

2017 Clinical Practice Guide for Non-Pregnant Adults with Diabetes Mellitus

Measure	Monitoring Frequency	Recommendations
<b>Weight and BMI</b>	At routine visits	Review healthy weight maintenance and goals, and for those who require weight loss consider behavioral, medical, or surgical treatment options.
<b>Exercise</b>	At routine visits	Encourage regular physical activity. Most patients with type 2 diabetes should strive for: <ul style="list-style-type: none"> <li>• 150 minutes of moderate to vigorous aerobic activity spread out over 3-5 days per week.</li> <li>• 2-3 additional days per week of moderate to vigorous resistance training.</li> </ul> For sedentary persons, those with advanced age or cardiovascular disease, a formal medical or cardiac evaluation may be needed to individualize recommendations, but some degree of physical activity should be encouraged for all. For Type 1 diabetes, care must be given to adjust insulin around any exercise routine.
<b>Hemoglobin A1C</b>	Every 3 months if not meeting goals or making treatment changes  Every 6 months if meeting goals	Hemoglobin A1c targets should be individualized according to the anticipated risks and benefits of diabetes treatment, and patient preferences. <ul style="list-style-type: none"> <li>• &lt;7% is a reasonable target for most healthy adults with long life expectancy.</li> <li>• &lt; 6.5% may be appropriate for individuals who are younger, newly diagnosed, have minimal comorbidities, and are at low risk for hypoglycemia.</li> <li>• &lt; 8% or &lt; 9% may be appropriate for individuals who have limited life expectancy, advanced complications, multiple comorbidities, or are at high risk for hypoglycemia.</li> <li>• Treatment adherence, access to resources and support systems will impact a patient's ability to achieve any target.</li> </ul> Referral to a diabetes specialist may be helpful in addressing some of these needs.
<b>Blood Pressure</b>	At least annually and at routine visits	< 140/90 for all patients and < 130/80 may be appropriate for those who are younger, on fewer agents, or at low risk for hypotension and side effects of therapy. <ul style="list-style-type: none"> <li>• For BP control in patients without albuminuria, ACE, ARB, non-dihydropyridine CCB or a thiazide-type diuretic can be used.</li> <li>• For BP control in patients with albuminuria (<math>\geq 30</math> mg/g-Creatinine), ACE/ARB should be initial drug class choice. In patients with DM and albuminuria and normal blood pressure, ACE/ARB can be considered but evidence is lacking.</li> <li>• For DM without HTN or albuminuria: combined ACE I/ARB are <u>not recommended</u>.</li> </ul>
<b>Smoking</b>	Initially and then periodically	Assess smoking status and provide smoking cessation counseling and interventions if the patient is receptive.

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<p><b>Lipids</b></p>	<p>At time of diagnosis or upon initiation of lipid lowering therapy and then periodically based on monitoring needs.</p> <p>Annual monitoring is reasonable but at very least every 5 years for all patients (on or off lipid therapy).</p>	<p>LDL cholesterol &lt;100 mg/dl, Triglyceride (TG) levels &lt;150 mg/dl, and HDL cholesterol levels &gt;40 mg/dl in men and &gt;50 mg/dl in women are desirable, but pharmacologic treatment is based on risk category:</p> <ul style="list-style-type: none"> <li>• Individuals 40 to 75 years old without clinical cardiovascular disease (CVD): LDL goal &lt; 100 mg/dl OR Moderate intensity<sup>†</sup> statin therapy expecting a 30 to 50% reduction in LDL from baseline.</li> <li>• Individuals with clinical CVD: LDL goal &lt; 70 mg/dl OR high intensity<sup>†</sup> statin therapy expecting a 30 to &gt; 50% reduction in LDL from baseline. <i>Ezetimibe ± moderate statin if statin intolerance.</i></li> <li>• Consider moderate to high intensity statin therapy for those aged &lt; 40 or &gt; 75 with risk factors for CVD* but no clinical CVD, based on individual circumstances.</li> <li>• Consider moderate statin therapy for those aged &gt; 75 with no risk factors, but for those aged &lt; 40 with no risk factors, statin therapy is currently not recommended beyond lifestyle measures.</li> <li>• TG levels &gt;1000 mg/dl, (severe hypertriglyceridemia) should be treated with immediate pharmacologic agents (fibric acid derivatives, niacin, or fish oil) to reduce risk of acute pancreatitis.</li> <li>• TG levels of 500-1000 mg/dl should be treated with lifestyle modification, and in addition to statin therapy, pharmacologic TG lowering should strongly be considered to reduce risk of pancreatitis.</li> <li>• TG levels &lt; 500 mg/dl should be treated with lifestyle modification and statin therapy should be the primary focus for CV risk reduction. Select individuals may benefit from pharmacologic TG lowering, for example Tg ≥ 204 mg/dl with HDL ≤ 35 mg/dl, therefore treatment should be individualized.</li> </ul> <p><small>†Moderate intensity: atorvastatin 10-20 mg, rosuvastatin 5-10 mg, pravastatin 40-80, lovastatin 40, fluvastatin 40 bid, or XL 80 mg/d, pitavastatin 2-4 mg, simvastatin 20-40 mg. High intensity: atorvastatin 40-80 mg, rosuvastatin 20-40 mg. Consider ezetimibe + moderate statin if intolerance.</small></p> <p><small>*CVD Risk factors: LDL cholesterol &gt;100 mg/dL, high blood pressure, smoking, chronic kidney disease, albuminuria, and family history of CVD.</small></p>
<p><b>Kidney Disease Assessment</b></p>	<p>Annual spot urine albumin to creatinine ratio (ACR).</p> <p>Annual serum creatinine</p>	<p>If &gt; 30 mg/g, it should be repeated 2 more times within a 6 month period and 2 out of 3 measures should be positive prior to considering a patient to have albuminuria.</p> <p>Serum creatinine level should be done yearly regardless of urine albumin excretion. Consider nephrology referral when cause of nephropathy is uncertain, complications related to reduced GFR exist (anemia, electrolyte abnormalities, secondary hyperparathyroidism), or for advancing kidney disease, stages 3 or 4.</p>
<p><b>Aspirin</b></p>		<p>Aspirin (ASA) 75-162 mg/d for Type I and II DM</p> <p><u>Primary Prevention (no history of CVD)</u></p> <ul style="list-style-type: none"> <li>• Consider in men and women aged ≥ 50 years with at least 1 additional risk factor: <ul style="list-style-type: none"> <li>○ HTN, Smoking, Dyslipidemia, Albuminuria, or Family History of premature CVD, who are not at high risk for bleeding.</li> </ul> </li> </ul> <p><u>Secondary Prevention (history of CVD)</u></p> <ul style="list-style-type: none"> <li>• ASA should be used, Clopidogrel 75 mg/d should be used in documented cases of ASA allergy</li> </ul> <p><u>Acute Coronary Syndrome (ACS)</u></p> <ul style="list-style-type: none"> <li>• Dual antiplatelet therapy (ASA 75-162 mg/d PLUS Clopidogrel 75 mg/d) is reasonable for up to one year.</li> </ul>

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<b>Foot Exam</b>	Annually and then based on individual risk	Examination for deformity, pulses, and sensation. Podiatry and vascular referrals as needed. More frequent exams (quarterly, semi-annually) are appropriate for higher risk individuals.
<b>Eye Exam</b>	Annually from the time of diagnosis for T2DM and within ≤ 5 years for T1DM	Dilated Retinal Eye Exam done by an Ophthalmologist or Optometrist. If there is no evidence of retinopathy after two consecutive yearly exams in a well-controlled patient it is reasonable to repeat exams every two years.
<b>Oral Health</b>	Annually	Oral screening and dental exam/referral.
<b>Psychosocial Issues</b>	Routinely	Screen for depression, anxiety (including diabetes related stress), eating disorders, cognitive issues and patient's social situation. Consider treatment, referral and social services consultation when appropriate.
<b>Vaccinations</b>	Based on Individual Schedules	<ul style="list-style-type: none"> <li>• Annual influenza vaccine</li> <li>• Pneumococcal polysaccharide vaccine at diagnosis for patients 2 years of age and older with a revaccination at ≥ 65 years old, at least five years after prior vaccination.</li> <li>• Hepatitis B vaccine to unvaccinated adults ages 19-59, consider ages 60+</li> </ul>
<b>Patient Education</b>	Initially at diagnosis and then periodically reassess needs	Provide education and/or referral to diabetes education program that includes general diabetes education and/or medical nutrition therapy.

American Diabetes Association: Clinical Practice Recommendations 2017, Diabetes Care. Vol. 40(S1)S1-S135.

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