

Michigan Quality Improvement Consortium Guideline

Screening and Management of Hypercholesterolemia

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 ≥ 18 years of age if risk factors</p>	Risk Assessment	<ul style="list-style-type: none"> ♦ Screening: Initial fasting lipid profile (i.e., total, LDL-C, HDL-C, triglycerides); If in normal range, repeat at least every five years. [D] ♦ Treatment is based on LDL-C, major risk factors and presence of CHD or equivalent. 								
		<p>Major Risk Factors:</p> <ul style="list-style-type: none"> ♦ Cigarette smoking ♦ Diabetes mellitus ♦ Hypertension (BP ≥ 140/90), or on antihypertensives ♦ HDL-C: < 40 (HDL-C ≥ 60 = negative risk factor) ♦ Family history (first degree) of premature CHD ♦ Age (men ≥ 45 years; women ≥ 55 years) 	<p>CHD Risk Equivalents:</p> <ul style="list-style-type: none"> ♦ Other clinical forms of atherosclerotic disease (e.g., peripheral arterial disease, abdominal aortic aneurysm, and/or symptomatic carotid artery disease) ♦ CHD and CHD risk equivalents give a > 20% risk of a CHD event within 10 years 							
	Risk Stratification	<ul style="list-style-type: none"> ♦ Calculate short-term risk for patients with ≥ 2 risk factors using Framingham projection of 10-year absolute risk [D] (http://cvdrisk.nhlbi.nih.gov/calculator.asp): <table border="1"> <thead> <tr> <th>Categorical Risk</th> <th>Goal for LDL-C</th> </tr> </thead> <tbody> <tr> <td>♦ CHD or ≥ 2 risk factors and 10-year risk: > 10%</td> <td>< 100 mg/dL</td> </tr> <tr> <td>♦ ≥ 2 risk factors and 10-year risk: ≤ 10%</td> <td>< 130 mg/dL</td> </tr> <tr> <td>♦ 0 - 1 risk factor</td> <td>< 160 mg/dL</td> </tr> </tbody> </table>		Categorical Risk	Goal for LDL-C	♦ CHD or ≥ 2 risk factors and 10-year risk: > 10%	< 100 mg/dL	♦ ≥ 2 risk factors and 10-year risk: ≤ 10%	< 130 mg/dL	♦ 0 - 1 risk factor
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Education and risk factor modification	<p>Educate patient/family regarding Therapeutic Lifestyle Changes (TLC):</p> <ul style="list-style-type: none"> ♦ Reduce saturated fats and cholesterol [A], increase plant stanols/sterol (e.g. cholesterol-lowering margarines), increase viscous soluble fiber (e.g. oats, barley, lentils, beans), consider increasing fish consumption (Omega-3 fatty acids). ♦ Decrease weight and increase exercise to moderate level of activity for 30 minutes, most days of the week [A]. 									
Pharmacologic interventions	<ul style="list-style-type: none"> ♦ Therapeutic Lifestyle Changes (TLC) for all. Drug therapy based on the LDL-C level. ♦ Statin therapy based on risks and goals, or if the LDL-C is not at goal by 3 months after TLC have begun in earnest. ♦ Statin therapy for all patients with CHD, CHD risk equivalents, regardless of baseline lipid level. When starting or raising dose, check ALT. ♦ LFT at physician discretion for patients with liver disease or risk factors. ♦ For prolonged myalgias, consider dosage reduction or statin change. ♦ Evaluate and adjust drug therapy every 3 months until goal achieved. If statins not tolerated or ineffective, consider alternate medical therapy. 									

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 several sources, including: Lipid Management in Adults, Institute for Clinical Systems Improvement, Twelfth Edition, November 2011 ([icsi.org](http://www.icsi.org)). Individual patient considerations and advances in medical science may supersede or modify these recommendations.