

Screening and Management of Lipid Disorders

Patient Population:

Adults aged 18 and older without familial or severe dyslipidemias.

Objectives:

- Define appropriate lipid screening guidelines and monitoring intervals for lipid disorders and medication management.
- Provide best practice prescribing guidelines for the treatment of lipid disorders, including preferred initial treatment agents and dose intensity and place in therapy for non-statin drugs.

Screening Recommendations:

The USPSTFⁱ currently recommends the following for lipid screening (*Grade of Recommendation*):

- a) Universal, non-fasting lipid screening in adults 40-75 years of age (B).
- b) Use of clinical judgement to guide the decision to screen in adults aged 21-39 given lack of data on efficacy of screening for or treatment of dyslipidemia in this age group.

B= USPSTF recommends the service. There is a high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.

Statin Benefit Groups:

The ACC 2017 Lipid Management Guidelinesⁱⁱ endorse treatment (per ACC/AHA 2013 guidelinesⁱⁱⁱ) with a statin for primary or secondary prevention and provide recommendations for use of non-statin therapy for patients in 1 of the following 4 evidence-based statin benefit groups:

1. Patients with clinical atherosclerotic cardiovascular disease (ASCVD);*
2. Patients with LDL-C \geq 190 mg/dL, not due to secondary modifiable causes;
3. Patients aged 40-75 years of age with diabetes mellitus and LDL-C 70-189 mg/dL; or
4. Patients aged 40-75 years of age without diabetes, but with LDL-C 70-189 mg/dL AND predicted 10-year ASCVD risk \geq 7.5%

*Clinical ASCVD: acute coronary syndrome, myocardial infarction, angina, revascularization, stroke, TIA, or peripheral arterial disease

Treatment Recommendations:

A. If not in statin benefit group 1-4 defined above and predicted 10-year ASCVD risk is <5%

Reinforce healthy lifestyle. Education as appropriate: Smoking cessation, diet/exercise/weight loss, reduce excessive alcohol.

Follow-up: Repeat screening/risk assessment in 4-6 years [IID]. If borderline, consider repeat screening in 1-2 years.

B. If in statin benefit group 1-4 defined above or predicted 10-year ASCVD risk is 5 to 7.5%:

Treatment through lifestyle changes. Education as appropriate: smoking cessation (reduces coronary event rate by ~ 50% within 1-2 years), diet/exercise/weight loss, reduce excessive alcohol.

Initiate (generic) statin therapy. (Non-statin drugs should be reserved for other comorbid conditions, add-on therapy to a statin, or in statin-intolerant patients only after a trial of at least 2-3 statin agents.)

- Discuss with patient risk reduction benefits, adverse effects, drug-drug interactions, patient preferences.
- Liver Function Tests: Check baseline ALT.

- Careful follow-up of liver tests for those with known liver disease, risk factors for liver disease, or in patients who are on other potentially hepatotoxic medications.

For other patients:

- If baseline liver function tests are normal, no further monitoring is needed.
- If baseline liver function tests are mildly abnormal (< 5X upper limit of normal), reassess after 6-12 weeks of statin therapy for stability. Consider monitoring annually. Abnormal baseline liver function tests can frequently improve with statin therapy.
- If in statin benefit groups 1-4 defined above and with no contraindications, conditions or drug-drug interactions that influence statin safety, initiate **high intensity statin therapy** with one of the following (**Boldfaced type** indicates specific doses that were evaluated in >1 RCTs) {see **Table 1** for expected reduction in LDL-C with each drug/dose}:
 - atorvastatin **40-80** mg daily; or
 - rosuvastatin **20-40** mg daily
- For patients without diabetes, with LDL-C 70-189 mg/dL and ASCVD risk of 5-7.5%, or patients who are not candidates for high-intensity statin, initiate **moderate intensity statin therapy** with one of the following (**Boldfaced type** indicates specific doses that were evaluated in RCTs) {see **Table 1** for expected reduction in LDL-C with each drug/dose}:
 - atorvastatin **10-20** mg daily
 - rosuvastatin **5-10** mg daily
 - simvastatin **20-40** mg daily
 - pravastatin **40-80** mg daily
 - lovastatin **40** mg daily
 - fluvastatin **40** mg daily
 - fluvastatin XL 80 mg daily
 - pitavastatin 2-4 mg daily –available as Brand only (\$\$\$)

Lipid monitoring on Statin Therapy: In 4-12 weeks after initiation

- Check lipids to evaluate adherence.
- For long-term follow-up check lipids annually.
- If lipids do not decrease as expected: address adherence, reinforce lifestyle modifications, (if applicable) increase to high-intensity statin dose and consider referral to a lipid specialist.

CK Monitoring on Statin Therapy:

- Only if symptomatic muscle aches/weakness or to evaluate for drug-drug interactions.

Triglycerides: After statin therapy, if fasting triglycerides \geq 500 mg/dL, consider specific treatment.

Recommendations for optional use of select non-statin agents based on the ACC 2017 Guidelines:²

If in statin benefit group 1-4 above:

Ezetimibe (Zetia): If LDL-C remains < 25% above goal (LDL-C < 100 mg/dL) on maximally tolerated statin with optimal adherence, consider addition of ezetimibe 10 mg daily. Repeat lipid assessment 4-12 weeks after initiation of ezetimibe.

If in statin benefit group 1 or 2 above:

PCSK-9 inhibitors: alirocumab (Praluent), evolocumab (Repatha): If LDL-C is \geq 25% above goal on maximally tolerated statin with optimal adherence, addition of a PCSK-9 inhibitor may be preferred. Repeat lipid assessment 4-12 weeks after initiation.

ⁱ <https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/statin-use-in-adults-preventive-medication1>

ⁱⁱ Journal of the American College of Cardiology Oct 2017, 70 (14) 1785-1822

ⁱⁱⁱ Circulation June 24 2014, 129(25) S1-S45