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AHA/ACC Guidelines for Preventing Heart Attack and Death in Patients With Atherosclerotic Cardiovascular Disease: 2001 Update - A Statement for Healthcare Professionals From the American Heart Association and the American College of Cardiology

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AHA/ACC Scientific Statement

AHA/ACC Guidelines for Preventing Heart Attack and Death in Patients With Atherosclerotic Cardiovascular Disease: 2001 Update

A Statement for Healthcare Professionals From the American Heart Association and the American College of Cardiology

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Since the original publication (in 1995) of the American Heart Association (AHA) consensus statement on secondary prevention, which was endorsed by the American College of Cardiology (ACC), important evidence from clinical trials has emerged that further supports the merits of aggressive risk reduction therapies for patients with atherosclerotic cardiovascular disease. As noted in that statement, aggressive risk factor management clearly improves patient survival, reduces recurrent events and the need for interventional procedures, and improves the quality of life for these patients.

The compelling evidence from recent clinical trials was the impetus to revise the 1995 guidelines (Table). As examples, the many lipid reduction trials have generated significant changes in the National Heart, Lung, and Blood Institute's Adult Treatment Panel III report. This report further defined target cholesterol levels, expanded indications for drug treatment, and initiated therapy earlier. Accumulating β-blocker data have resulted in broader indications for a larger patient group. The Heart Outcomes Prevention Evaluation (HOPE) trial has demonstrated the benefit of ACE inhibitor therapy in high-risk patients with cardiovascular disease without a history of an acute event. Further data from ongoing trials should provide insight into the potential benefits of treating lower risk patients with combined therapies. The Clopidogrel versus Aspirin in Patients at Risk of Ischemic Events (CAPRIE) trial has provided evidence for clopidogrel benefit in certain patients. Diabetes management recommendations have been updated to include recent guidelines from the American Diabetes Association for risk factor management of diabetics and the growing body of evidence showing diabetics at high risk for cardiovascular events. The Heart and Estrogen/progestin Replacement Study (HERS) documented that hormone replacement therapy is ineffective for secondary prevention. The writing group revising this document also considered other important trials and reports, and they are included in the selected reading list.

In the 6 years since the guidelines were first published, 2 other developments have made them even more important in clinical care: the aging of the population continues to expand the number of patients living with a diagnosis of cardiovascular disease (now estimated at 12.4 million), and the multiple studies of the actual use of these recommended therapies in appropriate patients, while showing slow improvement, have continued to support the discouraging conclusion that a large proportion of patients in whom therapies are indicated are not receiving those therapies in actual clinical practice. The AHA and ACC continue to urge that all medical care settings in which these patients are managed organize a specific plan to identify appropriate patients, provide practitioners with useful reminder clues based on the guidelines, and continuously assess the success achieved in providing all appropriate therapies to all of the patients who can benefit from them.

Selected Reading

1. Adult Treatment Panel III. Executive summary of the third report of the National Cholesterol Education Program (NCEP) Expert Panel on

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This statement was approved by the American Heart Association Science Advisory and Coordinating Committee in June 2001 and by the American College of Cardiology Board of Trustees in July 2001. A single reprint is available by calling 800-242-8721 (US only) or writing the American Heart Association, Public Information, 7272 Greenville Ave, Dallas, TX 75231-4596. Ask for reprint No. 71-0214. To purchase additional reprints: up to 999 copies, call 800-611-6083 (US only) or fax 413-665-2671; 1000 or more copies, call 214-706-1466, fax 214-691-6342, or e-mail pubauth@heart.org. To make photocopies for personal or educational use, call the Copyright Clearance Center, 978-750-8400.

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AHA/ACC Secondary Prevention for Patients With Coronary and Other Vascular Disease: 2001 Update

Goals	Intervention Recommendations		
Smoking: Goal complete cessation	Assess tobacco use. Strongly encourage patient and family to stop smoking and to avoid secondhand smoke. Provide counseling, pharmacological therapy, including nicotine replacement and buproprion, and formal smoking cessation programs as appropriate.		
BP control: Goal <140/90 mm Hg or <130/85 mm Hg if heart failure or renal insufficiency <130/80 mm Hg if diabetes	Initiate lifestyle modification (weight control, physical activity, alcohol moderation, moderate sodium restriction, and emphasis on fruits, vegetables, and low-fat dairy products) in all patients with blood pressure ≥130 mm Hg systolic or 80 mm Hg diastolic. Add blood pressure medication, individualized to other patient requirements and characteristics (ie, age, race, need for drugs with specific benefits) **if** blood pressure is not <140 mm Hg systolic or 90 mm Hg diastolic **or** if blood pressure is not <130 mm Hg systolic or 85 mm Hg diastolic for individuals with heart failure or renal insufficiency (<80 mm Hg diastolic for individuals with diabetes).		
Lipid management: Primary goal LDL <100 mg/dL	Start dietary therapy in all patients (<7% saturated fat and <200 mg/d cholesterol) and promote physical activity and weight management. Encourage increased consumption of omega-3 fatty acids. Assess fasting lipid profile in all patients, and within 24 hr of hospitalization for those with an acute event. If patients are hospitalized, consider adding drug therapy on discharge. Add drug therapy according to the following guide:		
	LDL <100 mg/dL (baseline or on-treatment) Further LDL-lowering therapy not required Consider fibrate or niacin (if low HDL or high TG)	LDL 100–129 mg/dL (baseline or on-treatment) Therapeutic options: Intensify LDL-lowering therapy (statin or resin*) Fibrate or niacin (if low HDL or high TG) Consider combined drug therapy (statin+fibrate or niacin) (if low HDL or high TG)	LDL ≥130 mg/dL (baseline or on-treatment) Intensify LDL-lowering therapy (statin or resin*) Add or increase drug therapy with lifestyle therapies
Lipid management: Secondary goal If TG ≥200 mg/dL, then non-HDL† should be <130 mg/dL	If TG ≥150 mg/dL or HDL <40 mg/dL: Emphasize weight management and physical activity. Advise smoking cessation. If TG 200–499 mg/dL: Consider fibrate or niacin *after* LDL-lowering therapy* If TG ≥500 mg/dL: Consider fibrate or niacin *before* LDL-lowering therapy* Consider omega-3 fatty acids as adjunct for high TG		
Physical activity: Minimum goal 30 minutes 3 to 4 days per week Optimal daily	Assess risk, preferably with exercise test, to guide prescription. Encourage minimum of 30 to 60 minutes of activity, preferably daily, or at least 3 or 4 times weekly (walking, jogging, cycling, or other aerobic activity) supplemented by an increase in daily lifestyle activities (eg, walking breaks at work, gardening, household work). Advise medically supervised programs for moderate- to high-risk patients.		
Weight management: Goal BMI 18.5–24.9 kg/m^2	Calculate BMI and measure waist circumference as part of evaluation. Monitor response of BMI and waist circumference to therapy. Start weight management and physical activity as appropriate. Desirable BMI range is 18.5–24.9 kg/m^2. When BMI ≥25 kg/m^2, goal for waist circumference is ≤40 inches in men and ≤35 inches in women.		
Diabetes management: Goal HbA1$_c$ <7%	Appropriate hypoglycemic therapy to achieve near-normal fasting plasma glucose, as indicated by HbA1$_c$. Treatment of other risks (eg, physical activity, weight management, blood pressure, and cholesterol management).		
Antiplatelet agents/ anticoagulants:	Start and continue indefinitely aspirin 75 to 325 mg/d if not contraindicated. Consider clopidogrel 75 mg/d or warfarin if aspirin contraindicated. Manage warfarin to international normalized ratio=2.0 to 3.0 in post-MI patients when clinically indicated or for those not able to take aspirin or clopidogrel.		
ACE inhibitors:	Treat all patients indefinitely post MI; start early in stable high-risk patients (anterior MI, previous MI, Killip class II [S_3 gallop, rales, radiographic CHF]). Consider chronic therapy for all other patients with coronary or other vascular disease unless contraindicated.		
β-Blockers:	Start in all post-MI and acute ischemic syndrome patients. Continue indefinitely. Observe usual contraindications. Use as needed to manage angina, rhythm, or blood pressure in all other patients.		

BP indicates blood pressure; TG, triglycerides; BMI, body mass index; HbA1$_c$, major fraction of adult hemoglobin; MI, myocardial infarction; and CHF, congestive heart failure.

*The use of resin is relatively contraindicated when TG >200 mg/dL.

†Non-HDL cholesterol=total cholesterol minus HDL cholesterol.

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