Diabetes screening:  
Which patients, what tests, and how often?
Medicine in Brief

The OGTT identifies more cases of diabetes and prediabetes but takes >2 hours to administer.

Discussion
Despite a lack evidence showing benefit to the screened population, treating diabetes and its comorbidities improves outcomes, and the potential risks of therapy are low. Therefore, it seems reasonable to screen more patients than the USPSTF recommends.

Practice Points
- Screen annually for type 2 diabetes mellitus (T2DM), prediabetes, weight gain, and lipid abnormalities in all patients taking atypical antipsychotics.
- Screen annually psychiatric patients age ≥30 who do not take atypicals for T2DM and prediabetes.
- For patients age <30, regularly review your patients’ risk factors for diabetes to determine whom to screen for T2DM or prediabetes.
- Screening is done most simply by ordering a fasting plasma glucose test.

Using the EASD risk score is intriguing, but difficult to implement in a busy practice. Therefore, I recommend following the AACE guidelines, which recognize psychiatric illness as a risk factor, for screening psychiatric patients who are not receiving atypicals.

Annually screen psychiatric patients age ≥30, especially those with schizophrenia or affective disorders. I also follow the ADA guidelines and screen overweight adults age ≤30 if they have any of the other risk factors listed in Table 2 (page 23). The most common risk factors seen in practice are being a member of a high-risk ethnic group, hypertension, lipid abnormalities, and cardiovascular disease. For overweight adults without other risk factors, I start screening at age 30.

Other practitioners can be more or less conservative and still be within accepted guidelines. The FPG—glucose level drawn from a vein after at least 8 hours of fasting—is probably the easiest screening test in practice. Any patient with a value >100mg/dL should be referred to the patient’s primary care physician. Any patient who develops diabetes symptoms—including polyuria, polydipsia, and weight...
loss—should be tested immediately. The hemoglobin A1C test is not recommended for screening.

Clinical presentation
Screening detects overt diabetes and can identify prediabetes. Prediabetes includes conditions of impaired fasting glucose (IFG) or impaired glucose tolerance (IGT). IFG is defined as a fasting glucose of 100 to 125 mg/dL, and IGT is defined as having a 2-hour glucose of 140 to 199 mg/dL on an OGTT. Approximately one-quarter of the adult population has prediabetes, and interventions can prevent the progression of prediabetes to overt diabetes and reverse prediabetes. The Diabetes Prevention Trial found that lifestyle measures—including exercise and diet—were most effective, with a 53% reduction in the rate of progression to diabetes. Metformin also was effective, but less so than lifestyle measures alone.

Treatment slows the development or progression of microvascular complications, such as retinopathy, nephropathy, and neuropathy. Aggressive treatment of comorbid conditions, including hyperlipidemia and hypertension, also reduces the risk of cardiovascular events.

<table>
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<th>Risk factors identified for diabetes or prediabetes</th>
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| **American Diabetes Association (ADA)** | • BMI >25 kg/m²  
• physical inactivity  
• first-degree relative with diabetes  
• members of high-risk ethnic populations (African-American, Latino, Native American, Asian, Pacific Islander)  
• women who delivered a baby >9 lb or had gestational diabetes  
• hypertension  
• high-density lipoproteins cholesterol <35 mg/dL and/or triglyceride level >250 mg/dL  
• women with polycystic ovarian syndrome  
• impaired glucose tolerance or impaired fasting glucose on previous testing  
• conditions associated with insulin resistance, such as severe obesity or acanthosis nigricans  
• history of cardiovascular disease |
| **American Association of Clinical Endocrinologists** | • All of the risk factors identified by the ADA, except for conditions associated with insulin resistance, such as severe obesity or acanthosis nigricans  
• psychiatric illness |

Drug Brand Names
Aripiprazole • Abilify  
Metformin • Glucophage  
Ziprasidone • Geodon

Related Resources

Disclosure
Dr. Keenan reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

References