

High Cholesterol 13

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Ask Your Patients...

"Do you know that treating your high cholesterol can significantly improve your health?"

If Your Patient Asks...

"Should I be worried about my cholesterol?"

UNDERSTAND the problem

Atherosclerotic cardiovascular disease (ASCVD) is the leading cause of death in developed countries. The complex interaction between modifiable and non-modifiable risk factors underlies the etiology of ASCVD. Hyperlipidemias, and high concentrations of low-density lipoprotein (LDL) in particular, are implicated in the etiology of atherosclerosis and increased incidence of ASCVD. Alarmingly, more than 36 million individuals, or more than 12% of the adult U.S. population, have dangerously high cholesterol concentrations of 240 mg/dL or greater, which are associated with high risk of cardiovascular morbidity and mortality.¹

It is well established that effective lipid management slows the progression of atherosclerosis and lowers morbidity and mortality of ASCVD. As a result, appropriate clinical management of hyperlipidemias, including prevention and early diagnosis, has become a public health priority.

WHO is at highest risk

Data published in the National Health and Nutrition Examination Survey revealed that an estimated 12.1% of Americans 20 years of age and older have total blood cholesterol concentrations of 240 mg/dL (6.2 mmol/L) or greater, which are associated with high risk of cardiovascular morbidity and mortality.¹ It has been estimated that by 2030 ASCVD will account for approximately 23 million annual deaths worldwide.

As noted, hyperlipidemia has been established as a main risk factor in the development of atherosclerosis and ASCVD. Together with obesity, hypertension, diabetes, smoking, and physical inactivity, hyperlipidemia is a known modifiable risk factor of ASCVD. Several biomarkers are also considered modifiable risk factors of ASCVD. In addition to modifiable risk factors, the AHA/ACC have included "risk-enhancing factors" in their guideline on the management of blood cholesterol.² Projections of future risk derived from primary risk factors and risk-enhancing factors can be used to adjust the intensity of LDL-lowering therapy and enhance clinician-patient risk discussion

WHAT treatments are available

The evidence-based guidelines for the assessment of cardiovascular risk, treatment goals, lifestyle changes, and pharmacotherapy should be followed as the criterion standard in clinical practice.^{2, 3} Lipid management with a combination of pharmacotherapy and lifestyle changes aimed at the reduction of cholesterol levels effectively slows the progression of atherosclerosis and plays a pivotal role in the primary and secondary prevention of ASCVD.

Lifestyle changes

Instruction on lifestyle changes and dietary and nutritional counseling should be provided.² Patients without ASCVD should be managed with lifestyle changes before drug therapy is implemented. Necessary lifestyle changes include diet, weight reduction, smoking cessation, and physical activity. Patients should be counseled regarding these lifestyle changes at every clinical encounter.

Pharmacotherapy

There are four major categories of patients for whom statins may be considered:²

- Those with clinical ASCVD
- Those with severe hypercholesterolemia (LDL \geq 190 mg/dL)
- Those 40 to 75 years of age with diabetes and LDL \geq 70 mg/dL
- Those 40 to 75 years of age with no diabetes but with LDL \geq 70 mg/dL and \geq 7.5% 10-year ASCVD risk.

HOW can outcomes be improved

Unfortunately, studies have indicated that adherence to established guidelines is suboptimal, especially for women.^{4,5} Incorporation of evidence-based guidelines for the prevention of ASCVD into clinical practice, including screening and treatment of hyperlipidemias, will result in improved control of cholesterol and enhanced outcomes in patients at risk for ASCVD. This approach requires collaboration among all members of the multidisciplinary team of healthcare providers, including physicians, nurses, pharmacists, dietitians, counselors, and physiotherapists.⁶

In addition, the AHA/ACC has established recommendations to improve patient adherence to prescribed therapies. Providers should provide interventions focused on improving adherence to therapy (e.g., telephone reminders, calendar reminders, integrated multidisciplinary educational activities, pharmacist-led interventions). Patient-clinician discussions should be conducted prior to therapy to promote shared decision-making.²

WHERE to find resources

American Heart Association

1-800-AHA-USA-1 (242-8721)

<https://www.heart.org>

Centers for Disease Control and Prevention

<https://www.cdc.gov>

National Heart, Lung, and Blood Institute

<https://www.nhlbi.nih.gov>

Framingham Heart Study

<https://framinghamheartstudy.org>

- 1 Carroll MD, Fryar CD, Nguyen DT. Total and high-density lipoprotein cholesterol in adults: United States, 2015–2016. *NCHS Data Brief*. 2017;290:1-8.
- 2 Grundy SM, Stone NJ, Bailey AL, et al. 2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA guideline on the management of blood cholesterol: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *J Am Coll Cardiol*. 2019;139(25):e1082-e1143.
- 3 Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *Circulation*. 2014;129(Suppl 2):S76-S99.
- 4 Hahn KA, Strickland PA, Hamilton JL, Scott JG, Nazareth TA, Crabtree BF. Hyperlipidemia guideline adherence and association with patient gender. *J Womens Health (Larchmt)*. 2006;15(9):1009-1013.
- 5 Mosca L, Linfante AH, Benjamin EJ, et al. National study of physician awareness and adherence to cardiovascular disease prevention guidelines. *Circulation*. 2005;111:499-510.
- 6 Fletcher B, Berra K, Braun LT, et al. Managing abnormal blood lipids: a collaborative approach. *Circulation*. 2005;112:3184-3209.

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