



Lipid Screening and Management

The following guideline recommends risk assessment, stratification, education, counseling and pharmacological interventions for the management of low-density lipoprotein cholesterol (LDL-C).

Eligible Population	Key Components	Recommendation and Level of Evidence		
<p>Males ≥ 35 years of age</p> <p>Females ≥ 45 years of age</p> <p>Males and Females age ≥ 20 years of age if risk factors</p>	Risk Assessment	<p>Screening: Initial fasting lipid profile (i.e., total, LDL-C, HDL-C, triglycerides); If in normal range, repeat at least every 4-6 years. [D]</p> <p>Treatment is based on presence of clinical atherosclerotic cardiovascular disease (ASCVD), and ASCVD risk factors. [A]</p> <p>Treatment based on LDL goals is no longer recommended.</p>		
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	Risk Stratification	<p>Calculate¹ 10-year ASCVD risk for patients 40-75 years of age without clinical ASCVD, diabetes mellitus (type 1 or 2) or LDL-C ≥ 190 mg/dL [D]</p> <table border="0"> <tr> <td style="vertical-align: top;"> <p>Statin treatment benefit group</p> <ul style="list-style-type: none"> Clinical ASCVD: Age ≤ 75 years Clinical ASCVD: Age > 75 years LDL-C ≥ 190 mg/dL, age ≥ 21 years Diabetes mellitus (type 1 or 2) and age 40-75 years with LDL-C 70-189 mg/dL 10-year ASCVD risk ≥ 7.5% and age 40-75 years </td> <td style="vertical-align: top;"> <p>Statin dosing intensity²</p> <ul style="list-style-type: none"> High-intensity [A] Moderate-intensity [D] High-intensity [A] Moderate-intensity [A], can consider high-intensity if 10-year ASCVD risk ≥ 7.5% [D] Moderate-to-high intensity [A] </td> </tr> </table>	<p>Statin treatment benefit group</p> <ul style="list-style-type: none"> Clinical ASCVD: Age ≤ 75 years Clinical ASCVD: Age > 75 years LDL-C ≥ 190 mg/dL, age ≥ 21 years Diabetes mellitus (type 1 or 2) and age 40-75 years with LDL-C 70-189 mg/dL 10-year ASCVD risk ≥ 7.5% and age 40-75 years 	<p>Statin dosing intensity²</p> <ul style="list-style-type: none"> High-intensity [A] Moderate-intensity [D] High-intensity [A] Moderate-intensity [A], can consider high-intensity if 10-year ASCVD risk ≥ 7.5% [D] Moderate-to-high intensity [A]
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Education and risk factor modification	<p>Educate patient/family regarding Therapeutic Lifestyle Changes (TLC):</p> <p>If indicated: smoking cessation, reduce excessive alcohol [A]</p> <p>Recommend a dietary pattern that emphasizes intake of vegetables, fruits, and whole grains; includes low-fat dairy products, poultry, fish, legumes, non-tropical vegetable oils and nuts; and limits intake of sweets, sugar-sweetened beverages and red meats [A]</p> <p>Engage in aerobic physical activity: 3 to 4 sessions a week, lasting on average 40 minutes per session, and involving moderate-to-vigorous intensity physical activity [B]</p>			
Pharmacologic interventions	<p>Therapeutic Lifestyle Changes (TLC) for all. Drug therapy based on ASCVD risk factors.</p> <p>Statin therapy and intensity based on ASCVD risk factors.</p> <p>Obtain baseline ALT. If normal, no routine monitoring for patients on statin therapy is required.</p> <p>LFT at physician discretion for patients with abnormal baseline ALT, liver disease or risk factors.</p> <p>For prolonged myalgias, consider dosage reduction or statin change. Check creatine kinase (CK) only if symptomatic muscle aches/weakness.</p> <p>For patient > 75 years, statin use should be at patient/physician discretion.</p> <p>If statins not tolerated, consider alternate medical therapy.</p>			

¹ACC/AHA [ASCVD Risk Estimator Tool](#)

²University of Michigan Health System [Statin Dose Intensity and Equivalency Chart](#)

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014;129(suppl 2):S1-S45. Individual patient considerations and advances in medical science may supersede or modify these recommendations.