

CLINICAL GUIDELINE:

MANAGEMENT OF HIGH BLOOD CHOLESTEROL

Primary Prevention



Physician Clinical Integration
Network, LLC

Scope

As of 2017, 95 million U.S. adults age 20 or older had elevated cholesterol levels, and slightly more than half of adults who could benefit from cholesterol-lowering medications were currently taking them [1]. Continued exposure to high cholesterol levels over the course of a lifetime can increase the risk of a myocardial infarction or stroke [2].

Guidance

The PCIN Quality Committee and its designees reviewed the available information in the medical literature and societal guidelines on the evaluation and management for high blood cholesterol patients in the Primary Care setting, as well as information derived from their clinical practices to devise these guidelines.

Additionally, the 2018 guideline on management of blood cholesterol published by the American Heart Association and the American College of Cardiology covers risk assessment and primary prevention of atherosclerotic cardiovascular disease (ASCVD), lifestyle interventions, statin therapy, and non-statin alternatives.

Population Included

- Adult patients ≥ 21 years of age previously diagnosed or currently diagnosed with:
 - ASCVD
 - Hypercholesteremia
 - Diabetes with LDL greater than 70 mg/dl

Exclusions

- Pregnant or breastfeeding females
- Patients diagnosed with rhabdomyolysis

Recommendations

- ✓ Promoting a heart-healthy lifestyle is the most important tool in preventing ASCVD, heart failure, and atrial fibrillation for all ages.
- ✓ A team-based care approach is an effective strategy for the prevention of cardiovascular disease. Individuals should be evaluated for socioeconomic barriers that might influence treatment decisions.
- ✓ Assessment of ASCVD risk is the foundation of primary prevention (Figure 1) [2].
- ✓ In patients with clinical ASCVD, reduce low-density lipoprotein cholesterol (LDL-C) with high-intensity statins or maximally tolerated statins to decrease ASCVD risk [4].
- ✓ In very high-risk ASCVD, use an LDL-C threshold of 70 mg/dL (1.8 mmol/L) to consider addition of non-statins to statins [4].
- ✓ In patients with severe primary hypercholesterolemia (LDL-C level ≥ 190 mg/dL [≥ 4.9 mmol/L]), without calculating 10-year ASCVD risk, begin high-intensity statin therapy [4].
- ✓ In patients 40 to 75 years of age with diabetes mellitus and an LDL-C level of ≥ 70 mg/dL (≥ 1.8 mmol/L), without calculating 10-year ASCVD risk, start moderate-intensity statins [4].
- ✓ In adults 40 to 75 years of age evaluated for primary ASCVD prevention, have a clinician to patient risk discussion before starting statin therapy [4].
- ✓ In adults 40 to 75 years of age without diabetes mellitus and with LDL-C levels ≥ 70 mg/dL (≥ 1.8 mmol/L) at a 10-year ASCVD risk of $\geq 7.5\%$, start a moderate-intensity statin if a discussion of treatment options favors statin therapy [4].
- ✓ In adults 40 to 75 years of age without diabetes mellitus and with a 10-year risk of 5% to 19.9%, risk-enhancing factors favor initiation of statin therapy [4].
 - Risk-enhancing factors include family history of premature ASCVD; persistently elevated LDL-C levels ≥ 160 mg/dL (≥ 4.1 mmol/L); metabolic syndrome; chronic kidney disease; history of preeclampsia or premature menopause (< 40 years of age); chronic inflammatory disorders (e.g., rheumatoid arthritis, psoriasis, or chronic HIV); high-risk ethnic groups (e.g., South Asian); and persistent elevations of triglycerides ≥ 175 mg/dL (≥ 1.97 mmol/L).
- ✓ In adults 40 to 75 years of age without diabetes mellitus, with LDL-C levels ≥ 70 to 189 mg/dL (≥ 1.8 to 4.9 mmol/L), and at a 10-year ASCVD risk of $\geq 7.5\%$ to 19.9%, if a decision about statin therapy is uncertain, consider measuring coronary artery calcium (CAC).
 - If CAC is zero, statins may be withheld except for patients who smoke, those with diabetes, and those with a strong family history of premature ASCVD.
 - If CAC 1–99, statin therapy is favored, especially in patients ≥ 55 years of age.
 - If CAC score ≥ 100 or ≥ 75 th percentile, statins are indicated unless otherwise deferred by risk discussion outcome between clinician and patient [4].
- ✓ Assess adherence and percentage response to LDL-C-lowering medications and lifestyle changes with repeat lipid measurement 4 to 12 weeks after statin initiation or dose adjustment, repeated every three to twelve months as needed [4].

Rationale

Approximately one in three American adults have high LDL levels. These guidelines are intended to help health care providers prevent, diagnose and treat high cholesterol [2].



References

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2. New guidelines: Cholesterol should be on everyone's radar, beginning early in life. (2018, November 10). Retrieved June 19, 2019, from <https://www.heart.org/en/news/2018/11/10/new-guidelines-cholesterol-should-be-on-everyones-radar-beginning-early-in-life>
3. Arnett, D. K., Blumenthal, R. S., Albert, M. A., Buroker, A. B., Goldberger, Z. D., Hahn, E. J., Ziaeian, B. (2019). 2019 ACC/ AHA Guideline on the Primary Prevention of Cardiovascular Disease: Guidelines Made Simple. *Journal of the American College of Cardiology*. doi:10.1016/j.jacc.2019.03.010
4. American Heart Association. Cholesterol Management Guide for Healthcare Practitioners. 2018. Retrieved from: https://www.heart.org/-/media/files/health-topics/cholesterol/chlstrmgmntgd_181110.pdf

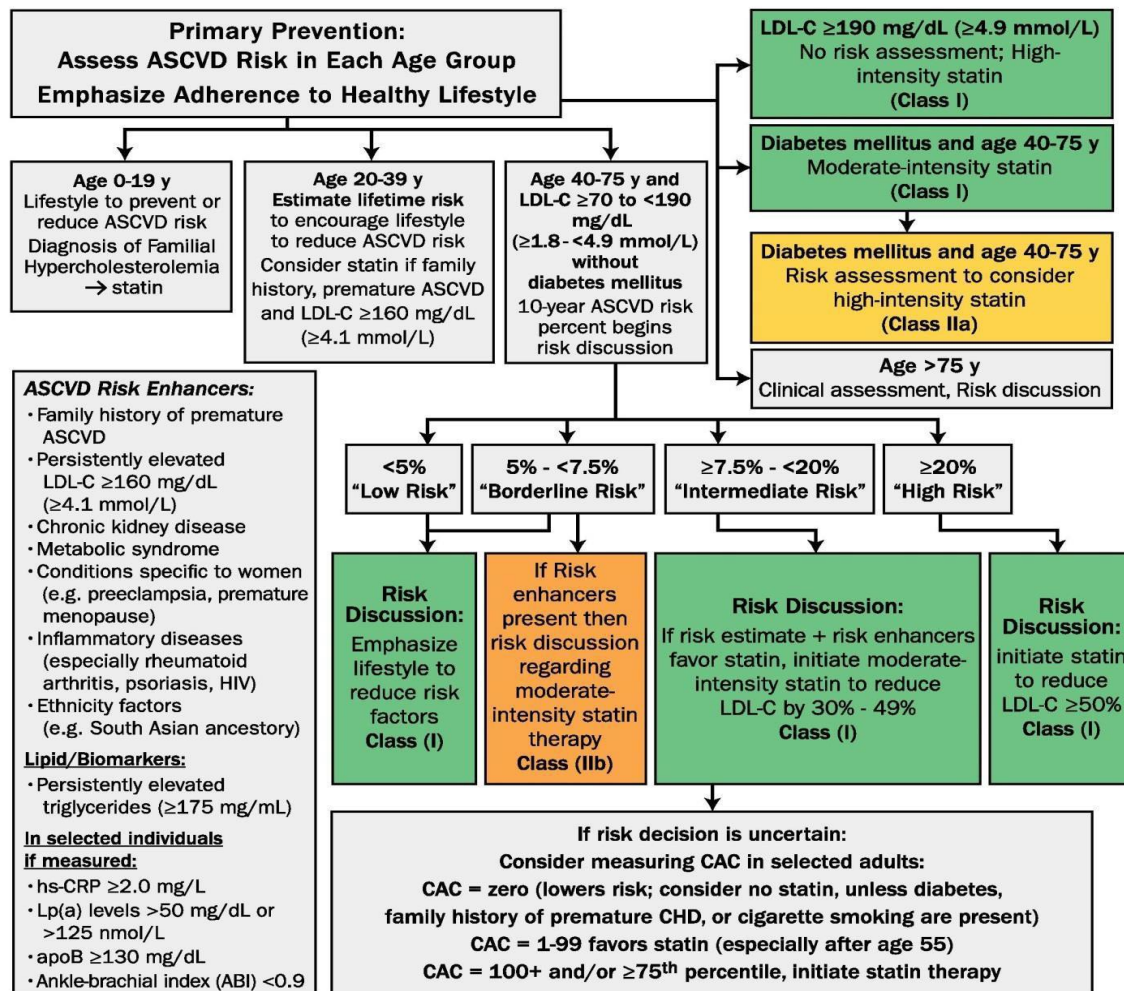


Figure 1: Primary Prevention of High Blood Cholesterol

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