin alone does not achieve the intended reduction, and can also be used when statins are not tolerated. A major trial showed fewer cardiovascular events when it was added to a statin after an acute coronary event. Discuss possible adverse effects and how the response will be measured. [1,2,7]

Bempedoic acid - a daily tablet

This acts on cholesterol production in the liver and is often used with ezetimibe. A trial in people unable or unwilling to take recommended statin doses because of adverse effects showed a reduction in cardiovascular events. It can raise uric acid and increase the risk of gout, which matters when choosing treatment. NICE access criteria include circumstances where statins are contraindicated or not tolerated and ezetimibe alone is insufficient. [8,9]

PCSK9 antibodies - injections

Medicines such as evolocumab and alirocumab help the liver remove more LDL. Depending on the product and regimen, injections are generally given every two or four weeks and can be self-administered after training. They produce substantial LDL reductions. Clinical trials have demonstrated fewer cardiovascular events in people with established cardiovascular disease. Injection-site reactions and other practical considerations should be discussed. [2,10,11]

Inclisiran - an injection at longer intervals

Inclisiran reduces production of a liver protein called PCSK9. A healthcare professional gives an initial injection, another after three months, then one every six months. It lowers LDL substantially. **As of November 2026, results from dedicated trials testing its effect on heart attacks and strokes are still awaited.** This distinguishes the demonstrated cholesterol reduction from direct evidence about clinical outcomes. [12,13,14]

Why is the same medicine not offered to everyone?

NHS eligibility is defined by the relevant NICE recommendations. Criteria can include established cardiovascular disease, inherited high cholesterol (familial hypercholesterolaemia), LDL remaining high despite tolerated treatment, or documented intolerance. A high calcium score or plaque on a scan may influence risk assessment, but does not automatically meet the criteria for a particular injection. Your clinician should explain the reason for the proposed option and any access restrictions. [1,2,8,10,12]



Ask about cholesterol lowering and clinical outcomes

A larger LDL reduction and evidence of fewer heart attacks or strokes are related questions, but they are not interchangeable. Ask what is known for the proposed medicine and for people in a situation similar to yours. [1,7,9,11,14]

CHOLESTEROL & PREVENTION

Starting treatment and checking the response

Know which result matters

LDL cholesterol is one important treatment measure. **Non-HDL cholesterol** is total cholesterol minus HDL; it includes cholesterol in several types of particles that can contribute to plaque. The goal depends on why you are being treated and the guidance being used. [1,2]

Situation	Current NICE treatment aim
Primary prevention	More than a 40% reduction in non-HDL cholesterol from the untreated baseline. [1]
Secondary prevention	LDL cholesterol of 2.0 mmol/L or less, or non-HDL cholesterol of 2.6 mmol/L or less. [1]

These are general NICE aims, not a single target for every person. Your specialist may recommend a different goal because of your particular diagnosis or risk. A percentage reduction needs a reliable baseline for comparison. [1,2]

When are blood tests repeated?

NICE recommends a lipid profile and liver enzymes **2-3 months after starting or changing treatment**. Liver enzymes are also checked at 12 months, then only if clinically indicated. The review considers how regularly you are taking treatment, side effects and whether the planned reduction has been achieved. Agree who will review the results, and arrange an annual medicine review with further lipid checks as appropriate. [1,2]

Check before adding another medicine

Some antibiotics, antifungals and other medicines interact with certain statins. Grapefruit and supplements can also matter. Ask a pharmacist or prescriber before starting something new; the advice depends on your actual statin. If you become pregnant while taking a statin, stop it and contact your prescriber promptly. Discuss plans for pregnancy or breastfeeding in advance; treatment needs individual review. [1,5,6]

Questions for your next review

Why is treatment recommended for me? Which result and target are we following? What benefit is expected? What should I do if symptoms develop? If the target is not reached, would a change in dose, another tablet or an injection be appropriate? Who is arranging the blood test and follow-up?

Keep the plan under review

The best plan is one you understand, can tolerate and can follow consistently. Keep taking it as agreed, raise problems early and review the response rather than judging success from one number alone. [1]

Sources and further reading • Numbered links are clickable in the PDF.

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