



CLINICAL GUIDELINES FOR DIABETES CARE

Criteria for the Diagnosis of Diabetes Mellitus*

1. Symptoms of diabetes plus casual plasma glucose concentration > 200 mg/dl (11.1 mmol/l). Casual is defined as any time of day without regard to time since last meal. The classic symptoms of diabetes include polyuria, polydipsia, and unexplained weight loss.
OR
2. Fasting Plasma Glucose (FPG) ≥ 126 mg/dl (7.0mmol/l). Fasting is defined as no caloric intake for at least (8) hours.
OR
3. 2-h PG ≥ 200 mg/dl during OGTT. The test should be performed using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.

**In the absence of unequivocal hyperglycemia with acute metabolic decompensation, these criteria should be confirmed by repeat testing on a different day. The third measure (OGTT) is not recommended for routine clinical use, but may be required in the evaluation of patients with IFG or when diabetes is still suspected despite a normal FPG.*

**American Diabetes Association. Diabetes Care.2003; 26(supp 1): S5-S20*

Recommendations for Adults with Diabetes Mellitus

Glycemic Control		Key Concepts in setting glycemic goals
A1C	$<7.0\%*$	<ul style="list-style-type: none"> • Goals should be individualized • Certain populations (children, pregnant women, and elderly) require special considerations • Less intensive glycemic goals may be indicated in patients with severe or frequent hypoglycemia • Postprandial glucose goals may further reduce microvascular complications at the cost of increasing hypoglycemia • Postprandial glucose may be targeted if A1C goals are not met despite reaching preprandial glucose goals
Preprandial plasma glucose	90-130 mg/dl (5.0-7.2 mmol/l)	
Peak Postprandial glucose	<180 mg/dl (<10.0 mmol/l)	
Blood Pressure	$<130/80$ mmHg	
Lipids		
LDL	<100 mg/dl (<2.6 mmol/l)	
Triglycerides [†]	<150 mg/dl (<1.7 mmol/l)	
HDL	>40 mg/dl (>1.1 mmol/l) (men) >50 mg/dl (>1.1 mmol/l) (women)	

Referenced to a nondiabetic range of 4.0-6.0% using a DCCT-based assay. [†] Current NCEP/ATP III guidelines suggest that in patients with triglycerides ≥ 200 mg/dl, the “non-HDL cholesterol” (total cholesterol minus HDL) be utilized. **Target A1C goal for the individual patient is an A1C as close to normal as possible without significant hypoglycemia.*

**American Diabetes Association. Diabetes Care.2003; 26(supp 1): S33-S50*

Patient Physical and Emotional Assessment

- **Comprehensive Medical History** Initial Visit
- **Comprehensive Medical Exam** One time and PRN

Annually: Patients with diabetes should have the following at least one time per year:

- **Neurological examination**
- **Hand/finger examination**
- **Cardiac examination**
- **Abdominal examination** (e.g. for hepatomegaly)
- **Complete Foot Exam** (for Adults) including assessment of protective sensation, foot structure, vascular status and skin integrity
- **Dilated Eye exams** Type 1 (5 years post diagnosis, then every year by a trained expert) and Type 2 (Shortly after diagnosis, then every year by a trained expert)
- **Evaluation of Pulses** (by palpation and auscultation)
- **Sexual Maturation Staging** (During pubertal period)
- **Nutritional Assessment**
- **Oral Examination: Dental/Gum Exam** (Can be done by Primary Care Physician)

Every Diabetic Visit: Patients with diabetes should have the following each diabetic visit:

- **Interim Medical History**
- **Blood Pressure** **Target goal: Adults: $<130/80$ mmHg Children: <90 th percentile value, age standard.** Patients should have blood pressure confirmed on a separate day
- **Weight /Height Measurements** (and comparison to norms in children and adolescents)
- **Visual Foot Inspection** by a health care professional for Patients at Risk (Patients with Neuropathy or other high risk foot conditions)
- **Skin Examination** of all insulin-injection sites
- **Psychosocial Assessment:**
 - **Social Factors:** Screen for problems with self-care: Assist patient to identify achievable self-care goals
 - **Psychological Factors:** Investigate emotional/physical factors linked to depression and treat aggressively with counseling, medication and/or referral

This Outpatient Practice Guideline for Diabetes was developed by the Medical Society of Delaware's Uniform Guideline Physician Committee for Diabetes. Based on the American Diabetes Association (ADA) "Standards of medical care for patients with diabetes mellitus", the guideline is designed to provide a plan for the evaluation and treatment of patients with diabetes and should be used in conjunction with the Diabetes Flow Chart. It is Not intended to replace Clinical Judgment, Not intended to establish a protocol for all patients with Diabetes but should be utilized for the management of routine patients and modified for patient-specific clinical indications.

Additional, comprehensive information can be found on the ADA website at www.diabetes.org and by reading the Position Statement for the Standards of Medical Care for Patients with Diabetes Mellitus or the ADA Report of the Expert Committee on the Diagnosis and Classification of Diabetes Mellitus.

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Laboratory Evaluation

Initial Visit and PRN

FBS, A1C, Lipid Profile, Serum Creatinine in adults (*Children if proteinuria is present*) Measure of Urinary Albumin excretion, Urinalysis, Urine Culture (if sediment is abnormal or symptoms are present), TSH, Electrocardiogram (Adults)

Annually or as indicated

- **A1C** Every 3 months for patients not meeting glycemic controls or if patient therapy changes; every 6 months for stable glycemic control **Target A1C goal for the individual patient is an A1C as close to normal as possible without significant hypoglycemia.**
- **Measure of Urinary Microalbumin;** *Begin with an analysis of a random spot urine sample for albumin-to-creatinine ratio*
Type 1 (5 years post diagnosis, then every year) Type 2 (Begin at time of diagnosis, then every year)
- **Lipid Evaluation/ Profile** Annually for Adults; *Re-evaluate following Macrovascular event.* If values fall in lower-risk levels, assessment may be repeated every 2 years
Target goal: Total Cholesterol, Triglycerides <150 mg/dl; LDL Cholesterol <100 mg/dl; HDL Cholesterol >40 mg/dl for male; >50 mg/dl for female
Children: Lipid profile after age 2 and when blood glucose control has been established. If values are considered low risk and there is no family history, assessment should be repeated every 5 years
Target goal: LDL Cholesterol ≤110 mg/dl in children with cardiovascular risk factors in addition to diabetes

Management Plan and Education

Short and long-term patient goals

Initially then annually: Assess knowledge of diabetes, medications, self-monitoring, acute/chronic complications, and problem-solving skills. **Children:** appropriate for developmental stage evaluating behavioral, emotional and psychosocial factors

Medication Plan Individualized to meet treatment goals

- **Aspirin Therapy** – Enteric coated aspirin for adults as primary and secondary prevention of CVD, unless contraindicated

Blood Pressure Control Patients should be treated with lifestyle, behavioral and drug therapy to achieve target blood pressure

Lifestyle Modifications/Changes

- **Physical Activity** –Assess, prescribe physical activity based on needs/condition (*30 minutes/5 days a week*)
- **Smoking Cessation** – Screen, advise, and assist; Initially, then annually PRN
- **Alcohol Usage** –Counsel patients regarding risks of alcohol consumption and hypoglycemia

Specialty Referrals

Diabetes Educator- If not provided by physician or practice staff

Diabetes Classes – Encourage attendance one time and PRN

Nutritional Counseling- Annually and PRN

Podiatrist/Foot Care Specialist – As indicated for foot disease or neuropathy

Endocrinologist – As indicated for patients with advanced needs or complications

Behavioral specialist– As indicated

Self Glucose Monitoring Type 1: typically test 3 or more times daily and Type 2: Testing sufficient to reach glucose goals

Medical Nutrition Therapy

Initial Visit: Assess patient needs/condition and assist in setting nutrition goals. **Follow-up:** Assess progress toward goals; identify problem areas by a trained expert

- **Nutrition/Weight Loss** – Weight Management must be individualized for patient; initially and in follow-up visits.
- **Reduce Salt Intake**

Immunizations

- **Influenza (Flu)** Annually provide vaccine for patients 6 months of age and older
- **Pneumococcal vaccine** Initially and repeat as per CDC recommendations

Gender Specific Health Assessment

- **Pre-Pregnancy Counseling-** Documentation of counseling for all potentially fertile women
- **Contraceptive Care/Family Planning**
- **Sexual Dysfunction** in Male and Female

Nephrologist – As indicated for renal disease

Ophthalmologist or Optometrist- Annual comprehensive dilated eye and visual exam for:

- Patients with type 1 within 3-5 years after onset of diabetes
- Patients with type 2 shortly after the diagnosis
- Pregnant women in 1st trimester with close f/u for 1 year postpartum
- Required more frequently if retinopathy is progressing

This guideline was developed by the Medical Society of Delaware's Physician Committee:

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