

**What Nurses Need to Know  
About the New ACC/AHA  
Cholesterol Guideline**


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## Objectives

Increase your knowledge of:

- The major recommendations included in the 2018 cholesterol guideline.
- How to determine who would benefit from cholesterol-lowering treatments.
- Current lifestyle recommendations in the management of elevated cholesterol.
- Guideline directed medications in the treatment of high cholesterol.



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2018 AHA/ACC/AACVPR/AAPA/ABC/ACPM/ADA/AGS/APhA/ASPC/NLA/PCNA



## Guideline on the Management of Blood Cholesterol

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## 2018 AHA/ACC Cholesterol Guideline

### What's new?

- ASCVD risk enhancers, in primary prevention
- Lifetime risk estimation in young adults
- New drugs, in secondary prevention
- Threshold of 70 mg/dL added for very high risk patients
- Goal is not a number but rather a % LDL reduction
- Coronary Artery Calcium (CAC)
- Fasting or non-fasting lipid profile is acceptable, if not on lipid-lowering therapy




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## 2018 AHA/ACC Cholesterol Guideline

### What's the same?

- Lifestyle is the cornerstone of prevention of ASCVD
- Statins are first-line agents for ASCVD risk reduction in patients who require drug therapy
- Statin benefit groups remain the same:
  - Known ASCVD
  - LDL  $\geq$  190 mg/dL
  - Diabetes aged 40-75 years
  - Calculated risk of ASCVD event  $\geq$  7.5%



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## 2018 AHA/ACC Cholesterol Guideline

### What's the same?

- Use high-intensity statins for maximal risk reduction
- Clinician-patient risk discussion for shared decision-making is highlighted throughout guideline
- For primary prevention, 10-year ASCVD risk estimation using the Pooled Cohort Equations remains the starting point for the risk discussion



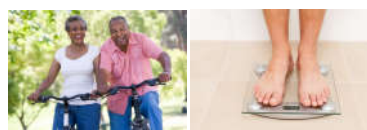
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## Top 10 Take Home Messages



### 1. Heart Healthy Lifestyle

- Healthy lifestyle reduces ASCVD risk at all ages
- Foundation of ASCVD risk reduction
- Re-emphasis on the 2013 Lifestyle Guideline



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## Lifetime Risk in Young Adults

### Ages 20-39 calculate lifetime risk

- Facilitates the clinician-patient risk discussion
- ASCVD Risk Estimator can be used to estimate lifetime risk in young adults
  - Search [ASCVD Risk Estimator Plus](#)
- Emphasize intensive lifestyle efforts

<https://www.acc.org/tools-and-practice-support/mobile-resources/features/2013-prevention-guidelines-ascvd-risk-estimator>



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## Top 10 Take Home Messages

### 2. Clinical ASCVD, reduce LDL-C with high-intensity statin

- The more LDL-C is reduced on statin therapy, the greater will be subsequent risk reduction.
- Use a maximally tolerated statin to lower LDL-C levels by  $\geq 50\%$ .



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## Top 10 Take Home Messages



3. Very high-risk ASCVD, use LDL-C threshold of 70 mg/dL & consider addition of non-statin to statin therapy

- History of multiple major ASCVD events or 1 major ASCVD event and multiple high-risk conditions.
- If LDL-C level remains  $\geq 70$  mg/dL on maximally tolerated statin, reasonable to add ezetimibe.
- If LDL-C level remains  $\geq 70$  mg/dL on maximally tolerated statin + ezetimibe, reasonable to add PCSK9 inhibitor



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## Top 10 Take Home Messages



4. Severe primary hypercholesterolemia, LDL-C  $\geq 190$  mg/dL begin high-intensity statin therapy

- No need to calculate 10-year ASCVD risk
- If the LDL-C level remains  $\geq 100$  mg/dL, adding ezetimibe is reasonable
- If the LDL-C level remains  $\geq 100$  mg/dL & the patient has multiple risk factors, a PCSK9 inhibitor may be considered



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## Top 10 Take Home Messages



5. Ages 40-75 with diabetes and LDL-C  $> 70$  mg/dL, start moderate-intensity statin

- No need to calculate 10-year ASCVD risk
- If 50-75 an multiple risk factors, high-intensity statin



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## Top 10 Take Home Messages




6. Ages 40-75, primary ASCVD prevention, risk discussion, before starting statin therapy:

- Presence of risk enhancing factors
- Presence of major risk factors
- 10-year ASCVD risk estimation
- Potential benefits of lifestyle and statin therapies
- Potential for adverse effects and drug-drug interactions; consideration of costs of statin therapy
- Patient preferences & values in shared decision-making



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## Primary Prevention




Emphasis on Heart Healthy Lifestyle

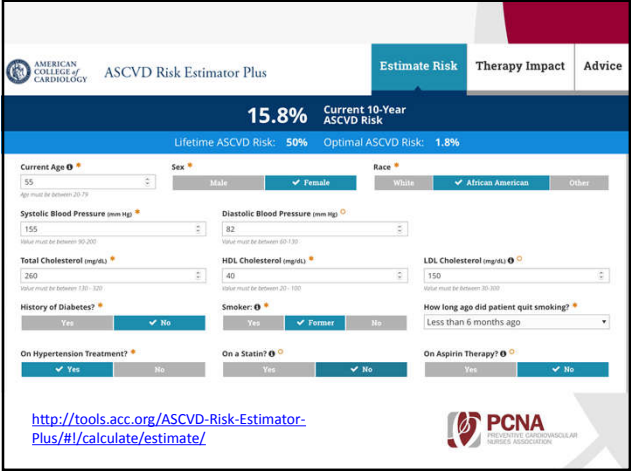
- Assess ASCVD risk (pooled cohort equations, sex- and race-specific):
  - 20-39 years: Lifetime risk estimation
  - 40-75 years: 10 year ASCVD risk

<https://www.acc.org/tools-and-practice-support/mobile-resources/features/2013-prevention-guidelines-ascvd-risk-estimator>

ClinCalc.com



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AMERICAN COLLEGE OF CARDIOLOGY ASCVD Risk Estimator Plus

**15.8%** Current 10-Year ASCVD Risk

Lifetime ASCVD Risk: 50% Optimal ASCVD Risk: 1.8%

Current Age: 55 Sex: Female Race: White


Systolic Blood Pressure: 155 Diastolic Blood Pressure: 82

Total Cholesterol: 260 HDL Cholesterol: 40 LDL Cholesterol: 150

History of Diabetes: No Smoker: Former

On Hypertension Treatment: Yes On a Statin: No On Aspirin Therapy: No

<http://tools.acc.org/ASCVD-Risk-Estimator-Plus/#/calculate/estimate/>



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## Top 10 Take Home Messages



7. Ages 40-75, no diabetes, LDL-C  $\geq 70$  mg/dL, ASCVD 10-yr risk  $\geq 7.5\%$  start a moderate intensity statin if:


- Discussion of treatment options favors statin therapy
- Risk-enhancing factors favor statin therapy
- Consider using coronary artery calcium (CAC)




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## Top 10 Take Home Messages

8. Ages 40-75, no diabetes, LDL-C  $\geq 70$  mg/dL, ASCVD 10-yr risk of 7.5 – 19.9% (intermediate risk) risk-enhancing factors favor initiation of statin therapy



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## Risk-Enhancing Factors

- Family history of premature ASCVD;
  - Persistently elevated LDL-C levels  $\geq 160$  mg/dL;
  - Metabolic syndrome;
  - Chronic kidney disease;
  - History of preeclampsia or premature menopause (age <40 yrs)
  - Chronic inflammatory disorders (e.g., rheumatoid arthritis, psoriasis, or chronic HIV);
  - High-risk ethnic groups (e.g., South Asian);
  - Persistent elevations of triglycerides  $\geq 175$  mg/dL.
- If measured in selected individuals:
- Apolipoprotein B  $\geq 130$  mg/dL;
  - High-sensitivity C-reactive protein  $\geq 2.0$  mg/L;
  - Ankle-brachial index <0.9;
  - Lipoprotein (a)  $\geq 50$  mg/dL or 125 nmol/L, especially at higher values of lipoprotein (a).

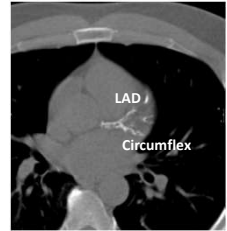


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## Top 10 Take Home Messages

9. Ages 40-75, no diabetes, LDL-C  $\geq 70$  mg/dL – 189 mg/dL, ASCVD 10-yr risk of 7.5 – 19.9% (intermediate risk) if decision about statin therapy uncertain, measure CAC

- If CAC is zero, treatment with statin therapy may be withheld or delayed, except in cigarette smokers, those with diabetes mellitus, and those with a strong family history of premature ASCVD.
- A CAC score above 0 favors statin therapy



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## Top 10 Take Home Messages



10. Assess adherence and response to medications and lifestyle with fasting lipid panel 4 to 12 wks following statin initiation or adjustment; then every 3-12 months.

- Responses to lifestyle and statin therapy are defined by percentage reductions in LDL-C levels compared with baseline.



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## Summary & Implications



- 2018 Cholesterol Guideline is comprehensive and provides an individualized approach to primary prevention.
- Become familiar with the 10 take-home messages and to locate other key information in the guideline.
- Nurses play an important role in the clinician-patient discussion:
  - respond to questions after a prescription is given, clarify information, address adverse effects, communicate with pharmacist, etc.
  - lifestyle counseling and providing resources
  - lead by example – become a heart healthy nurse!
- Nurses are well-positioned to conduct education and QI projects that facilitate guideline implementation.



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## Questions?



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