Dr Matthew Davies, Nephrologist and General Physician
195 Specialist Centre, 195 Thompson's Road, Bulleen, VIC 3105
Tel: 03 8850 5300 Fax: 03 8850 5350 Email: matthew.davies@austin.org.au
www.melbournenephrologist.com

# 'Fire and Forget':
# A Practical Approach to Lipid Management in CKD

The recent Kidney Disease: Improving Global Outcomes (KDIGO) guidelines advocate for a new approach to use of statins in patients with chronic kidney disease (CKD). The main change from current practice is the promotion of a 'fire and forget' rather than a 'treat to target' strategy. This moves away from repeated testing of lipids once a statin is commenced, and therefore offers the advantages of simplicity and cost-saving. The guidelines are based around the following observations:

- CKD is a very strong risk factor for cardiovascular (CV) disease
- Statin therapy reduces CV events in patients with CKD
- No trial has ever shown that treating to LDL-targets is beneficial in patients with CKD
- The safety of high dose statins in patients with reduced GFR is unproven

These guidelines apply to patients with CKD, including patients with reduced eGFR (<60ml/min/1.73m$^2$) and/or an elevated urinary albumin to creatinine ratio (ACR >2.5mg/mmol in males, >3.5mg/mmol in females, on 2 of 3 samples), present for >3 months.

The guidelines recommend a 3-step approach to lipid management in CKD patients:

(1) Rule out remediable causes of secondary dyslipidaemia
(2) Establish the indication of treatment (Yes or No) and select an agent and dose
(3) Treat according to a 'fire and forget' strategy – repeating measurement of LDL-C is not indicated after a statin is commenced

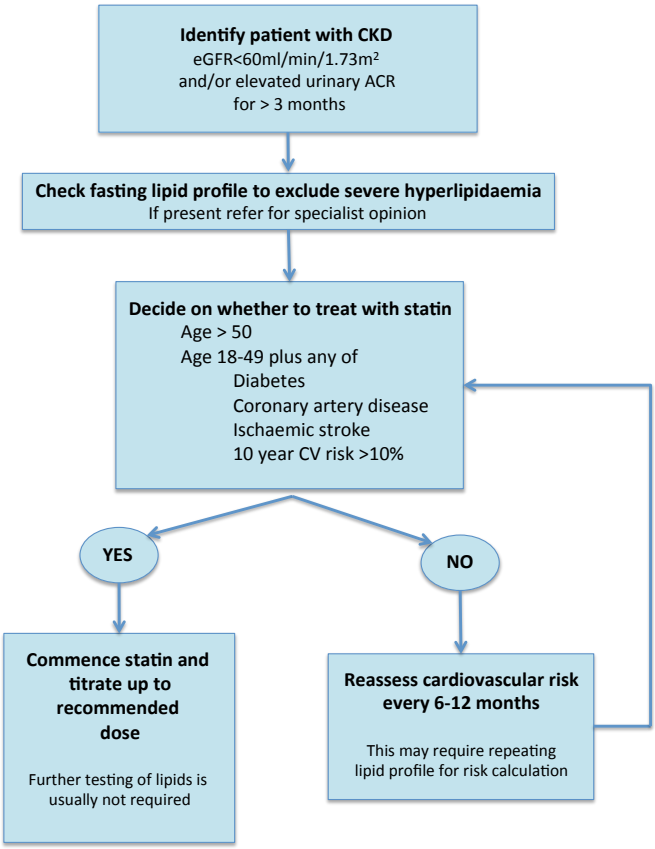


*Table 1.* **Recommended Doses of Statins in Adults With Chronic Kidney Disease***

| Statin | eGFR G1–G2 | eGFR G3a–G5, Including Patients Receiving Dialysis or Who Had a Kidney Transplant |
|---|---|---|
| Lovastatin | Any dose approved for GP | ND |
| Fluvastatin | Any dose approved for GP | 80† |
| Atorvastatin | Any dose approved for GP | 20‡ |
| Rosuvastatin | Any dose approved for GP | 10§ |
| Simvastatin/ ezetimibe | Any dose approved for GP | 20/10‖ |
| Pravastatin | Any dose approved for GP | 40 |
| Simvastatin | Any dose approved for GP | 40 |
| Pitavastatin | Any dose approved for GP | 2 |

eGFR = estimated glomerular filtration rate; GP = general population; ND = not done.
* All doses are mg/d. All statins may not be available in all countries. Lower doses than those used in major trials of statins in chronic kidney disease populations may be appropriate in Asian countries. Note that 40 mg of rosuvastatin daily is not recommended for use in patients with chronic kidney disease G1–G2 who did not have transplants because it may increase the risk for adverse renal events. Cyclosporine inhibits the metabolism of certain statins, resulting in higher blood levels.
† Data based on Assessment of Lescol in Renal Transplantation trial.
‡ Data based on Die Deutsche Diabetes Dialyse Studie.
§ Data based on A Study to Evaluate the Use of Rosuvastatin in Subjects on Regular Hemodialysis: An Assessment of Survival and Cardiovascular Events.
‖ Data based on the Study of Heart and Renal Protection trial.

This summary of the KDIGO Clinical Practice Guideline for Lipid Management in CKD (2013) was produced by Dr Matthew Davies for use by General Practitioners. Reference: Kidney International 2013, 3(3); 259-305

Dr Matthew Davies, Nephrologist and General Physician
195 Specialist Centre, 195 Thompson's Road, Bulleen, VIC 3105
Tel: 03 8850 5300 Fax: 03 8850 5350 Email: matthew.davies@austin.org.au
www.melbournenephrologist.com

In practical terms, this means that patients with CKD should have a fasting lipid profile checked once, to exclude severe hyperlipidaemia (e.g. LDL > 4.9mmol/L). Patients found to have severe hyperlipidaemia should usually be referred for specialist management.

Following this, a decision is made on whether to treat with a statin or not. The decision to treat or not is based on overall cardiovascular risk. The KDIGO group recommend treatment for patients with a 10-year risk of CV events of >10%. Based on this, groups who are deemed likely to benefit from statins are:

• All adults aged >50 years with CKD - all have a 10-year risk of CV event of >10%
• Adults aged 18-49 with CKD and any of: coronary artery disease, prior ischaemic stroke, diabetes mellitus or estimated 10-year incidence of coronary death or non-fatal MI of >10%.

The baseline level of cholesterol therefore only influences the decision to treat with a statin or not when determining the 10-year cardiovascular risk for patients aged 18-49, and this only needs to be calculated in patients who do not have another risk factor for CV disease. The 10-year risk of a cardiovascular event can be calculated using a risk calculator or risk tables. If using a 5-year risk calculator – such as the Australian absolute cardiovascular disease risk calculator (www.cvdcheck.org.au) - a 5-year risk of 5% can be used as the cut off. It is worth noting that most CV risk calculators do not factor in CKD and therefore may underestimate the absolute CV risk in the CKD population.

Following a decision to treat, a statin should be commenced and titrated up to the following recommended doses:

• eGFR>60ml/min/1.73m$^2$: any dose licensed for use in general population
• eGFR<60ml/min/1.73m$^2$: Simvastatin 40mg, Atorvastatin 20mg, Rosuvastatin 10mg or Pravastatin 40mg. Statin doses above these have not been proven to be safe for use in patients with CKD3-5 (ie eGFR<60).

After initiation of a statin, there is no need to repeat lipid levels as there are no target lipid levels for patients with CKD - hence 'fire and forget'.

For patients who do not qualify for statin therapy, cardiovascular risk should be reassessed every 6-12 months. In these patients there is a role for repeating measurement of lipid profiles, as the results will influence the calculation of that patient's new 10-year CV risk.

**Key messages**

CKD is a major risk factor for CV disease - all patients over the age of 50 with CKD have a 10 year risk of a cardiovascular event of >10% and, as such, are likely to benefit from treatment with a statin

Once a statin has been commenced at a recommended dose, further testing of lipids is unnecessary in the great majority of patients with CKD