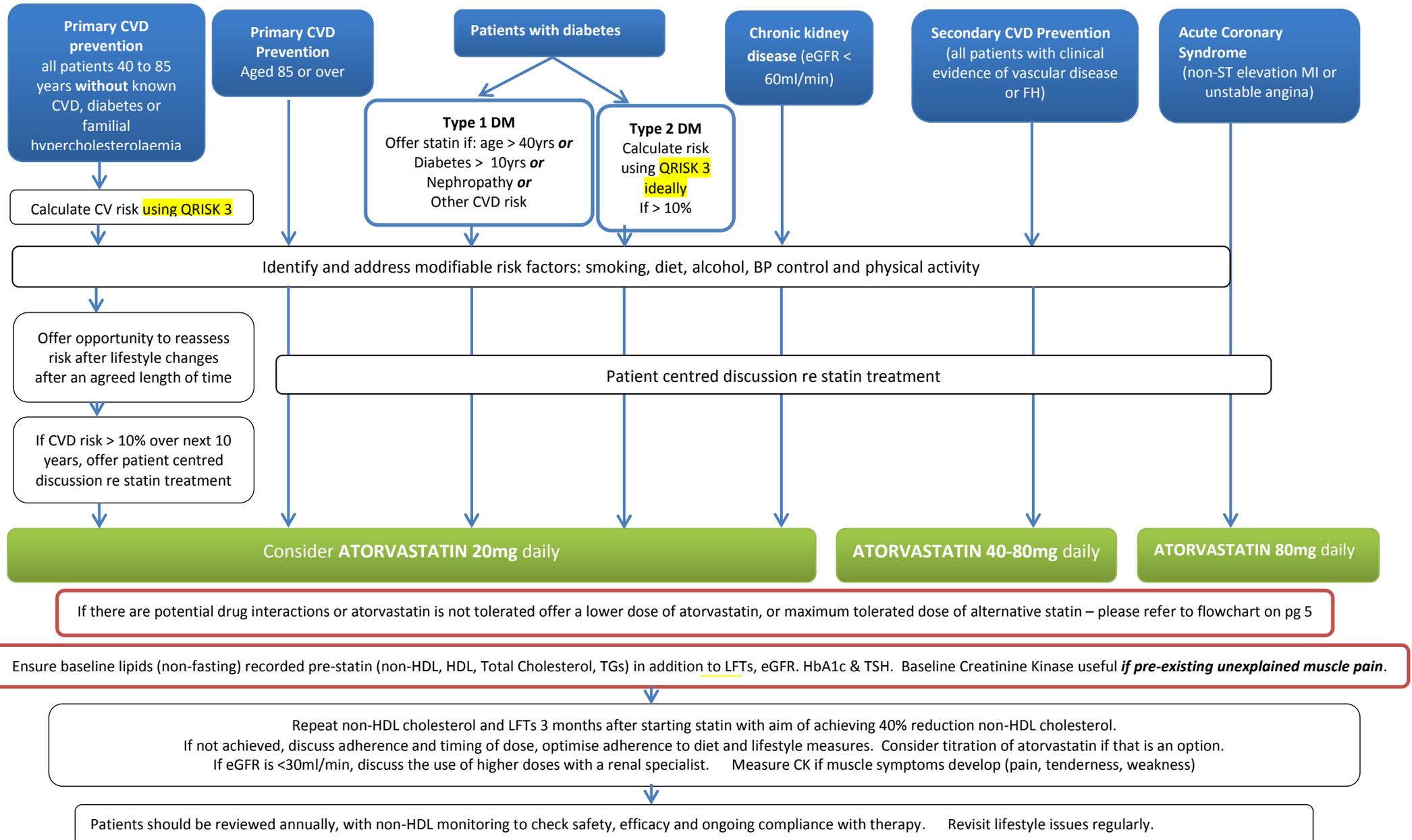


Management of Lipids in Primary Care

(updated guidance with reference to NICE CG 181 Lipid modification)



(updated guidance with reference to NICE CG 181 Lipid modification)

Recommended Lifestyle advice

- **Stop Smoking** - via local referral pathways
- **Alcohol** - suggested limits for men: 3-4 units/day, women: 2-3 units/day
- **Weight management** - can refer to Steps to Health, Dietbusters, Weightwatchers, Slimming World etc
- **Exercise** - 150 minutes moderate intensity or 75 minutes vigorous intensity aerobic activity per week or at maximum safe capacity of the individual
- **Cardioprotective diet:**
 - To reduce saturated fat intake from animal sources (instead use olive oil, rapeseed oil or spreads based on these)
 - At least 2 portions of fish per week, including 1 portion of oily fish
 - 5 portions of fruit & vegetables per day
 - Reduced intake of sugar and foods containing refined sugars
 - 4-5 portions of unsalted nuts (25g), seeds and legumes per week

Lipid management - FAQs

What about my existing simvastatin patients (or any other low-medium intensity statin)?

- At next face to face review discuss likely benefits and potential risks of changing to a high intensity statin
- Agree with the individual patient whether a change is needed
- Please note: MHRA has advised that there is an increased risk of myopathy associated with simvastatin 80mg

[Drug Safety Update, May 2010](#)

Treat if CVD risk over 10% - really?

- NICE says to 'consider' treatment
- It is confident that the intervention will do more good than harm for most patients and is cost effective (Cost per QALY £4125 for atorvastatin 20mg, £4875 for atorvastatin 80mg)
- Patient centred discussions are encouraged

How can I help my patient make the right decision for them?

- A patient decision aid has been developed and is available at:

<https://www.nice.org.uk/guidance/cg181/resources/cg181-lipid-modification-update-patient-decision-aid2>

What about younger perceived 'higher risk' patients scoring under 10%?

- Younger patients with multiple vascular risk factors who have a high lifetime risk of vascular disease but who do not cross the 10 year risk threshold of 10% could be considered for statin therapy in order to reduce one of the main drivers for continued atherogenesis. **QRISK 3 may be more reflective of risk than QRISK 2.**
- Discussion with an endocrinologist or cardiologist is suggested before commencing a statin in such patients or (Swindon only) email Community Diabetes Consultant for advice with patient specific details ; SWICCG.CommunityDiabetesService@nhs.net

What tests do I order and when? (effective from January 2016)

| Clinical Scenario | What needs to be tested | Fasting (F) or non- fasting (NF) | Comments |
|----------------------------------|--|----------------------------------|--|
| QRISK assessment | TC & HDL | NF | Non HDL will be routinely calculated & reported by lab. Can be repeated within 1 year but must state 'post lifestyle changes' |
| About to start statin | TC & HDL <i>PLUS</i> TGs, LFTs, HbA1c, eGFR, TSH | NF | Non HDL will be routinely calculated & reported by lab. If cholesterol tests already done (within last year) e.g. for QRISK, they will not routinely be redone without justification |
| 3 month post statin check | TC, HDL & LFTs | NF | Needs to be at least 6 weeks post statin initiation |
| Statin annual review | TC & HDL | NF | TGs are not routinely needed. Lipid review will be the same whether diabetic, hypertension, CHD or CKD. More frequent than annual requests will not be routinely done without justification e.g. change in therapy |
| Non fasting TGs > 10 | TGs | F | |

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What if triglycerides are high?

- If non fasting TGs > 20mmol/L, refer for urgent specialist review (if it is not due to excess alcohol or poor glycaemia control). In the absence of any existing lipid treatment, consider starting fenofibrate if specialist review is delayed.
- If non fasting TGs 10-20mmol/L, repeat with a fasting test 5-14 days later. Refer if >10mmol/L
- If non fasting TGs 4.5-9mmol/L, be aware that QRISK may underestimate CVD risk, optimise management of other CVD risk factors and offer statin in accordance with CVD risk. Additional lipid lowering treatment is not necessarily indicated. If non-HDL-C is also significantly raised, > 7.5mmol/L, seek specialist advice
- Consider specialist referral if TGs remain high (>5mmol/L non diabetic, >10mmol/L for diabetic) despite statin / lifestyle changes

Why have we recommended 40mg or 80mg Atorvastatin? How do I choose?

- NICE recommends 80mg for secondary prevention of CVD but to consider a lower dose if drug interactions, risk of adverse events or patient preference
- Lipid lowering difference between the two is relatively small (6% on average) and there is a higher risk of adverse effects present in the elderly, those with low muscle mass or impaired renal function
- Adverse effects of LFTs are more common with an 80mg dose

Risk of new onset diabetes with statins?

- There is some data to support an association between atorvastatin 80mg and new onset diabetes, mainly in patients already at risk of developing diabetes
- Level of risk may vary between statins and dose but insufficient evidence to confirm or exclude
- For the group of patients who would be receiving atorvastatin 80mg (ACS) the reduced vascular risk outweighs the risk of diabetes and not a reason for stopping statin treatment

How do I manage suspected Familial Hypercholesterolemia (FH)?

- If a person has a combination of a family history of premature coronary heart disease (<50 years in 1st degree relative) and total cholesterol above 7.5mmol/l consider FH or total cholesterol above 9mmol/l on its own (Near normal TGs will increase the suspicion)
- Exclude secondary causes of dyslipidaemia – might include hypothyroidism, excess alcohol, poorly controlled diabetes, liver and renal disease (nephrotic syndrome) before referral
- Refer to the Lipid Clinic at GWH via the Electronic Referral System.
- Statins are 1st line treatment in FH as per [NICE CG 71 \(2008\)](#)

What do I do if my patient is intolerant to statins?

- If a person is not able to tolerate a high intensity statin aim to treat with the maximum tolerated dose – any statin at any dose will reduce CVD risk. (See locally agreed flow chart on p5)
- If adverse effects reported from taking a high intensity statin discuss the following strategies;
 - Stop the statin and try again once symptoms have resolved to check that symptoms are related to statin
 - Reduce the dose within the same intensity group e.g. atorvastatin 40mg to 20mg (see table on pg5)
 - Change the statin to a lower intensity group e.g. atorvastatin 20mg to simvastatin (see table on pg 5)
 - Ezetimibe may then be an option for high risk patients who are intolerant to 3 statins.
- Seek specialist advice for people at high risk of CVD who are intolerant to 3 different statins

What about rosuvastatin / pravastatin?

- Although now generic, rosuvastatin is still a higher cost compared to atorvastatin with no evidence of better outcomes. Locally, we consider it to be appropriate for 3rd line use where atorvastatin or simvastatin not tolerated
- Pravastatin seems to have similar side effect profile to rosuvastatin (they are both hydrophilic) although not as potent so it may be more suitable for primary prevention patients

(updated guidance with reference to NICE CG 181 Lipid modification)

What about ezetimibe?

- People with primary hypercholesterolaemia should be considered for ezetimibe in line with latest NICE TA i.e. statin contra-indicated or not tolerated (see above)
- The IMPROVE-IT trial was published (June 15), showing a benefit of simvastatin 40 + ezetimibe over simvastatin 40 alone on death from (cardiovascular disease, a major coronary or nonfatal stroke) in ACS patients. This suggests that benefit is due to LDL lowering rather than any special ezetimibe effect
- **Please note:** Atorvastatin at doses suggested here is already more intense LDL lowering than simvastatin 40mg in those patients so current advice hasn't changed at all

What if LFTs are raised?

- Do not exclude people who have liver transaminase levels which are raised but are less than 3 x the upper limit of normal

What if Creatinine Kinase levels are raised?

- If CK levels are more than 5 x the upper limit of normal, re-measure after 7 days. If still more than 5 x upper limit of normal, do not start statin treatment.
- If CK levels are raised but less than 5 x the upper limit of normal, start or reduce to a lower dose of statin once symptoms have resolved

What about other treatments for prevention of CVD?

- **NICE states do NOT offer;**
 - Fibrates (routinely, alone or in combination)
 - Nicotinic acid; niacin
 - Bile acid sequestrants; cholestyramine, colestipol, colesevelam
 - Omega-3 fatty acid compounds; Omacor, Prestylon, Maxepa
- This applies to treatment for primary and secondary prevention, including people with diabetes and CKD
- Existing patients may be on for dyslipidaemia under specialist guidance but there may be opportunities to review
- **Do not offer** coenzyme Q10 or Vitamin D to increase adherence to statin treatment

When to refer and who to refer to?

Consider referring;

- High risk patients who do not reach non-HDL reductions of 40% despite maximal statin therapy
- High risk patients who are intolerant to at least 3 statins and ezetimibe
- Suspected familial hypercholesterolemia
- Severe hypertriglyceridemia (>10mmol/l fasting)
- Severe hypercholesterolemia (TC >9 or non-HDL-C >7.5mmol)
- Patients who may be suitable for injectable alirocumab or evolocumab therapies in accordance with NICE TAs 393 and 394;
 - FH without CVD but LDL-C persistently above 5mmol/L
 - FH with CVD and LDL-C persistently above 3.5mmol/L
 - non FH but high or very high risk of CVD and LDL-C persistently above 4 or 3.5mmol/L respectively

Refer to the Lipid Clinic at GWH via the Electronic Referral System

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Further information

QRISK 3 – CVD risk calculator – <https://www.qrisk.org/three/>

Grouping of statins
Guideline appendix A

| Reduction in low-density lipoprotein cholesterol | 5 | 10 | 20 | 40 | 80 |
|--|------------------|------------------|------------------|------------------|--------------------|
| Dose (mg/day) | | | | | |
| Fluvastatin | – | – | 21% ¹ | 27% ¹ | 33% ² |
| Pravastatin | – | 20% ¹ | 24% ¹ | 29% ¹ | – |
| Simvastatin | – | 27% ¹ | 32% ² | 37% ² | 42% ^{3,4} |
| Atorvastatin | – | 37% ² | 43% ³ | 49% ³ | 55% ³ |
| Rosuvastatin | 38% ² | 43% ³ | 48% ³ | 53% ³ | – |

1. 20%–30%: low intensity.
2. 31%–40%: medium intensity.
3. Above 40%: high intensity.
4. Note advice from the MHRA about the increased risk of myopathy associated with high-dose (80 mg) simvastatin (Drug Safety Update May 2010).

NICE

Non-HDL-Cholesterol target ready reckoner for rechecking levels at 3 months

| Baseline | 40% reduction |
|----------|---------------|
| 8 | 4.8 |
| 7.5 | 4.5 |
| 7 | 4.2 |
| 6.5 | 3.9 |
| 6 | 3.6 |

Note that non-HDL-cholesterol may vary by up to 1mmol/L from day to day and this target reduction is merely a guide for discussion with patient before deciding to increase the dose

References: NICE CG 181: Lipid modification

