1O STEPS BEFORE YOU REFER FOR LIPIDS

1. Repeat the measurement
   Repeat samples should be taken after a twelve hour fast to stabilise triglyceride levels and allow for full interpretation of the lipid profile.

2. Identify the pattern of the lipoprotein abnormality.
   Is it –
   - Hypercholesterolaemia (raised total cholesterol and raised LDL cholesterol (such as in FH)
   - Mixed hyperlipidaemia (raised TC and LDL and raised triglycerides).
   - Hypertriglycerideamia (very raised triglycerides can lead to acute pancreatitis).

3. Exclude secondary cause.
   Common causes of dyslipidaemia include hypothyroidism, obesity, glucose intolerance, diabetes, excess alcohol and some drug treatments (usually sex hormones and steroids, retinoic acid, thiazides and beta blockers, protease inhibitors, cyclosporine an antipsychotics).

4. Confirm the need for treatment
   All the guidelines recommend that a statin should be used for secondary prevention. In primary prevention, risk calculation should be superfluous in the presence of extreme risk factors such as TC>8mm/L, TC to HDL ratio >6 or diabetes and the inherited hyperlipidaemia such as FH.

5. Take a family history
   Identify a family history of CVD (particularly premature CVD, sudden death, hyperlipidaemia, diabetes, and hypertension. If the patient is uncertain they could contact relatives before they attend the lipid clinic.

6. Check adherence to lifestyle and medication.
   Statins are generally well tolerated drugs. Despite this, up to 53% of patients have discontinued statin therapy at 2 years.

7. Maximise treatment to target
   Both health professionals and patients feel comfortable with a goal of therapy (especially if this is simple and easy to remember) and target levels can be a powerful aid to fostering concordance.

8. Repeat liver function test if raised
   The incidence of liver failure in patients taking statins is thought to be 0.5/100,000 person years (no more than the non statin taking population). However, pertinent raised ALT levels require further investigation. Rises in Gamma GT are not relevant to the initiation or continuation of statin therapy.

9. Check creatinine kinase (CK) if myalgia.
   Patients should have their CK measured prior to initiation of a statin. Statin side effects mostly occur on initiation but sometimes arise later. Difficulties arise with deciding whether muscle aches and pains are related to statin therapy as extreme exertion can also cause similar effects.

10. Communicate therapies already tried and their outcomes.
    Statin intolerance is one of the most common reasons for referral to the lipid clinic and may be real or apparent. Exclude emergent hypothyroidism or possible drug interactions. It is reasonable to try different statins or use lower doses in combination with ezetimibe.

Ref: Morrell, J, Wierzbicki, T., 10 Steps Before You Refer For: Lipids, Br J Cardiol, 2009; 16(5):242-5