

Management of Diabetes Mellitus

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The following guideline applies to patients with type 1 and type 2 diabetes mellitus and recommends specific interventions for periodic assessment, laboratory tests, and education to guide effective patient self-management.

Eligible Population	Key Components	Recommendation and Level of Evidence	Frequency
Patients with type 1 or type 2 diabetes mellitus	Periodic assessment	Assessment should include: <ul style="list-style-type: none"> • blood pressure [D] (adult target of < 130/80) [A] • weight • diabetic foot exam [B] • cardiovascular risk assessment update 	At least twice annually
	Laboratory tests and other studies	Tests should include: <ul style="list-style-type: none"> • hemoglobin A1C [D]: * Optimal goal: < 7.0% • if UA< 1+ protein, urine microalbumin measurement should be performed [D] • *Lipid management: Updated recommendations based on recent studies (including the CARDS study) to include the following. <ul style="list-style-type: none"> • In individuals with diabetes aged >40 years with a total cholesterol \geq135 mg/dl, without overt cardiovascular disease, statin therapy to achieve an LDL reduction of 30–40% regardless of baseline LDL levels is recommended. The primary goal is an LDL <100 mg/dl (2.6 mmol/l). • For persons with diabetes aged <40 years without overt cardiovascular disease, but at increased risk (due to other cardiovascular risk factors or long duration of diabetes), who do not achieve lipid goals with lifestyle modifications alone, the addition of pharmacological therapy is appropriate and the primary goal is an LDL cholesterol <100 mg/dl (2.6 mmol/l). • People with diabetes and overt cardiovascular disease are at very high risk for further events and should be treated with a statin. A lower LDL cholesterol goal of <70 mg/dl (1.8 mmol/l), using a high dose of a statin, is an option in these high-risk patients with diabetes and overt cardiovascular disease. • dilated eye exam by ophthalmologist or optometrist [B], or digiscope 	Hemoglobin A1C at least twice annually; 2-4 times annually for tight glycemic control Other studies at least annually
	Education, counseling and risk factor modification	Guided self-management/education for: <ul style="list-style-type: none"> • nutrition and exercise • foot care • cardiovascular risk reduction¹ • glycemic control • smoking cessation intervention [B] /secondhand smoke avoidance [C] • pre-conception counseling 	At least annually
	Medical recommendations	Care should include: <ul style="list-style-type: none"> • treatment of hypertension [A] (adult target of < 130/80) [D] • prescription of ACE inhibitor in patients with hypertension [A] or albuminuria >30mg/24hr (or albumin:creatinine ratio>30mg/g) [A] 2, 3 • management of cardiovascular risk factors • assurance of appropriate immunization status (Td, influenza, pneumococcal vaccine) [C] 	At each visit until therapeutic goals are achieved

1 Major risks in addition to the patient's diabetes include: Modifiable risks -- smoking, hypertension, hyperlipidemia, sedentary lifestyle, obesity, stress;

Fixed risks -- family history, age, gender

2 For patients with albuminuria, adjustment of ACE inhibitor treatment as tolerated (if ACE not tolerated use ARB's) (target: eliminate or stabilize albumin excretion rates) [D]

3 Consider referral of patients with serum creatinine value >2.0 mg/dl (adult value) or persistent albuminuria to nephrologist for evaluation

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on the 2002 American Diabetes Association Clinical Practice Recommendations (www.diabetes.org). Individual patient considerations and advances in medical science may supercede or modify these recommendations.