



Clinical Care Guidelines for: Coronary Artery Disease

OBJECTIVE

Guide the appropriate diagnosis and management of Coronary Artery Disease.

GUIDELINE

MDwise supports coronary artery disease recommendations from the American Heart Association and American College of Cardiologists:

[AHA/ACC Guidelines for Secondary Prevention for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2006 Update](#)

Guidelines are included in the MDwise Provider Manual and posted on the MDwise Web site. They are available individually as requested.

ASSESSMENT AND DIAGNOSIS

DIAGNOSIS:

- A physician will diagnose CAD based on a patient's medical and family histories, risk factors, a physical exam, and the results from tests and procedures

RISK ASSESSMENT

- Framingham Risk Assessment (10-year risk of Hard Coronary Heart Disease, i.e. MI or coronary death)

LAB EVALUATION:

- EKG
- Stress Test
- Echocardiography
- Chest X-Ray
- Blood Tests
- Electron-Beam Computed Tomography
- Coronary Angiography and Cardiac Catheterization

TREATMENT AND PREVENTION

Treatment is based on diagnosis, comorbidities, and prevention and treatment of complications and cardiovascular disease.

Smoking Goal: Complete cessation. No exposure to environmental tobacco smoke	-Ask about tobacco status at every visit -Advise every tobacco user to quit -Assess the tobacco user's willingness to quit -Assist by counseling and developing a plan for quitting -Arrange follow-up, referral to special programs, or pharmacotherapy (including nicotine replacement, bupropion, and varenicline) -Urge avoidance of exposure to environmental tobacco smoke at work and home
Blood Pressure -Goal: <140/90 mmHg or <130/80 mmHg if patient has diabetes or chronic kidney disease	For all patients -Initiate or maintain lifestyle modification: weight control; increased physical activity; alcohol moderation; sodium reduction; and emphasis on increased consumption of fresh fruits, vegetable, and low-fat dairy products For patient with blood pressure $\geq 140/90$ mmHg (or $\geq 130/80$ for individuals with chronic kidney disease or diabetes) -As tolerated, add blood pressure medication, treating initially with Beta-blockers and/or ACE inhibitors, with addition of other drugs such as thiazides as needed to achieve goal blood pressure [For compelling indications for individual drug classes in specific vascular diseases, see Seventh Reports of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7)]
Lipid Management Goal: LDL-C <100 mg/dL If triglycerides are ≥ 200 mg/dL, non-HDL-C should be <130 mg/dL	For all patients -Start dietary therapy. Reduce intake of saturated fats (to <7% of total calories), trans-fatty acids, and cholesterol (to <200mg/d) -Adding plant stanol/sterols (2g/d) and viscous fiber (>10g/d) will further lower LDL-C -Promote daily physical activity and weight management -Encourage increased consumption of omega-3 fatty acids in the form of fish or in capsule form (1g/d) for risk reduction. For treatment of elevated triglycerides, higher dose are usually necessary for risk reduction For lipid management

	<p>-Assess fasting lipid profile in all patients, and within 24 hours of hospitalization for those with an acute cardiovascular or coronary event. For hospitalized patients, initiate lipid-lowering medication as recommended below before discharge according to the following schedule:</p> <p>LDL-C should be <100 mg/dL</p> <p>Further reduction of LDL-C to <70 mg/dL is reasonable</p> <p>If baseline LDL-C is \geq100 mg/dL, initiate LDL-lowering drug therapy</p> <p>If on-treatment LDL-C is 70 to 100 mg/dL, it is reasonable to treat to LDL-C <70 mg/dL</p> <p>If baseline LDL-C is 70 to 100 mg/dL, it is reasonable to treat to LDL-C <70 mg/dL</p> <p>If triglycerides are 200 to 499 mg/dL, non-HDL-C should be <130 mg/dL</p> <p>Further reduction of non-HDL-C to <100 mg/dL is reasonable</p> <p>Therapeutic options to reduce non-HDL-C</p>
Physical Activity Goal: 30 minutes, 7 days per week (minimum 5 days per week)	<p>-For all patients, assess risk with physical activity history and/or an exercise test, to guide prescription</p> <p>-For all patients, encourage 30 to 60 minutes of moderate-intensity aerobic activity, such as brisk walking, on most, preferably all, days of the week, supplemented by an increase in daily lifestyle activities (eg. walking, breaks at work, gardening, household work)</p> <p>-Encourage resistance training 2 days per week</p> <p>-Advise medically supervised programs for high-risk patients (eg. recent acute coronary syndrome or revascularization, heart failure)</p>
Weight Management Goal: Body mass index: 18.5 to 24.9 kg/m ² Waist circumference: men <40 inches, women <35 inches	<p>-Assess body mass index and/or waist circumference on each visit and consistently encourage weight maintenance/reduction through an appropriate balance of physical activity, caloric intake, and formal behavioral programs when indicated to maintain/achieve a body mass index between 18.5 and 24.9 kg/m²</p> <p>-If waist circumference (measured horizontally at the iliac crest) is \geq35 inches in women and \geq40 inches in men, initiate lifestyle changes and consider treatment strategies for metabolic syndrome as indicated</p> <p>-The initial goal of weight loss therapy should be to reduce body weight by approximately 10% from baseline. With success, further weight loss can be attempted if indicated through further assessment</p>
Diabetes Management Goal: HbA _{1c} <7%	<p>-Initiate lifestyle and pharmacotherapy to achieve near-normal HbA_{1c}</p> <p>-Begin vigorous modification of other risk factors (eg. Physical activity, weight management, blood pressure control, and cholesterol management as recommended above)</p> <p>-Coordinate diabetic care with patient's primary care physician or endocrinologist</p>
Antiplatelet Agents/ Anticoagulants	<p>-Start aspirin 75 to 162 mg/d and continue indefinitely in all patients unless contraindicated</p> <p>For patients undergoing coronary artery bypass grafting, aspirin should be started within 48 hours after surgery to reduce saphenous vein graft closure. Dosing regimens ranging from 100 to 325 mg/d appear to be efficacious. Doses higher than 162 mg/d can be continued for up to 1 year</p> <p>-Start and continue clopidogrel 75 mg/d in combination with aspirin for up to 12 months in patient after acute coronary syndrome or percutaneous coronary intervention with stent placement (\geq1 month for bare metal stents, \geq3 months for sirolimus-eluting stent, and \geq6 months for paclitaxel-eluting stent)</p> <p>Patients who have undergone percutaneous coronary intervention with stent placement should initially receive higher-dosage aspirin at 325 mg/d for 1 month for bare metal stent, 3 months for sirolimus-eluting stent, and 6 months for paclitaxel-eluting stent</p> <p>-Manage warfarin to international normalized ratio=2.0 to 3.0 for paroxysmal or chronic atrial fibrillation or flutter, and in post-myocardial infarction patients when clinically indicated (eg. Atrial fibrillation, left ventricular thrombus)</p> <p>-Use of warfarin in conjunction with aspirin and/or clopidogrel is associated with increased risk of bleeding and should be monitored closely</p>
Renin-Angiotensin-Aldosterone System Blockers	<p>ACE inhibitors:</p> <p>-Start and continue indefinitely in all patients with left ventricular ejection fraction \leq40% and in those with hypertension, diabetes, or chronic kidney disease, unless contraindicated</p> <p>-Consider for all other patients</p> <p>-Among lower-risk patients with normal left ventricular ejection fraction in whom cardiovascular risk factors are well controlled and revascularization has been performed, use of ACE inhibitors may be considered optional</p> <p>Angiotensin receptor blockers:</p> <p>-Use in patients who are intolerant of ACE inhibitors and have heart failure or have had a myocardial infarction with left ventricular ejection fraction \leq40%</p> <p>-Consider in all patients who are ACE inhibitor intolerant</p> <p>-Consider use in combination with ACE inhibitor in systolic-dysfunction heart failure</p> <p>Aldosterone blockade:</p> <p>-Use in post-myocardial infarction patients, without significant renal dysfunction or hyperkalemia who are already receiving therapeutic doses of an ACE inhibitor and Beta-blocker, have a left ventricular ejection fraction \leq40%, and have either diabetes or heart failure</p>
Beta-Blockers	<p>-Start and continue indefinitely in all patients who have had a myocardial infarction, acute coronary syndrome, or left ventricular dysfunction with or without heart failure symptoms, unless contraindicated. Consider chronic therapy for all other patients with coronary or other vascular disease or diabetes unless contraindicated</p>
Influenza Vaccine	<p>Patients with cardiovascular disease should have an annual influenza vaccination</p>

REFERENCES

[AHA/ACC Guidelines for Secondary Prevention for Patients With Coronary and Other Atherosclerotic Vascular Disease: 2006 Update](#)

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