

ACCF/AHA Release Guideline for Early Cardiovascular Risk Assessment

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Guideline source: American College of Cardiology Foundation and American Heart Association

Evidence rating system used? Yes

Literature search described? Yes

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Atherosclerotic cardiovascular disease is the leading cause of death among adults in the United States. Because coronary heart disease (CHD) has a long asymptomatic latent period, there is an opportunity for early preventive measures. The American College of Cardiology Foundation (ACCF) and the American Heart Association (AHA) have created a guideline to assist physicians with the early cardiovascular risk assessment of asymptomatic adults. The goal of this assessment is to guide targeted preventive efforts based on the patient's individual risk. Initial evaluation includes broadly categorizing patients by risk. Further intervention is based on these risk assessments.

Recommendations

GLOBAL RISK SCORING

Global risk scores (e.g., Framingham Risk Score) that include multiple traditional cardiovascular risk factors effectively combine individual risk factor measurements into a single quantitative estimate of risk. These scores should be used in all cardiac risk assessment evaluations to guide the initiation of targeted preventive measures.

FAMILY HISTORY AND GENOMIC TESTING

Family history of atherothrombotic cardiovascular disease should be obtained, although genotype testing is not recommended.

LABORATORY TESTING

Lipoprotein and Apolipoprotein. Lipid measurements, including lipoprotein levels, apolipoprotein levels, and particle size/density, beyond the standard lipid profile are not recommended.

Natriuretic Peptide. Measurement of natriuretic peptide levels is not recommended.

C-Reactive Protein. Measurement of C-reactive protein levels can be useful in selecting candidates for statin therapy in the following patients: men 50 years and older and women 60 years and older with a low-density lipoprotein cholesterol level less than 130 mg per dL (3.37 mmol per L) who are not on lipid-lowering medications, hormone therapy, or immunosuppressant therapy and do not have clinical CHD, diabetes mellitus, chronic kidney disease, severe inflammatory conditions, or contraindications to statins. Measurement of C-reactive protein levels may be reasonable in younger patients with intermediate cardiovascular risk, but is not recommended for high-risk patients.

A1C. Measurement of A1C levels may be reasonable in patients without diabetes to assess cardiovascular risk.

Microalbuminuria. Urinalysis to detect microalbuminuria is reasonable in patients with hypertension or diabetes, and may be reasonable in intermediate-risk patients without these conditions.

Lipoprotein-Associated Phospholipase A2. Measurement of lipoprotein-associated phospholipase A2 levels may be reasonable in intermediate-risk patients.

IMAGING AND OTHER TESTING

Resting Electrocardiography (ECG). Resting ECG is reasonable in patients with hypertension or diabetes, and may be considered in patients without these conditions.

Transthoracic Echocardiography. Echocardiography to detect left ventricular hypertrophy may be considered in patients with hypertension, but is not recommended in those without hypertension.

Carotid Intima-Media Thickness. Measurement of carotid intima-media thickness is reasonable in intermediate-risk patients; however, high-quality results are dependent on properly performing the test.

Brachial/Peripheral Flow-Mediated Dilation. Peripheral arterial flow-mediated dilation is not recommended.

Arterial Stiffness. Measurement of arterial stiffness is not recommended outside of research settings.

Ankle-Brachial Index. Measurement of ankle-brachial index is reasonable for intermediate-risk patients.

Exercise and stress ECG. Exercise ECG may be considered in intermediate-risk patients (including sedentary adults who are considering a vigorous exercise program), particularly if non-ECG markers, such as exercise capacity, are noted.

Stress Echocardiography. Stress echocardiography is not recommended in low- or intermediate-risk patients. It is used mainly in the advanced cardiac evaluation of symptomatic patients to estimate prognosis in those with known coronary artery disease and to assess those with known or suspected valvular heart disease.

Myocardial Perfusion Imaging. Stress

myocardial perfusion imaging may be considered in patients with diabetes or a strong family history of CHD, or if a previous risk assessment suggested high risk of CHD. It is not indicated for patients with low or intermediate risk, and is used mainly in the advanced cardiac evaluation of symptomatic patients and to estimate prognosis in patients with known coronary artery disease.

Calcium Scoring Methods. Measurement of cardiac calcium levels is reasonable in patients with intermediate risk (10 to 20 percent 10-year risk), may be reasonable in those with low to intermediate risk (6 to 10 percent 10-year risk), and is not recommended in patients with low risk (less than 6 percent 10-year risk). Measurement of cardiac calcium levels is reasonable in patients 40 years and older with diabetes.

Coronary Computed Tomography Angiography. Coronary computed tomography angiography is not recommended.

Magnetic Resonance Imaging. Magnetic resonance imaging for detection of vascular plaque is not recommended. ■

Answers to This Issue's CME Quiz

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| Q1. A | Q5. C | Q8. A, B, C, D |
| Q2. B | Q6. B | Q9. A, B, C |
| Q3. B, C | Q7. C | Q10. B, C |
| Q4. D | | |