



SYLVESTER LAWRENCE  
Sylvester has type 2 diabetes

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## Task force begins evidence review to update federal guideline for screening for type 2 diabetes

The [US Preventive Services Task Force \(USPSTF\)](#) recently began a review of the scientific evidence on screening for diabetes and prediabetes in asymptomatic adults as a first step toward updating the federal screening guideline. Click [here](#) to review the USPSTF’s draft research plan for its evidence review.

Approximately every five years, USPSTF, an independent panel of experts in prevention and evidence-based medicine, examines the evidence base around screening and issues a guideline for health care professionals to use in determining which of their asymptomatic adult patients should be screened for diabetes. The USPSTF last reviewed diabetes screening and issued its current recommendation in 2007-2008.<sup>1</sup> For diabetes, the USPSTF currently recommends screening for diabetes only in asymptomatic adults who have high blood pressure greater than 135/80 (a “B” recommendation).<sup>1</sup> Other guidelines (e.g., the American Diabetes Association’s (ADA)—see accompanying chart) are broader in that they recommend screening based on age and multiple other risk factors, in addition to high blood pressure.<sup>2</sup>

With the passage of the Affordable Care Act (ACA) in 2010, the USPSTF guidelines are

### ADA criteria for testing for diabetes in asymptomatic adults<sup>2</sup>

1.	Testing should be considered in all adults who are overweight (BMI $\geq 25$ kg/m <sup>2</sup> *) and have additional risk factors: <ul style="list-style-type: none"><li>• physical inactivity</li><li>• first-degree relative with diabetes</li><li>• high-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)</li><li>• women who have delivered a baby weighing &gt;9lbs or were diagnosed with gestational diabetes</li><li>• hypertension (<math>\geq 140/90</math> mmHg or on therapy for hypertension)</li><li>• HDL cholesterol level &lt;35 mg/dL (0.90 mmol/L) and/or a triglyceride level &gt;250 mg/dL (2.82 mmol/L)</li><li>• women with polycystic ovary syndrome</li><li>• A1C <math>\geq 5.7\%</math>, impaired glucose tolerance, or impaired fasting glucose on previous testing</li><li>• other clinical conditions associated with insulin resistance (e.g., severe obesity)</li><li>• history of cardiovascular disease</li></ul>
2.	In the absence of the above criteria, testing for diabetes should begin at age 45 years.
3.	If the results are normal, testing should be repeated at least at 3-year intervals, with consideration of more frequent testing depending on initial results (e.g., those with prediabetes should be tested yearly) and risk status.

\*At-risk BMI may be lower in some ethnic groups

# new & news in diabetes policy

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increasingly important because insurance will provide complete coverage for preventive health services like diabetes screening only if these services have received an "A" or "B" recommendation from the USPSTF.

An updated review of diabetes screening is both timely and vital, given:

- The ongoing rise in the number of new cases and overall prevalence of diabetes<sup>3</sup>
- Strong evidence of the value of diabetes prevention programs and early intervention in diabetes onset<sup>4</sup>

- Increased attention to prevention stimulated by the Affordable Care Act and efforts to reduce health care costs, while improving patient outcomes and quality of care.<sup>5</sup>

Screening is the entry point for identifying adults with prediabetes who might benefit from participation in evidence-based diabetes prevention programs, such as those offered by the YMCA of the USA. Screening is also essential for identification of adults with undiagnosed diabetes, who could benefit from early detection and appropriate management to help prevent the complications of diabetes.<sup>6</sup>

## Changes in the prevalence of prediabetes in the US from 1999 through 2010

An article published in *Diabetes Care* by a research team from the Centers for Disease Control and Prevention (CDC) and National Institute of Diabetes and Digestive and Kidney Disease (NIDDK) at the National Institutes of Health (NIH) examined the changes in the prevalence of prediabetes in the US from 1999-2010 based on A1C (5.7 to < 6.5%) and fasting plasma glucose or FPG (100 to < 126 mg/dL). The authors used data from 19,000 people aged  $\geq 12$  years from the 1999-2010 National Health and Nutrition Examination Survey (NHANES). The investigators calculated "total prevalence of prediabetes" by adding up three subgroups: those defined as having prediabetes by A1C alone; those having prediabetes by FPG alone; and those having prediabetes by both A1C and FPG.<sup>7</sup>

Key findings from the study include:

- Overall, the **prevalence of prediabetes increased 21%** from 1999 to 2010 in the US<sup>7</sup>
- Among those aged  $\geq 12$  years, age-adjusted prediabetes prevalence increased from 27.4% in 1999-2002 to 34.1% in 2007-2010<sup>7</sup>
- Among adults aged  $\geq 18$  years, the prevalence increased from 29.2% to 36.2%<sup>7</sup>

- Among individuals aged  $\geq 12$  years, prevalence of prediabetes based on the A1C test increased from 9.5% to 17.8%, a relative increase of 87%, whereas rates of impaired fasting glucose remained stable<sup>7</sup>
- These prevalence changes were similar among the total population and across subgroups<sup>7</sup>
- **The proportion of US adolescent girls and women with prediabetes grew at a rate nearly twice that of males.** This finding is of concern, because offspring of these women may have an increased risk of diabetes after being exposed to hyperglycemia in utero<sup>7</sup>

Click [here](#) to access the study abstract.

**"Fortunately, the Diabetes Prevention Program of the National Institutes of Health and other studies have shown that among adults with elevated glucose levels, type 2 diabetes can be delayed or prevented. Further, recent studies have shown that effective lifestyle-based interventions can be successfully implemented in community-based settings, potentially reaching disparate populations."**

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## US sees some improvement in diabetes care from 1999 to 2010

A study in the *New England Journal of Medicine* by a research team from the CDC and NIH showed that the number of people with diabetes in the US who achieved their blood glucose targets increased by nearly 8% between 1999 and 2010. Nearly 12% achieved their blood pressure goals and another 21% were able to bring their LDL cholesterol levels down during the same time period.<sup>8</sup> However, only 14% of people with diabetes met all the recommended targets for optimal diabetes care during the study period.<sup>8</sup> Adults with diabetes also did not meet the goals for preventive practices – 40% to 50% did not receive diabetes education, vaccinations, or annual dental examinations.<sup>8</sup>

The investigators examined data for 3,355 adults aged 18 and older with self-reported diabetes from the National Health and Nutrition Examination Survey (2002, 2003-2006, and 2007-2010) and 97,310 adults with self-reported diabetes from the Behavioral Risk Factor Surveillance System (2000, 2004, 2008).<sup>8</sup>

Click [here](#) to access the study abstract.

**“...There’s a long way to go to deliver the quality of diabetes care that truly meets our patients’ needs. Excellence in providing long-term care has lagged behind the advances in acute care, and that needs to change. The management of chronic disease is laborious and requires dedication to a goal that is measured predominantly by the absence of the complications that define an uncontrolled condition...victories in chronic illness are harder to perceive, for both patients and doctors.”<sup>9</sup>**

### The primary goals for diabetes care include<sup>8</sup>:

- Hemoglobin A1C of 7% or less (for most people with diabetes, although care should be individualized)
- Blood pressure of less than 130/80 mm Hg
- LDL cholesterol levels below 100 mg/dL
- No tobacco use

### The recommended preventive practices include<sup>8</sup>:

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Annual lipid measurement</li><li>• Annual eye exam</li><li>• Annual foot exam</li><li>• Annual dental exam</li><li>• Annual urine screening</li></ul> | <ul style="list-style-type: none"><li>• Diabetes education at diagnosis and as needed</li><li>• Glucose monitoring at least once per day</li><li>• Annual flu vaccine</li><li>• Pneumococcal vaccine</li></ul> |
|---|--|

## Living with diabetes long-term: Survivors more likely to meet treatment goals

According to a study published in *Diabetes Care*, people with type 2 diabetes who are able to survive for more than 40 years were more likely than those who survived for fewer years with the disease to meet diabetes treatment goals over the long-term, including having better glycemic control, lower blood pressure, and better cholesterol levels.<sup>10</sup> In conducting their investigation, the researchers looked at the records of 238 people with diabetes who survived on average 44 years with the disease and compared their A1C levels, blood pressure, and lipids with the records of 307 people with diabetes who survived only half as long. Not unexpectedly, those who survived the longest had higher rates of complications because of “longer duration and older age,” including retinopathy, neuropathy, and peripheral vascular disease.<sup>10</sup>

You can access the study abstract [here](#).



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## Study examines diabetes mortality rates trends

A study published in *Population Health Metrics* examined mortality rates among people with prediabetes and diabetes over time and found a “non-significant increase” for both, even as death rates for those without diabetes dropped.<sup>11</sup> The investigators examined changes in mortality rates for patients with diabetes and prediabetes from 1988-2006 using data from the National Health and Nutrition Examination Survey (NHANES). Diagnosis of non-diabetes, prediabetes, and diabetes was based on A1C levels.

The researchers found what they called a “non-significant increase in mortality over time,” among patients with prediabetes and diabetes, even as death rates for those without the conditions dropped.<sup>11</sup> The mortality rate of people with prediabetes grew from 11.19 to 14.02 deaths per 1,000 person-years, while the rate among people with diabetes grew from 20.34 to 20.82. Death rates among people without diabetes or prediabetes fell over the same period, dropping from 7.81 to 6.04.<sup>11</sup>

Access the full study [here](#).

## Kids with type 2 diabetes develop heart and kidney complications more quickly than adults

A study published in *Diabetes Care* found that children who develop type 2 diabetes risk developing heart, kidney, and eye problems faster and at higher rates than adults who develop type 2 diabetes.<sup>12</sup> The TODAY study followed 699 young people age 10 through 17 with type 2 diabetes who developed the condition within two years or less from the study start date. The participants were randomized into three groups: one received metformin; another received metformin plus rosiglitazone; while a third group received metformin plus intensive lifestyle intervention. Although the youth on the drug combination fared the best, all three groups did poorly compared to adults.

The study results showed that overall the rate of deterioration in beta cell function was four times higher in youth compared to adults.<sup>12</sup> Despite the intervention, the children and adolescents in all three arms of the study continued to develop complications. Researchers will monitor the study participants over the next 10 to 15 years.<sup>12</sup>

Access the June 2013 issue of *Diabetes Care* [here](#). The TODAY series of articles begins on page 1735.

**“Once these kids have type 2 diabetes, they seem to be at very high risk for early complications when compared to adults.”<sup>13</sup>**

– Jane Lynch, MD, Professor of pediatric endocrinology, School of Medicine at The University of Texas Health Science Center at San Antonio

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## Task force issues new guideline on screening for gestational diabetes

The United States Preventive Services Task Force (USPSTF) recently issued a new draft guideline on screening for gestational diabetes, recommending screening for asymptomatic pregnant women after 24 weeks gestation (a “B” recommendation). USPSTF said there is insufficient evidence to weigh the benefits and risks of screening for gestational diabetes earlier than that. In 2008, USPSTF had concluded that the evidence was insufficient to recommend for or against routine screening for gestational diabetes.<sup>14</sup>

View the draft recommendation [here](#).

**“It’s important to remember that each case of gestational diabetes affects two people: the expectant mother and the baby. We now have good evidence that screening expectant mothers for gestational diabetes after 24 weeks provides a substantial benefit, with few to no harms, leading to healthier moms and babies.”<sup>15</sup>**

– Wanda K. Nicholson, MD, MPH, MBA,  
USPSTF member

## Better glycemic control seen in patients who can “message” their health care providers

A recent study in *Diabetes Care* shows that patients with diabetes who had the ability to communicate with their health care providers using electronic messaging through a shared electronic medical records system—and used that capability—had better A1C levels.<sup>16</sup> The researchers looked at the A1C levels (A1C<7; A1C<8; A1C>9) over the period 2003-2006 for 6,301 adults with diabetes in a large non-profit integrated health system who registered for access to a shared medical record.

Their analysis showed that:

- 74% used messaging at least once during the study period<sup>16</sup>
- Frequent use of messaging was associated with both better glycemic control *and* better adherence to A1C testing recommendations.<sup>16</sup>

According to the authors, “These results suggest that secure messaging may facilitate important processes of care and help some patients to achieve or maintain adequate glycemic control.”<sup>16</sup>

Click [here](#) to access the study abstract.



DOLORES REISNER  
Dolores has type 2 diabetes

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## Many medical guidelines don't take costs into account

Despite concerns about the rising cost of health care, results from a study published in *JAMA Internal Medicine* show that just over half of professional medical societies with more than 10,000 members consider costs when developing their treatment guidelines for specific conditions. The other organizations either consider costs implicitly or do not address them at all according to the authors.<sup>17</sup>

The researchers examined treatment guidelines from the 30 largest US medical societies that were issued between 2008 and 2012 and found that 17 explicitly include costs in their development of clinical guidelines.<sup>17</sup>

Further examination of the 17 professional medical societies that explicitly consider costs when developing guidelines revealed that nine organizations have a formal evaluation system for costs and the other eight either used a number of methods to evaluate costs or do not explain the cost evaluation process they use.<sup>17</sup>

Ultimately, these guidelines from professional societies—whether they consider costs or not—may influence reimbursement decisions by the Centers for Medicare and Medicaid Services (CMS) and other organizations that pay for medical care.

To read the study abstract, click [here](#).

### Categorization of Cost Considerations in Development of Clinical Guidance Documents for 30 Physician Specialty Societies<sup>18</sup>

Society	Membership	Cost Consideration
AAD American Academy of Dermatology	17 000	Explicit
AAFP American Academy of Family Physicians	94 700	Explicit
AAO-HNS American Academy of Otolaryngology–Head and Neck Surgery	12 000	Explicit
AAP American Academy of Pediatrics	60 000	Explicit
ACCP American College of Chest Physicians	17 800	Explicit
ACOG American Congress of Obstetrics and Gynecologists	52 000	Explicit
ACP American College of Physicians	130 000	Explicit
ACR American College of Radiology	34 000	Explicit
AGA American Gastroenterological Association	17 000	Explicit
AMA-PCPI American Medical Association–Physician Consortium for Performance Improvement	235 000	Explicit
APA American Psychiatric Association	38 000	Explicit
APIC Association for Professionals in Infection Control and Epidemiology	13 000	Explicit
ASGE American Society of Gastrointestinal Endoscopy	12 000	Explicit
ATS American Thoracic Society	15 000	Explicit
AUA American Urological Association	16 000	Explicit
SCCM Society of Critical Care Medicine	15 000	Explicit
TES The Endocrine Society	14 000	Explicit
AAOS American Academy of Orthopedic Surgeons	36 000	Implicit
ACC American College of Cardiology	39 000	Implicit
ASCO American Society of Clinical Oncology	27 000	Implicit
CAP College of American Pathologists	17 000	Implicit
ACEP American College of Emergency Physicians	28 000	Implicit
AOA American Osteopathic Association	70 000	Implicit
ASH American Society of Hematology	15 705	Implicit
AAN American Academy of Neurology	21 000	Not mentioned
ACG American College of Gastroenterology	12 000	Not mentioned
ACS American College of Surgeons	75 000	Not mentioned
ACSM American College of Sports Medicine	45 000	Not mentioned
ASA American Society of Anesthesiologists	46 000	Not mentioned
SHM Society of Hospitalist Medicine	31 000	Not mentioned

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## One in five adults meet overall physical activity guidelines

Approximately 20% of adults in the US meet both the aerobic and muscle strengthening guidelines under the federal government's physical activity recommendations, according to a report published by the Centers for Disease Control and Prevention (CDC) in the May 3, 2013 *Morbidity and Mortality Weekly Report*.<sup>19</sup> The data are based on self-reported information from the Behavioral Risk Factor Surveillance System, which is an annual phone survey of adults aged 18 and over conducted by state health departments.

The Physical Activity Guidelines recommend that adults get at least 2.5 hours of moderate-intensity aerobic activity per week, such as walking; or one hour and 15 minutes a week of vigorous-intensity aerobic activity, such as jogging; or a combination of both. The guidelines

also recommend that adults engage in muscle-strengthening activities at least twice a week, such as push-ups, sit-ups, or activities using resistance bands or weights. According to the report, more than 50% of adults are getting recommended amounts of aerobic activity and nearly 30% are engaging in the recommended muscle-strengthening activity.<sup>19</sup>

The report also found differences by state in meeting the physical activity guidelines. The rates of adults meeting the guidelines ranged from 27.3% in Colorado to 12.7% in Tennessee and West Virginia.<sup>19</sup> The West (24%) and the Northeast (21%) are the regions with the highest proportion of adults who met the guidelines. Women, Hispanics, older adults, and obese adults are all less likely to meet the guidelines.<sup>19</sup>

Access the full article [here](#).

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