

**Table 11. Guide to Primary Prevention of Cardiovascular Disease in Patients With Diabetes**

Risk Intervention Goal(s)	Recommendations				
Smoking: Complete cessation	Ask about smoking status as part of routine evaluation. Strongly encourage patient and family to stop smoking. Provide counseling, nicotine replacement, and formal cessation programs as appropriate. Reinforce nonsmoking status.				
Blood pressure control: <130/80 mm Hg	Measure BP at each visit. Consider home BP monitoring. Promote healthy lifestyle modification: weight control, physical activity, moderation of alcohol intake, moderation of sodium intake. Consider BP medication if BP ≥130/80 mm Hg after 3 months of lifestyle modification or if initial BP >140/90 mm Hg. Individualize therapy to take into account other patient requirements and characteristics. Initial drug therapy should include a drug class demonstrated to reduce CVD events (ACE inhibitors, ARBs, β-blockers, CCB, and diuretics). All patients with CVD and diabetes should take an ACE or ARB, with their regimen.				
Lipid management: <i>Primary goal</i> LDL-C <100 mg/dL (optional goal: <70 mg/dL)  <i>Secondary goal</i> HDL-C >40 mg/dL in men >50 mg/dL in women TG <150 mg/dL Non-HDL-C ≤130 mg/dL	If LDL-C elevated, rule out secondary causes via liver function tests, thyroid function tests, urinalysis. If TG ≥200 mg/dL, non-HDL-C should be used.  Ask about dietary habits as part of routine evaluation. Measure TC, HDL-C, and TG; estimate LDL-C. Start AHA Step II diet (≤30% fat, <7% saturated fat, <200 mg/day cholesterol) and weight control.  Consider adding drug therapy to dietary therapy and weight control for LDL-C levels >130 mg/dL.	Risk factors to consider for more aggressive lipid-lowering therapy (ie to lower LDL-C to ≤100 mg/dL): age (men ≥45 years, women ≥55 years or postmenopausal), hypertension, diabetes, smoking, HDL-C <40 mg/dL, family history of CHD in first-degree relatives (in male relatives <55 years, in female relatives <65 years).  If HDL-C <40 mg/dL (men), <50 mg/dL (women), emphasize weight management, physical activity, and smoking cessation.			
	Suggested drug therapy for high LDL-C levels (drug selection modified according to TG level).  <table border="0" data-bbox="548 841 1619 927"> <tr> <td>TG &lt;200 mg/dL Statin or resin</td> <td>TG 200–400 mg/dL Statin ± fibrate</td> <td>TG &gt;400 mg/dL Consider combined drug therapy (statin + fibrate)</td> </tr> </table> If LDL-C goal not achieved, consider combination drug therapy.	TG <200 mg/dL Statin or resin	TG 200–400 mg/dL Statin ± fibrate	TG >400 mg/dL Consider combined drug therapy (statin + fibrate)	
TG <200 mg/dL Statin or resin	TG 200–400 mg/dL Statin ± fibrate	TG >400 mg/dL Consider combined drug therapy (statin + fibrate)			
Glucose control: Near-normal fasting glucose (<110 mg/dL); HbA <sub>1C</sub> <7%	First-step therapy: weight reduction and exercise. Second-step therapy: oral hypoglycemic agents (sulfonylureas and/or metformin; ancillary: acarbose, glitazone). Third-step therapy: insulin.				
Antiplatelet agents	Use aspirin therapy (75–162 mg/d) if not contraindicated. Not recommended in patients under 21 years old due to increased risk of Reye's Syndrome.				
Physical activity	Increase amount of exercise to 3–4 times per week for 30 minutes. Ask about physical activity status and exercise habits as part of routine evaluation. Encourage 30–45 minutes of moderate-intensity dynamic exercise 3–5 times per week as well as increased physical activity in daily life for persons who are inactive to improve conditioning and optimize fitness level. Advise medically supervised programs for those with low functional capacity and/or comorbidities. Promote environmental factors conducive to health (eg golf courses that permit walking). Greater activity levels of at least 1 hr/d of moderate (walking) or 30 min/d of vigorous (jogging) activity may be needed to achieve weight loss.				
Weight management: Achieve and maintain desirable weight (BMI 21–25 kg/m <sup>2</sup> , waist circumference <102 cm for men, <88 cm for women)	Measure patient's height and weight, BMI, and waist circumference at each visit as part of routine evaluation. Start weight management and physical activity as appropriate to achieve desirable BMI and waist circumference. Primary approach should include a reduction in energy intake and an increase in physical activity. Begin with a decrease in daily caloric balance (500–1000 cal/d). Total daily caloric requirements: 1000–1200 kcal/d for women; 1200–1600 kcal/d for men.				
Estrogens	Efficacy for CVD risk reduction in women with diabetes not proven. Individualize recommendation consistent with other health risks.				

Grundy SM, Benjamin IJ, Burke GL, et al. Diabetes and Cardiovascular Disease: A Statement for Healthcare Professionals from the American Heart Association. *Circulation*. 1999;100:1134-1146.  
Updated with: Pearson TA, Blair SN, Daniels SR, et al. AHA Guidelines for Primary Prevention of Cardiovascular Disease and Stroke: 2002 Update. *Circulation*. 2002;106:388-391.  
Updated with: Grundy SM, Cleeman JI, Merz CNB, et al. Implications of Recent Clinical Trials for the National Cholesterol Education Program Adult Treatment Panel II Guidelines. *Circulation*. 2004;110:227-239.  
Updated with: American Diabetes Association. Standards of Medical Care in Diabetes. *Diabetes Care*. 2005;28(suppl 1):S4-S86.