Overview and Update: Standards of Medical Care in Diabetes 2019
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Disclosures

• No Disclosures
Test Your Knowledge

Question 1

MS is a 45 year old female who presents for a yearly exam. She is on HCTZ for hypertension and has no other medical problems. Her vital signs are normal and physical exam unremarkable. Fasting labs revealed a glucose of 136. According to ADA recommendations, you should confirm the diagnosis by:

1. Repeat fasting glucose is 3 months
2. Hemoglobin A1c in three months
3. Order a Hemoglobin A1c on the current sample
4. Check for family history of diabetes

Question 2

Mr. Smith has type 2 diabetes mellitus and hypercholesterolemia. He is taking metformin 500 mg twice a day, glimepiride 4 mg daily, and simvastatin 20 mg daily. He has a BP of 130/80, pulse 88, BMI 32.1 kg/m². Laboratory results: A1c 7.1%, fasting glucose 140, serum creatinine 0.9, albumin/creatinine ratio 10 (normal), and LDL cholesterol 105.

To decrease his risk of diabetic kidney disease, You

1. Add an Ace inhibitor
2. Add an Angiotensin receptor blocker
3. Repeat urine albumin creatine ratio in one year
4. Increase the simvastatin to 40 mg daily.
Question 3
The Suggested time to refer for DSMES
1. At diagnosis
2. Annually for assessment of education, nutrition, and emotional needs
3. When complicating factors (health conditions, physical limitations, emotional factors, or basic living needs) arise that influence self-management; and
4. When transitions in care occur
5. # 1 and # 3
6. All of the above

Learning Objectives
By the end of this presentation, participants will be able to:

• Discuss updates and changes in the 2019 Standards of Medical Care in Diabetes

• Identify the classification of diabetes and related diagnostic tests

• Summarize the comprehensive medical evaluation and additional referrals for people with diabetes, including DSME
# Evidence Grading System

## Classification and Diagnosis of Diabetes

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
</table>
| **A** | Clear evidence from well-conducted, generalizable RCTs that are adequately powered, including:  
  - Evidence from a well-conducted multicenter trial or meta-analysis that incorporated quality ratings in the analysis  
  - Compelling nonexperimental evidence  
  - Supportive evidence from well-conducted RCTs that are adequately powered |
| **B** | Supportive evidence from a well-conducted cohort studies  
  - Supportive evidence from a well-conducted case-control study |
| **C** | Supportive evidence from poorly controlled or uncontrolled studies  
  - Conflicting evidence with the weight of evidence supporting the recommendation |
| **E** | Expert consensus or clinical experience |
Classification of Diabetes

1. Type 1 diabetes
   – β-cell destruction
2. Type 2 diabetes
   – Progressive insulin secretory defect
3. Gestational Diabetes Mellitus (GDM)
4. Other specific types of diabetes due to other causes:
   – Monogenic diabetes syndromes
   – Diseases of the exocrine pancreas, e.g., cystic fibrosis
   – Drug- or chemical-induced diabetes

Criteria for the Diagnosis of Diabetes

| FPG ≥126 mg/dL (7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h. | OR |
| 2-h PG ≥200 mg/dL (11.1 mmol/L) during OGTT. The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75-g anhydrous glucose dissolved in water. | OR |
| A1C ≥6.5% (48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay. | OR |
| In a patient with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL (11.1 mmol/L). |

* In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal test results from the same sample or in two separate test samples.
**Criteria for Defining Prediabetes**

<table>
<thead>
<tr>
<th>FPG 100 mg/dL (5.6 mmol/L) to 125 mg/dL (6.9 mmol/L) (IFG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
</tr>
<tr>
<td>2-h PG during 75-g OGTT 140 mg/dL (7.8 mmol/L) to 199 mg/dL (11.0 mmol/L) (IGT)</td>
</tr>
<tr>
<td>OR</td>
</tr>
<tr>
<td>A1C 5.7–6.4% (39–47 mmol/mol)</td>
</tr>
</tbody>
</table>

*For all three tests, risk is continuous, extending below the lower limit of the range and becoming disproportionately greater at the higher end of the range.*

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**Type 2 Diabetes**

- Screening for prediabetes and type 2 diabetes with an informal assessment of risk factors or validated tools should be considered in asymptomatic adults. **B**
- Testing for prediabetes and/or type 2 diabetes in asymptomatic people should be considered in adults of any age who are overweight or obese (BMI ≥25 kg/m² or ≥23 kg/m² in Asian Americans) and who have 1 or more additional risk factors for diabetes. **B**
- For all patients, testing should begin at age 45 years. **B**
- If tests are normal, repeat testing carried out at a minimum of 3-year intervals is reasonable. **C**
Type 2 Diabetes

- To test for prediabetes and type 2 diabetes, fasting plasma glucose, 2-h plasma glucose during 75-g oral glucose tolerance test, and A1C are equally appropriate. B
- In patients with prediabetes and type 2 diabetes, identify and, if appropriate, treat other cardiovascular disease risk factors. B
- Risk-based screening for prediabetes and/or type 2 diabetes should be considered after the onset of puberty or after 10 years of age, whichever occurs earlier, in children and adolescents who are overweight (BMI ≥85th percentile) or obese (BMI ≥95th percentile) and who have additional risk factors for diabetes.

Gestational Diabetes Mellitus (GDM)

- Test for undiagnosed diabetes at the 1st prenatal visit in those with risk factors, using standard diagnostic criteria. B
- Test for GDM at 24–28 weeks of gestation in pregnant women not previously known to have diabetes. A
- Test women with GDM for persistent diabetes at 4–12 weeks postpartum, using the 75-g OGTT and clinically appropriate nonpregnancy diagnostic criteria. B
Gestational Diabetes Mellitus

- Women with a history of GDM should have lifelong screening for the development of diabetes or prediabetes at least every 3 years. B

- Women with a history of GDM found to have prediabetes should receive intensive lifestyle interventions or metformin to prevent diabetes. A

Glycemic Targets
Table 6.2—Summary of glycemic recommendations for many nonpregnant adults with diabetes

<table>
<thead>
<tr>
<th>Metric</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C</td>
<td>&lt;7.0% (53 mmol/mol)*</td>
</tr>
<tr>
<td>Preprandial capillary plasma glucose</td>
<td>80–130 mg/dL* (4.4–7.2 mmol/L)</td>
</tr>
<tr>
<td>Peak postprandial capillary plasma glucose†</td>
<td>&lt;180 mg/dL* (10.0 mmol/L)</td>
</tr>
</tbody>
</table>

*More or less stringent glycemic goals may be appropriate for individual patients. Goals should be individualized based on duration of diabetes, age/life expectancy, comorbid conditions, known CVD or advanced microvascular complications, hypoglycemia unawareness, and individual patient considerations. †Postprandial glucose may be targeted if A1C goals are not met despite reaching preprandial glucose goals. Postprandial glucose measurements should be made 1–2 h after the beginning of the meal, generally peak levels in patients with diabetes.
Patient-Centered Collaborative Care

A patient-centered communication style should be used to optimize health outcomes and quality of life:

- person-centered and strength-based language
- active listening
- elicits patient preferences and beliefs, and
- assesses literacy, numeracy, and potential barriers to care


Components of the Comprehensive Diabetes Evaluation

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Visit</th>
<th>Every Follow-Up Visit</th>
<th>Annual Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diabetes history</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Characteristics at onset (e.g., age, symptoms)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review of previous treatment regimens and response</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess frequency/cause/severity of past hospitalizations</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Family history</strong></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Family history of diabetes in a first-degree relative</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Family history of autoimmune disorder</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><strong>Personal history of complications and common comorbidities</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Macrovascular and microvascular</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Common comorbidities</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Presence of hemoglobinopathies or anemias</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>High blood pressure or abnormal lipids</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Last dental visit</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Last dilated eye exam</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Visits to specialists</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Interval history</strong></td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Changes in medical/family history since last visit</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

### Components of the Comprehensive Diabetes Evaluation

<table>
<thead>
<tr>
<th>Social History</th>
<th>Initial Visit</th>
<th>Every Follow-up Visit</th>
<th>Annual Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Eating patterns and weight history</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Sleep behaviors and physical activity</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Familiarity with carbohydrate counting in type 1 diabetes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Tobacco, alcohol, and substance use</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Identify existing social supports</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Interval history**
- Changes in social history since last visit

<table>
<thead>
<tr>
<th>Medications and Vaccinations</th>
<th>Initial Visit</th>
<th>Every Follow-up Visit</th>
<th>Annual Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Medication-taking behavior</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Medication intolerance or side effects</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Complementary and alternative medicine use</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Vaccination history and needs</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Components of the Comprehensive Diabetes Evaluation

<table>
<thead>
<tr>
<th>Technology Use</th>
<th>Initial Visit</th>
<th>Every Follow-up Visit</th>
<th>Annual Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Assess use of health apps, online education, patient portals, etc.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Glucose monitoring (meter/CGM): results and data use</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>- Review insulin pump settings</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Psychosocial conditions
- Screen for depression, anxiety, and disordered eating; refer for further assessment or intervention if warranted
- Consider assessment for cognitive impairment*

### Diabetes self-management education and support
- History of dietitian/diabetes educator visits
- Screen for barriers to diabetes self-management
- Refer or offer local resources and support as needed

### Hypoglycemia
- Timing of episodes, awareness, frequency and causes

### Pregnancy planning
- For women with childbearing capacity, review contraceptive needs and preconception planning

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Components of the Comprehensive Diabetes Evaluation

### PHYSICAL EXAMINATION

- Height, weight, and BMI; growth/pubertal development in children and adolescents
- Blood pressure determination
- Orthostatic blood pressure measures (when indicated)
- Fundoscopic examination (refer to eye specialist)
- Thyroid palpation
- Skin examination (e.g., acanthosis nigricans, insulin injection or insertion sites, lipodystrophy)
- Comprehensive foot examination
  - Visual inspection (e.g., skin integrity, callous formation, foot deformity or ulcer, toenails)
  - Screen for PAD (pedal pulses, refer for ABI if diminished)
  - Determination of temperature, vibration or pinprick sensation, and 10-g monofilament exam

<table>
<thead>
<tr>
<th></th>
<th>INITIAL VISIT</th>
<th>EVERY FOLLOW-UP VISIT</th>
<th>ANNUAL VISIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height, weight, BMI</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Orthostatic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Fundoscopic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Thyroid palpation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Skin examination</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Comprehensive foot</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>visual inspection</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Screen for PAD</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Determination of</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>temperature, vibration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-g monofilament</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

### LABORATORY EVALUATION

- A1C, if the results are not available within the past 3 months
- If not performed/available within the past year
  - Lipid profile, including total, LDL, and HDL cholesterol and triglycerides
  - Liver function tests
  - Spot urinary albumin-to-creatinine ratio
  - Serum creatinine and estimated glomerular filtration rate
  - Thyroid-stimulating hormone in patients with type 1 diabetes
  - Vitamin B12 if on metformin (when indicated)
  - Serum potassium levels in patients on ACE inhibitors, ARBs, or diuretics

<table>
<thead>
<tr>
<th></th>
<th>INITIAL VISIT</th>
<th>EVERY FOLLOW-UP VISIT</th>
<th>ANNUAL VISIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1C</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Lipid profile</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Liver function tests</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Spot urinary albumin</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Serum creatinine</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Estimated GFR</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Thyroid-stimulating</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Serum potassium</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

† May be needed more frequently in patients with known chronic kidney disease or with changes in medications that affect kidney function and serum potassium.

‡ May also need to be checked after initiation or dose changes of medications that affect these laboratory values (i.e., diabetes medications, blood pressure medications, cholesterol medications, or thyroid medications).

In people without dyslipidemia and not on cholesterol-lowering therapy, testing may be less frequent.
Common Comorbidities

- Autoimmune Diseases (T1D)
- Cancer
- Cognitive Impairment/Dementia
- Fatty Liver Disease
- Pancreatitis
- Fractures
- Hearing Impairment
- HIV
- Low Testosterone (Men)
- Obstructive Sleep Apnea
- Periodontal Disease
- Psychosocial/Emotional Disorders

Referrals for Initial Care Management

- Eye care professional for annual dilated eye exam
- Family planning for women of reproductive age
- Registered dietitian for MNT
- DSMES
- Dentist for comprehensive dental and periodontal examination
- Mental health professional, if indicated
Lifestyle Management

DSMES

Four critical time points for DSMES delivery:

1. At diagnosis
2. Annually for assessment of education, nutrition, and emotional needs
3. When complicating factors (health conditions, physical limitations, emotional factors, or basic living needs) arise that influence self-management; and
4. When transitions in care occur

Diet, Physical Activity & Behavioral Therapy: Recommendations

- Diet, physical activity and behavioral therapy designed to achieve and maintain >5% weight loss should be prescribed for overweight and obese patients with T2DM ready to achieve weight loss. A

- Such interventions should be high-intensity (≥16 sessions in 6 months) and focus on diet, physical activity, and behavioral strategies to achieve a 500 - 750 kcal/day energy deficit. A

Recommendations: Diet, physical activity & behavioral therapy (2)

- Individualize diets, as those that provide the same caloric restriction but differ in protein, carbohydrate, and fat content are equally effective in achieving weight loss. A

- Prescribe long-term (≥1 year) comprehensive weight maintenance programs to patients who achieve short-term weight loss goals. A
  - at least monthly contact
  - ongoing monitoring of body weight (weekly or more frequently)
  - and/or other self-monitoring strategies, such as tracking intake, steps
  - continued consumption of a reduced-calorie diet, and
  - participation in high levels of physical activity (200-300 min/week).
To achieve weight loss of >5%, short-term (3-month) interventions that use very low-calorie diets (≤800 kcal/day) and total meal replacements may be prescribed for carefully selected patients by trained practitioners in medical care settings with close medical monitoring. To maintain weight loss, such programs must incorporate long-term comprehensive weight-maintenance counseling. B


Smoking Cessation

• Advise all patients not to use cigarettes and other tobacco products A or e-cigarettes. E

• Include smoking cessation counseling and other forms of treatment as a routine component of diabetes care. B

Psychosocial Issues: Recommendations

- Integrate with collaborative, patient-centered approach and provide to all people with diabetes, with the goals of optimizing health outcomes and health-related quality of life (QOL).
- Screening and follow-up may include:
  - attitudes about diabetes
  - expectations for medical management and outcomes
  - affect or mood
  - general and diabetes-related QOL
  - available resources (financial, social, and emotional)
  - psychiatric history


Microvascular Complications and Foot Care
DKD Screening: Recommendations

Screening

• At least once a year, assess urinary albumin (e.g., spot urinary albumin-to-creatinine ratio - UACR) and estimated glomerular filtration rate (eGFR):
  – In patients with type 1 diabetes with duration of ≥5 years B
  – In all patients with type 2 diabetes B
  – In all patients with comorbid hypertension B


DKD Treatment: Recommendations

Treatment

• Optimize glucose control to reduce the risk or slow progression of DKD. A

• For patients with type 2 diabetes and chronic kidney disease, consider use of a SGLT2-i or GLP-1 RA shown to reduce risk of CKD progression, cardiovascular events, or both. C

• Optimize BP control to reduce the risk or slow progression of DKD. A

• In nonpregnant patients with diabetes and hypertension, either an ACE inhibitor or ARB is recommended for those with modestly elevated UACR (30–299 mg/g creatinine) B and is strongly recommended for those with UACR ≥300 mg/g creatinine and/or eGFR <60 mL/min/1.73m2. A

Treatment

- Periodically monitor serum creatinine and potassium levels for the development of increased creatinine or changes in potassium when ACE inhibitors, ARBs, or diuretics are used. B

- Continued monitoring of UACR in patients with albuminuria treated with an ACE inhibitor or ARB is reasonable to assess the response to treatment and progression of CKD. E

DKD Treatment: Recommendations

Treatment

- An ACE inhibitor or an ARB is not recommended for the primary prevention of CKD in patients with diabetes who have normal blood pressure, normal UACR (<30 mg/g creatinine), and normal eGFR. B

- When eGFR rate is <60 mL/min/1.73m², evaluate and manage potential complications of CKD. E
**DKD Treatment: Recommendations**

**Treatment**

- Patients should be referred for evaluation for renal replacement treatment if they have an eGFR <30 mL/min/1.73m². A

- Promptly refer to a physician experienced in the care of kidney disease for uncertainty about the etiology of kidney disease, difficult management issues, and rapidly progressing kidney disease. B

**Diabetic Retinopathy: Recommendation**

**Screening:**

- Initial dilated and comprehensive eye exam by an ophthalmologist or optometrist:
  - Adults with type 1 diabetes, within 5 years of diabetes onset. B
  - Patients with type 2 diabetes at the time of diabetes diagnosis. B
Diabetic Retinopathy: Recommendation

Screening (continued):

• If there’s no evidence of retinopathy for one or more annual exams and glycemia is well controlled, then consider exams every 1–2 years. If any level of retinopathy is present, subsequent dilated retinal exams should be repeated at least annually by ophthalmologist or optometrist. If retinopathy progresses or sight is threatened, then exams should be more frequent. B

• Telemed programs using validated retinal photography with remote reading by an ophthalmologist or optometrist and timely referral for comprehensive eye exam can be appropriate retinopathy screening strategy. B


Diabetic Retinopathy: Recommendation

Screening (continued):

• Women with preexisting type 1 or type 2 diabetes who are planning pregnancy or who are pregnant should be counseled on the risk of development and/or progression of diabetic retinopathy. B

• Eye examinations should occur before pregnancy or in the first trimester in patients with preexisting type 1 or type 2 diabetes, and then patients should be monitored every trimester and for 1-year postpartum as indicated by the degree of retinopathy. B

**Diabetic Retinopathy: Recommendations**

- To reduce the risk or slow the progression of diabetic retinopathy:
  - Optimize glycemic control. A
  - Optimize blood pressure and serum lipid control. A

**Screening:**

- Assess for diabetic peripheral neuropathy starting at diagnosis of type 2 diabetes and 5 years after the diagnosis of type 1 diabetes and at least annually thereafter. B

- Assessment for distal symmetric polyneuropathy should include history and assessment of either temperature or pinprick sensation (small-fiber function) and vibration sensation using a 128-Hz tuning fork (for large-fiber function). All patients should have annual 10-g monofilament testing to identify feet at risk for ulceration and amputation. B

- Symptoms and signs of autonomic neuropathy should be assessed in patients with microvascular complications. E

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Neuropathy: Recommendations

Treatment:

- Optimize glucose control to prevent or delay the development of neuropathy in patients with T1DM and to slow the progression in patients with T2DM.
- Assess and treat patients to reduce pain related to DPN and symptoms of autonomic neuropathy and to improve quality of life.
- Either pregabalin, duloxetine, or gabapentin are recommended as initial pharmacologic treatments for neuropathic pain in diabetes.


Older Adults
Older Adults: Recommendations

• Consider the assessment of medical, psychological, functional, and social geriatric domains in older adults to provide a framework to determine targets and therapeutic approaches for diabetes management. C

• Screening for geriatric syndromes may be appropriate in older adults experiencing limitations in their basic and instrumental activities of daily living as they may affect diabetes self-management and be related to health-related quality of life. C

Treatment Goals:

• Older adults who are otherwise healthy with few coexisting chronic illnesses and intact cognitive function and functional status should have lower glycemic goals (A1C <7.5%), while those with multiple coexisting chronic illnesses, cognitive impairment, or functional dependence should have less stringent glycemic goals (A1C <8.0-8.5%). C

• Glycemic goals for some older adults might reasonably be relaxed as part of individualized care, but hyperglycemia leading to symptoms or risk of acute hyperglycemic complications should be avoided in all patients. C
Pharmacologic Therapy:

- In older adults at increased risk of hypoglycemia, medication classes with low risk of hypoglycemia are preferred. B
- Overtreatment of diabetes is common in older adults and should be avoided. B
- Deintensification (or simplification) of complex regimens is recommended to reduce the risk of hypoglycemia, if it can be achieved within the individualized A1C target. B

Simplification of Therapy
Older Adults: Recommendations

Treatment Goals:

• Screening for diabetes complications should be individualized in older adults. Particular attention should be paid to complications that would lead to functional impairment. C

• Treatment of hypertension to individualized target levels is indicated in most older adults. C

Diabetes Care in the Hospital: Recommendations

- Perform an A1C on all patients with diabetes or hyperglycemia (blood glucose >140 mg/dL) admitted to the hospital if not performed in the prior 3 months. B

- Insulin should be administered using validated written or computerized protocols that allow for predefined adjustments in the insulin dosage based on glycemic fluctuations. E

- When caring for hospitalized patients with diabetes, consider consulting with a specialized diabetes or glucose management team where possible. E


Diabetes Care in the Hospital: Recommendations (2)

Glycemic Targets:

- Insulin therapy should be initiated for treatment of persistent hyperglycemia starting at a threshold ≥180 mg/dL. Once insulin therapy is started, a target glucose range of 140-180 mg/dL is recommended for the majority of critically ill patients and noncritically ill patients. A

- More stringent goals, such as 110-140 mg/dL, may be appropriate for selected patients, if this can be achieved without significant hypoglycemia. C

Test Your Knowledge

Question 1

MS is a 45 year old female who presents for a yearly exam. She is on HCTZ for hypertension and has no other medical problems. Her vital signs are normal and physical exam unremarkable. Fasting labs revealed a glucose of 136. According to ADA recommendations, you should confirm the diagnosis by:

1. Repeat fasting glucose is 3 months
2. Hemoglobin A1c in three months
3. Order a Hemoglobin A1c on the current sample
4. Check for family history of diabetes

Question 2

Mr. Smith has type 2 diabetes mellitus and hypercholesterolemia. He is taking metformin 500 mg twice a day, glimepiride 4 mg daily, and simvastatin 20 mg daily. He has a BP of 130/80, pulse 88, BMI 32.1 kg/m\(^2\). Laboratory results: A1c 7.1%, fasting glucose 140, serum creatinine 0.9, albumin/creatinine ratio 10 (normal), and LDL cholesterol 105.

To decrease his risk of diabetic kidney disease, You

1. Add an Ace inhibitor
2. Add an Angiotensin receptor blocker
3. Increase the simvastatin to 40 mg daily.
4. Repeat urine albumin creatinine ratio in one year
Question 3

The Suggested time to refer for DSMES

1. At diagnosis
2. Annually for assessment of education, nutrition, and emotional needs
3. When complicating factors (health conditions, physical limitations, emotional factors, or basic living needs) arise that influence self-management; and
4. When transitions in care occur
5. # 1 and # 3
6. All of the above

Helpful Resources
2019 Standards of Care - Resources

• Full version available
• Abridged version for PCPs
• Free app
• Pocket cards with key figures
• Free webcast for continuing education credit

Professional.Diabetes.org/SOC

Thank you