South Carolina Guidelines for Diabetes Care – 2012

Key concepts: 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; more intensive glycemic 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.

Screening for Diagnosis of Diabetes

To test for diabetes or to assess risk of future diabetes, either A1C, Fasting Plasma Glucose (FPG), or 2-h 75-g Oral Glucose ToleranceTest (OGTT) are appropriate. An A1C level of 5.7% to 6.4% indicates increased risk for diabetes. The presence of diabetes is indicated by:
A1C level of 6.5 % or higher;
FPG level of ≥ 126 mg/dl;
OGTT level ≥ 200 mg/dl.

Reference: American Diabetes Association. Standards of Medical Care in Diabetes-2012. Diabetes Care. Volume 35, Supplement 1. January 2012 http://care.diabetesjournals.org/content/35/Supplement_1

Exam/Test	Care of the Person with Type 1 Diabetes	Care of the Person with Type 2 Diabetes
Complete exam	To classify the patient, detect complications, develop a management plan, and provide a basis for continuing care.	
Office visits	Quarterly, but dictated by severity of condition and response to treatment; if uncontrolled, visits may be more often.	
Body Mass Index (Weight each visit; Height 1X/year) and/or Waist Circumference	Each visit with goal of reducing BMI to reasonable weight (Overweight 25-29.9; Obese ≥ 30) If you are a woman with a waist circumference of at least 35 inches (88 cm) or a man with a waist circumference of at least 40 inches (102 cm), you are at greater risk, regardless of your BMI. It is not necessary to take this measurement if your BMI is 35 or above. In Asian population, central (abdominal) obesity is defined as waist circumference ≥ 31 inches (80 cm) for a woman and ≥ 35 inches (90 cm) for a man. Reference: International Diabetes Federation (IDF) Consensus Worldwide Definition of the Metabolic Syndrome	
A1C Goal: A1C <7.0%	Quarterly (E), then 2x/year if meeting goal (E); more stringent goals (<6.0%) may further reduce complications at the cost of increased risk of hypoglycemia and may be considered in individual patients (B). If older adult with hypoglycemia, goal may be 7.5% and avoidance of hyper/hypoglycemia episodes leading to acute/chronic complications.	
Blood pressure Systolic <130mm Hg Diastolic <80 mm Hg	Each visit. ACE-I or ARB recommended for treatment of hypertension (A). If more than 3-4 anti-hypertensive meds to achieve target, then examine risks vs. benefits of goal of <140/85 (E).	
Lipid profile Goals: < 100 mg/dl LDL if high risk < 70 mg/dl LDL if very high risk (or overt CVD) > 40 mg/dl HDL in men > 50 mg/dl HDL in women may be appropriate < 150 mg/dl Triglycerides	Annual test and more often if needed to achieve goals; Every 2 years if low risk (LDL <100, HDL >50, triglycerides <150) (E). Statin therapy should be added to lifestyle therapy, regardless of baseline lipid levels, for diabetic patients (A). • With overt CVD (A). • Without CVD who are > 40 years and have one or more other CVD risk factors (A).	
Urine microalbumin/creatinine (RANDOM testing is preferred method) 24-h collection: <30 mg/24h Timed collection: <20 mcg/min Spot collection: <30 mg/g Cr	Should begin after five years duration (E), then annually; ACE-I or ARB recommended for treatment of microalbuminuria (A) when 2 of 3 tests are elevated within a 6-month period.	At diagnosis and annually; ACE-I or ARB recommended for treatment of microalbuminuria (A) when 2 of 3 tests are elevated within a 6-month period.
Serum creatinine (regardless of albumin) and calculated GFR	Measure annually in all adults with diabetes and stage level of CKD if present (E).	
Aspirin therapy 75-162 mg/day	For all with type 1 or type 2 (unless contraindicated) with increased cardiovascular risk for primary prevention, including most men > age 50 and women > age 60; as secondary prevention for all with history of CVD (A).	
Dilated eye exam by an ophthalmologist or optometrist knowledgeable and experienced in diagnosing and managing diabetic retinopathy	Within 3-5 years after onset of diabetes once patient is age 10 years or older, then annually; less frequent exams (q 2-3 years) may be considered when eye exam normal (B).	Shortly after diagnosis of diabetes; less frequent exams (q 2 – 3) years may be considered when eye exam normal.
Foot examination	Visual inspection at each visit. Comprehensive exam annually to include vascular (pulses, temperature, color, digital capillary refill, ABI if abnormal exam claudication or high risk), neurologic (at least 2 of following: monofilament, vibratory perception, tactile sensation, reflexes), dermatologic (general skin turgor/texture) focal lesions, interdigital calluses, maceration, nails) musculoskeletal (ROM, foot type, digits, bony prominences), & footwear (E).	
Self-monitored blood glucose Goals for plasma values Preprandial glucose 70-130 mg/dl Peak post-prandial glucose <180 mg/dl	Three or more times daily for patients using multiple insulin injections or insulin pump therapy (A).	As needed to maintain/achieve glycemic control; may need to check postprandial glucose (E).
Review self-management goals	Each visit emphasize glycemic and hypertensive control; weight loss is recommended for all overweight or obese individuals at risk for or with diabetes (A) using Mediterranean, low fat/calorie restricted or low-carbohydrate diet. At least 150 minutes per week of moderate-intensity aerobic physical activity (A)*; if there are no contraindications, people with Type 2 diabetes should be encouraged to perform resistance training 3 times/week (A); review eating patterns with emphasis on carbohydrate, sodium (if hypertensive), and saturated fats; monitoring carbohydrate is a key strategy in glycemic control (A); Saturated fat should be < 7% of total calories (A); minimize intake of *trans* fat (E); substitute monounsaturated fat for saturated and *trans* fat (AACE). Encourage dietary fiber of 14 gm of fiber/1,000 kcal and whole grain foods (at least one-half of grain intake) (B). Limit daily alcohol to 1 drink or less for women and 2 drinks or less for men (E). For lipid management, increase omega 3 fats, viscous fiber, and plant stanols/sterols; reduce saturated fat, *trans* fat and dietary cholesterol (A). In patients with hypertension, encourage DASH** style dietary pattern including reducing sodium and increasing potassium intake (B). *Physical activity recommendations http://journals.lww.com/acsm-msse/Fulltext/2010/12000/Exercise_and_Type_2_Diabetes__American_College_of.18.aspx **Dietary approaches to Stop Hypertension Eating Plan (DASH) http://www.nhlbi.nih.gov/health/public/heart/hbp/dash/introduction.html	

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Exam/Test	Type 1	Type 2
Self-care education Diabetes self-management education and training (DSME/T) is a collaborative process through which people with or at risk for diabetes gain the knowledge and skills needed to modify their behavior and successfully self-manage the disease and its related chronic conditions. (American Association of Diabetes Educators (AADE). AADE Position Statement: AADE7TM Self-Care Behaviors. *Diabetes Educ*. 2008; 34: 445-449.)	**At least once, update as needed to reach/maintain goals. (Subcommittee recommends to: use AADE 7 Guidelines)** **Education should be individualized, based on the National Standards for DSME[i] [B] and include:** o **Being Active - Importance of regular physical activity and a healthy diet [A], and working towards an appropriate BMI.** o **Problem Solving - Assessment of patient knowledge, attitudes, self-management skills and health status; strategies for making health behavior changes and addressing psychosocial concerns [C].** o **Taking Medication - Description of diabetes disease process and treatment; safe and effective use of medications; prevention, detection and treatment of acute and chronic complications, including recognition of hypoglycemia (A).** o **Healthy Eating - Importance of nutrition management and regular physical activity [A].** o **Monitoring - Role of self-monitoring of blood glucose in glycemic control [A].** o **Reducing Risks - Cardiovascular risk reduction, smoking cessation intervention (B) and secondhand smoke avoidance (C), sexual dysfunction, self-care of feet (B), preconception counseling (D), encourage patients to receive dental care (D).** o **Healthy Coping – Set achievable behavioral goals and provide encouragement and coping strategies (E).** **Individuals with pre-diabetes or diabetes should receive individualized Medical Nutrition Therapy (MNT) by registered dietitian (RD) (A).**	
Depression screen	**All adult members with a diagnosis of Diabetes will be screened for depression (E) using any screening method that the provider prefers *** or asking the following two questions:** **1. "Over the past 2 weeks have you felt down, depressed, or hopeless?"** **2. "Over the past 2 weeks have you felt little interest or pleasure in doing things?"** *(If positive for the 2 questions, screen further for depression.)* ***Zung, Beck, PHQ-9, CES-D**	
Influenza immunization	**Annually after 6 months of age (C)**	
Pneumonia immunization	**Once unless given more than 5 years before age 65 or immunocompromised (C).**	
Hepatitis B immunization	**Hepatitis B vaccination should be administered to unvaccinated adults with diabetes mellitus who are aged 19 through 59 years (A).** **Hepatitis B vaccination may be administered at the discretion of treating clinician to unvaccinated adults with diabetes mellitus who are aged ≥60 years (B).** http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6104a9.htm	
Smoking cessation	**Advise smoking cessation counseling and other forms of treatment (B). Advise all patients not to smoke (A) Refer to SC Quit Line available at 1-800-QuitNow**	
Oral Health	**Oral exam every 6 months (E).**	
Preconception and family planning counseling	**Preconception counseling for all women of childbearing age. Women with gestational diabetes should be screened for diabetes 6 to 12 weeks postpartum and should have subsequent screening for the development of diabetes or prediabetes at least every 3 years (E).**	
Hypothyroidism screening	**Screen for TSH in persons with type 1, dyslipidemia, or woman > 50 years old. TSH should be rechecked every 1-2 years or with symptoms of thyroid dysfunction (E). Free T4 should be measured if TSH abnormal.**	
Liver function tests	**Liver Function Tests annually.**	
Celiac disease	**Children with type 1 should be screened for celiac disease soon after diagnosis of diabetes by measuring tissue transglutaminase or antiendomysial antibodies with documentation of normal serum IgA levels (E).**	

Level of evidence for most significant recommendations: A = Randomized Clinical Trial; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel; E = Expert or clinical opinion

Diabetes Initiative of South Carolina | **DHEC Diabetes Prevention & Control** | **Diabetes Advisory Council of South Carolina**

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