2019 Clinical Practice Guideline

Cardiovascular Disease Guidelines

Purpose/Objectives

- Many major studies conclude that the incidence and progression of atherosclerotic cardiovascular disease decreases when individuals address modifiable risks, including cigarette smoking, hypertension, high serum cholesterol physical inactivity, obesity and diabetes mellitus. This guideline focuses on risk factor modification,and incorporates consensus statements from the American Heart Association (AHA), the American College of Cardiology (ACC) and/or the American College of Cardiology Foundation (ACCF). (See References)
- This guideline is designed to assist clinicians by providing a framework for evaluation and treatment of patients and is not intended to either replace a clinician's judgment or establish a protocol for all patients with a particular condition. The final decision regarding medical treatment is made by the physician and the patient.

See "Abbreviation Table" on page four.

Primary Prevention

It is reasonable to assess traditional atherosclerotic cardiovascular disease (ASCVD) risk factors every 4-6 years in adults 20-79 years of age who are free from ASCVD and estimate 10-year ASCVD risk every 4-6 years in adults 40-79 who are free from ASCVD. Traditional risk factors are age, sex, total and HDL-cholesterol, systolic blood pressure, use of antihypertensive therapy, diabetes, and current smoking status.

For adults who would benefit from blood pressure lowering and/or LDL lowering, the American Heart Association recommends dietary patterns (such as the DASH dietary pattern, the USDA Food Pattern, or the AHA diet) and exercise.

Additional details and recommendations for cholesterol management, management of overweight and obesity, management of other risk factors, and use of antiplatelet agents for primary prevention are summarized in the referenced documents.

Primary Prevention of Atherosclerotic Cardiovascular Disease

Screening Recommendations	Clinical Considerations	Management/Control	Source Guideline/ Reference Page
Assess at every visit	Smoking status	• Offer cessation counseling when applicable • Encourage avoidance of second-hand or environmental smoke	2/Page 389 Table 1 and Page 390 Table 2
	Dietary intake of high-fat and/or high-calorie foods	• Encourage a healthy diet which includes vegetables, fruits, lean meats, low-fat options, whole grains, and legumes No more than moderate alcohol consumption	2/Page 389 Table 1 and Page 390 Table 2
	Activity level	Encourage physical activity, which is recommended at no less than five days per week for thirty minutes each day.	2/Page 389 Table 1 and Page 390 Table 2

Primary Prevention of Atherosclerotic Cardiovascular Disease (continued)

Screening Recommendations	Clinical Considerations	Management/Control	Source Guideline/ Reference Page
Recommend measuring and recording values no less than once every two years	Blood pressure (BP)	• Goal < 140/90 mm Hg for up to age 80 • Goal < 150/90 mm Hg for 80 years or older • Encourage a healthy lifestyle • Initiate drug therapy when necessary	7/Page 1
	Body mass index (BMI)	• Goal BMI 18.5 – 24.9 Encourage optimal weight	2/Page 389 Table 1 and Page 390 Table 2
	Pulse	Documentation	2/Page 389 Table 1 and Page 390 Table 2
For adults age 20 – 79 who do not have cardiovascular disease, evaluate risk factors every 4 – 6 years. For adults age 40 – 79, use this information to assess for 10-year cardiovascular disease risk.	• Age • Gender • Total cholesterol • High density lipoprotein cholesterol • Systolic blood pressure • Use of antihypertensive drugs • Diabetes mellitus • Current smoking status	• Adherence to a heart healthy diet • Regular exercise • Avoidance of tobacco products • Achieving & maintaining an optimal weight	4/Page 10 Table 4 and 6/Page 13 Section 2.1
In the absence of risk factors, testing for diabetes should begin for all individuals who are overweight or obese. Repeat testing at least as every 3 years. Consider more frequent testing given initial results.	Screen for and manage diabetes	In those with diabetes, optimal control is desired. See American Diabetes Association, Standards of Medical Care in Diabetes – 2016.	9/Clinical Considerations

Secondary Prevention

Important evidence from clinical trials supports and broadens the merits of intensive risk-reduction therapies for patients with established coronary and other atherosclerotic vascular disease, including peripheral artery disease, atherosclerotic aortic disease, and carotid artery disease.

For adults who would benefit from blood pressure lowering and/or LDL lowering, the American Heart Association recommends dietary patterns (such as the DASH dietary pattern, the USDA Food Pattern, or the AHA diet) and exercise. Additional details about management of overweight and obesity, lifestyle management and recommendations for cholesterol management are summarized in the referenced documents.

Recommended interventions regarding smoking, blood pressure control, Type 2 diabetes mellitus management, antiplatelet agents/ anticoagulants, renin-angiotensin-aldosterone system blockers and beta blockers, influenza vaccination, depression and cardiac rehabilitation are summarized in Table 1 in the AHA/ACCF secondary prevention and risk reduction therapy guideline referenced above.

Suggested Preventive Measures and Reduction of Risk for Patients Diagnosed with Atherosclerotic Vascular Disease

Intervention	Source Guideline/ Reference Page
Assess smoking status at every visit and offer cessation counseling when applicable	1/Page 2459 Table 1
Recommendations for BP Goals • Goal < 140/90 mm Hg for patients with HTN or CAD. • Goal ≤ 130/80 mm Hg may be considered for patients with a history of MI, CAD, CVA or TIA, or for patients with carotid artery disease, PAD, or AAA, which are considered to be risk equivalents for CAD. • For people over 80 years of age randomized controlled trials have not conclusively demonstrated a target optimal blood pressure.	10/Pages 1382 - 1386
Initiate or continue high-intensity statin therapy as first-line therapy in those ≤ 75 years of age who have CVD, unless it is contraindicated. If contraindicated, initiate moderate-intensity statin therapy if tolerated. Evaluate the benefits of risk-reduction, adverse side effects, drug-to-drug interactions, and consider patient preferences when initiating moderate or high-intensity statin therapy. Continue statin therapy in those with CVD if tolerated.	6/Page 22 Table 4
Assess how frequently the patient engages in physical activity and recommend no less than five days per week for thirty minutes each day when indicated	1/Page 2460 Table 1
Recommend and administer an annual influenza vaccine unless contraindicated	1/Page 2462 Table 1
Screen for depression when clinical staff are available to assist the primary care clinician by providing direct depression care and/or coordination, case management, or mental health treatment.	8/Current Recommendation
Recommend low dose aspirin for daily usage in all patients with coronary artery disease unless contraindicated.	1/Page 2460 table 1
Recommend initial treatment with ACE inhibitors for indefinite usage in those with left ventricular ejection fraction of ≤ 40%, hypertension, diabetes, or chronic kidney disease, unless contraindicated. Consider ACE inhibitors post MI.	1/Page 2461 Table 1 10/Page 1380-1381
For those unable to tolerate ACE inhibitors as initial treatment, recommend ARBs in those with heart failure or who have had a myocardial infarction with left ventricular ejection fraction ≤ 40%.	1/Page 2461 Table 1

Suggested Preventive Measures and Reduction of Risk for Patients Diagnosed with Atherosclerotic Vascular Disease (continued)

Recommend aldosterone blockade in conjunction with ACE inhibitors and Beta Blockers for those post-myocardial infarction who do not have significant renal impairment or hyperkalemia and who have a left ventricular ejection fraction ≤ 40% and who have diabetes or heart failure.	1/Page 2461 Table 1
For all patients with left ventricular systolic dysfunction who had angina, a previous myocardial infarction and/or have heart failure, recommend beta blockers unless contraindicated.	1/Page 2462 Table 1 10/Page 1380
Consider cardiac rehab for select patients with acute coronary syndrome	1/Page 2462 Table 1

Abbreviation Table

AAA	abdominal aortic aneurysm	CVA	cardiovascular accident
ACC	American College of Cardiology	CVD	cardiovascular disease
ACCF	American College of Cardiology Foundation	DASH	dietary approaches to stop hypertension
ACE	angiotensin converting enzyme	HDL	high density lipoprotein
AHA	American Heart Association	HTN	hypertension
ARB	angiotensin receptor blocker	LDL	low density lipoprotein
ASCVD	atherosclerotic cardiovascular disease	MI	myocardial infarction
BP	blood pressure	PAD	peripheral artery disease
BMI	body mass index	TIA	transient ischemic attack
CAD	coronary artery disease	USDA	United States Department of Agriculture
AAA	abdominal aortic aneurysm	CVA	cardiovascular accident

Cardiovascular Disease Source Guidelines

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