NHS GGC Guidelines for the Management of Cholesterol

PRIM ARY PREVEN TION OF CORON ARY HEART DISEASE AND STROKE

High risk patients (predicted cardiovascular event rate 20% or more over 10 years) should be treated with a statin

Treat patients ≥40 years of age who have diabetes using a statin as for secondary prevention

Random non-fasting test for total cholesterol and LFT’s

If total cholesterol >8mmol/L and CVD in 1st degree relative aged <60, consider referral to lipid clinic for genetic screening for familial hypercholesterolaemia

Calculate individual risk using ASSIGN or Joint British Societies risk prediction models
See BNF or CDSS – if already treated for hypertension, use most recent pre-treatment BP for risk estimation

Treat patient if 10 year cardiovascular event risk ≥ 20% using simvastatin 40mg daily (atorvastatin 10mg is an acceptable alternative)

See BNF for cautions, contra-indications and clinically important interactions (see supplement overleaf).
Recheck LFT’s after 1 month. Check CK if patient complains of myalgia.

NB There is no target for cholesterol for primary prevention. There is no evidence to support up-titration of statin dose or the use of additional drugs (see supplement overleaf)

SECONDARY PREVEN TION OF CORON ARY HEART DISEASE AND STROKE

Patients with established atherosclerotic arterial disease are at high risk and should be treated with a statin regardless of total blood cholesterol concentration

i.e. previous MI / previous CABG / previous PCI / angina / angiographically-proven coronary artery disease / ischaemic stroke or TIA / peripheral arterial disease / patients ≥ 40 years of age who have diabetes

Random non-fasting test for total cholesterol and LFT’s

If total cholesterol >8mmol/L with premature CVD, consider referral to Lipid Clinic for genetic screening for familial hypercholesterolaemia

Treat all patients regardless of baseline cholesterol using simvastatin 40mg daily (consider the use of high dose atorvastatin up to 80mg for acute MI or stroke)

See BNF for cautions, contra-indications and clinically important interactions (see supplement overleaf).
Recheck LFT’s after 1 month. Check CK if patient complains of myalgia.

Re-test at 1 month
Random non-fasting total cholesterol + triglycerides + LFT’s

Goals of treatment by THREE MONTHS Total cholesterol concentration <5.00 mmol/L and reduce cholesterol concentration by ≥ 25%

Cholesterol Goals Achieved Annual review to ensure continued concordance.

Cholesterol goals not achieved Discuss adherence with treatment. Consider higher doses of atorvastatin (i.e. 40 or 80mg daily). The use of other classes of lipid-lowering agents is not recommended without specialist advice.

Treatment of frail or very elderly patients with statins should be guided by individual circumstances and co-morbidities and need not follow guideline recommendations.

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# SUPPLEMENT

## 1. STATIN INTOLERANCE

**NB** The evidence for the use of statins is much stronger than for other agents for both primary and secondary prevention of cardiovascular disease. It is important to emphasise this to patients, and to ensure that there is genuine intolerance before considering an alternative. This should include trying different statin preparations and/or lower than usual doses - for example: `- simvastatin 40mg → simvastatin 20mg → atorvastatin 10mg → rosuvastatin 5mg`

**Primary prevention (i.e. those with no diagnosis of atherosclerotic arterial disease or diabetes)**

Ensure patient is genuinely intolerant of statin before making any changes to therapy (see above). Reinforce dietary and lifestyle measures. There is insufficient evidence to support the use of agents other than statins for primary prevention, however if familial hyperlipidaemia is suspected then the patient should be referred to a lipid clinic for specialist advice.

**Secondary prevention (i.e. those with a diagnosis of atherosclerotic arterial disease or diabetes)**

Ensure patient is genuinely intolerant of statin before making any changes to therapy (see above). Reinforce dietary and lifestyle measures. In exceptional circumstances consider alternative agents, but there is much less evidence for efficacy, and they are usually more expensive. It may be appropriate to seek a specialist opinion if the patient is intolerant of two classes of lipid-lowering drugs for secondary prevention.

## 2. FAILURE TO REACH CHOLESTEROL TARGETS

**Primary prevention (i.e. those with no diagnosis of atherosclerotic arterial disease or diabetes)**

There is no primary prevention cholesterol target in SIGN 97 or in NICE guidance. It is not recommended to carry out further cholesterol checks or dose titration after starting treatment.

**Secondary prevention (i.e. those with a diagnosis of atherosclerotic arterial disease or diabetes)**

Patients who fail to reach the target of 5.0mmol/L and at least 25% reduction in cholesterol using simvastatin 40mg should be switched to a more potent statin rather than adding a second agent. For example: `- simvastatin 40mg → atorvastatin 40mg → atorvastatin 80mg`. The use of doses of simvastatin greater than 40mg is no longer recommended due to an increased risk of myopathy. If patients fail to meet targets despite up-titration of statins it may be appropriate to seek a specialist opinion. An exception code can be applied in this situation.

## 3. LIPID-LOWERING DRUGS – FORMULARY COMMENTS

- **Statins** listed in the GGC formulary include simvastatin and atorvastatin, as well as pravastatin (restricted indication – drug interactions or intolerance) and rosuvastatin (3rd line, restricted indication of intolerance to other statins, or familial hyperlipidaemia). Ensure generic prescribing.
- **Anion exchange resins** Cholestyramine is listed in the GGC formulary.
- **Fibrates** Fenofibrate and bezafibrate are listed in the GGC formulary, but there is conflicting evidence regarding efficacy and safety. Fibrates reduce triglycerides more effectively than statins.

## 4. DRUG INTERACTIONS

Significant interactions are seen between statins and a wide range of other drugs. The BNF provides comprehensive guidance. The CSM advises that the use of simvastatin in particular is contra-indicated with some macrolide antibiotics, some anti-fungal agents, gemfibrozil, danazol, and ciclosporin. The dose of simvastatin should not exceed 20mg in patients prescribed amiodarone, amlodipine, diltiazem, or verapamil.

## 5. OTHER COMMENTS

**NB** prevention of atherosclerotic arterial disease requires control of all risk factors. No single factor, including cholesterol, should be viewed in isolation.

- Addition of other medication should be considered in the secondary prevention of vascular disease where appropriate (e.g. anti-platelet therapy, ACE-inhibitors, beta-blockers etc).
- All other risk factors (e.g. smoking, hypertension, glycaemic control in diabetes) should be addressed.
- Dietary and other lifestyle advice (e.g. alcohol, exercise, weight management) should be given.

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