Intermountain Healthcare

Coronary Heart Disease Preventive Care Recommendations

Recommendation	Treatments and Targets
1. Lifestyle Management • **TEACH** patients to follow a healthy lifestyle	• **Physical activity**: >30 minutes/day, moderate intensity, 5-7 days/week • **Diet:** limit saturated fat, trans-fat, and sugar; eat more fruits, vegetables, low-fat proteins, high-fiber foods • **Weight management:** BMI 18.5-24.9; waist circumference <40"(men), <35" (women) • **Smoking:** Don't smoke; avoid second-hand smoke/pollutants

2. Lipid Management

- **MEASURE fasting lipid profile every 5 years** beginning at age 20 years.
- **Repeat annually if** results are abnormal, patient is on lipid-lowering therapy, or patient has known CHD
- **Treat based on LDL value and risk category**

Risk Category		Drug Therapy	LDL-Goal
High Risk	• **CHD (coronary heart disease)** o History of myocardial infarction o Acute coronary syndrome o Angina or equivalent o Coronary artery procedures o Evidence of myocardial ischemia • **CHD risk equivalents (atherosclerotic disease)** o Peripheral arterial disease o Abdominal aortic aneurysm o Carotid artery disease o Diabetes Mellitus	**Initiate statin for ALL high risk patients**	**LDL <70 mg/dL**
Moderate Risk	• **≥2 of the following risk factors:** o Age (men ≥45 years; women ≥55 years o Cigarette smoking o Hypertension (BP ≥140/90 mmHg or on antihypertensive medication) o Low HDL cholesterol (<40 mg/dL) o Impaired fasting glucose (101-125 mg/dL) o Family history of premature CHD (CHD in male first-degree relative <55 years or female first-degree relative <65 years) o Evidence of subclinical vascular disease (e.g., coronary calcification) o Elevated hsCRP (≥2.0 mg/L)	Intiate **statin** if lifestyle management does not achieve LDL <130 mg/dL	**LDL <100 mg/dL**
Low risk	• **0-1 risk factor** (see above)	Initiate **statin** If lifestyle management does not achieve LDL <160 mg/dL	**LDL <130 mg/dL (<100 ideal)**

Recommendation	Treatments and Targets
3. Glucose Management • **MEASURE** fasting glucose **every 3 years beginning at age 45** (more often or beginning at a younger age if clinically indicated)	• Fasting blood glucose: **<100 mg/dL** • Post-prandial glucose: **<140 mg/dL**
4. Blood Pressure Management • **MONITOR** blood pressure **every other year** (more often if clinically indicated)	• Optimal: **<120/80** • Minimal: **<140/90** • If diabetes or renal disease: **<130/80**

Recommendation	Treatments, Tests, and Targets			
5. Management of other risk factors	**Factor**		**Treatment, Test, or Target**	
	• >1 CHD risk factor		**Aspirin 81 mg daily**	
	• Metabolic syndrome or obesity (especially central adiposity)		Physical activity and diet as recommended under Lifestyle Management on page 1. Refer patient to Intermountain's *Weigh to Health™ Nutrition Program*.	
	• High triglycerides		**Target <150 mg/dL** through healthy lifestyle changes, medical therapy with fenofibrate or niacin if clinically indicated	
	• Low HDL		Physical activity, diet, and consider **niacin.**	
	• Inflammatory markers		Consider measuring **hsCRP** (>2 mg/L increases risk) and **LpPLA2** (>250 mg/dL increases risk) in borderline cases	
6. Coronary Artery Calcification (CAC) screening for asymptomatic patients* with MCCT (multislice cardiac CT). Consider screening for men 45-75 years and women 55-75 years with: • Moderate or high risk of CHD (see page 1) • When a positive or negative scan would influence therapeutic decision-making or patient adherence • Low likelihood of significant, obstructive CAD *****CAC is predictive of differential risk in asymptomatic diabetes	**Risk category based on CAC result**		**Tests and treatments**	**Target**
	Very High Risk	CAC>400 *or* >90th %tile for age	Proceed to cardiac CT angiogram or imaging stress test	**LDL <70 mg/dL**
	High Risk	CAC100-399 *or* 75th- 89th %tile for age	Aggressive medical management Consider imaging stress test	**LDL <70 mg/dL**
	Moderate Risk	CAC >1 but <100 *and* <75th %tile for age	Medical management	**LDL <100 mg/dL**

References:

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3] Grundy SM, Cleeman JI, Merz CN, et al. Implications of recent clinical trials for the National Cholesterol Education Program Adult Treatment Panel III guidelines. *Circulation*. 2004;110:227-239.

4] Lloyd-Jones DM, Leip EP, Larson MG, et al. Prediction of lifetime risk for cardiovascular disease by risk factor burden at 50 years of age. *Circulation*. 2006;113:791-798.

5] Greenland P, Bonow RO, Brundage BH, et al. ACCF/AHA 2007 clinical expert consensus document on coronary artery calcium scoring by computed tomography in global cardiovascular risk assessment and in evaluation of patients with chest pain: a report of the American College of Cardiology Foundation Clinical Expert Consensus Task Force (ACCF/AHA Writing Committee to Update the 2000 Expert Consensus Document on Electron Beam Computed Tomography). *Circulation*. 2007;115:402-426.

6] Budoff MJ, Achenbach S, Blumenthal RS, et al. Assessment of coronary artery disease by cardiac computed tomography: a scientific statement from the American Heart Association Committee on Cardiovascular Imaging and Intervention, Council on Cardiovascular Radiology and Intervention, and Committee on Cardiac Imaging, Council on Clinical Cardiology. *Circulation*. 2006;114:1761-1791.

7] Naghavi M, Falk E, Hecht HS, et al. From vulnerable plaque to vulnerable patient--Part III: Executive summary of the Screening for Heart Attack Prevention and Education (SHAPE) Task Force report. *Am J Cardiol*. 2006;98:2H-15H.