Lipid management in Diabetes (see APC advice)

To improve the lipid profile to:	***NICE recommended targets***
• Reduce the risk of cardiovascular disease • Reduce the risk of pancreatitis in patients with severe hypertriglyceridaemia	Total Cholesterol < 4 mmol/l or LDL-C <2 mmol/l (NICE CG66 and CG67 May 2008)

Lifestyle The importance of expert dietary advice, weight reduction, limiting alcohol consumption, exercise and smoking cessation should be emphasised and continually monitored.

Primary Prevention

Type 1 diabetes

- Consider statin treatment for primary prevention of CVD in all adults with type 1 diabetes.
- Offer statin treatment to patients who:
  - Are >40 years of age
  - Have had diabetes for >10 years
  - Have established nephropathy
  - Have other CVD risk factors

First line statin choice
Atorvastatin 20mg od

Type 2 diabetes

- Use QRISK2 risk assessment tool to assess CVD risk.
- Offer statin to patients with a 10% or greater 10-year risk of developing CVD.

First line statin choice
Atorvastatin 20mg od

For all patients (primary or secondary prevention) started on a high intensity statin (atorvastatin 20mg od and above)

- Measure total cholesterol, HDL cholesterol, non-HDL cholesterol at 3 months in all patients started on a high intensity statin.
- Aim for a 40% reduction in non-HDL. If not achieved:
  - Discuss adherence and timing of dose
  - Optimise adherence to diet and lifestyle measures
  - Consider increasing the dose if patient taking a lower dose than 80mg atorvastatin and person judged to be at high risk due to comorbidities, risk score or using clinical judgement.

Elevated Triglycerides (fasting lipid profile)
Assess and manage secondary causes of high triglycerides:

- Poor blood glucose
- Hypothyroidism
- Renal impairment
- Liver inflammation particularly from alcohol.

- **If Triglyceride remain > 5.7 (based on ADA standards of care 2020)mmol/l** consider fibrate (first choice fenofibrate) either before or in addition to statin (the risk of pancreatitis is increased especially if Triglyceride is > 10 mmol/l).
- **Nicotinic acid or derivatives**: Do not use routinely. May be considered if intolerance to statins or fenofibrate.
- **Omega-3-fish oils:** Do not use in primary prevention of CVD (unless as part of specialist treatment of hypertriglyceridaemia).

Samples

- There is no post prandial rise in total and LDL-cholesterol
- A non-fasting sample is suitable for initial screening only.
- A fasting sample should be obtained if triglyceride is significantly raised.

Referral to specialist care should be considered:

- If control remain poor
- Severe mixed hyperlipidaemia, with triglycerides >4.5 mmol/l
- When combination therapy is necessary
- If there is concern about liver function tests and the advisability of starting a statin
- If there is a family history of premature cardiovascular disease and familial hypercholesterolaemia
- If there is drug intolerance

Reviewed by Dr Merza Jan 2020