

Fact Sheet

The Facts about Prediabetes and Older Americans

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Almost half (48.3 percent) of US adults ages 65 and older (23.1 million people) have prediabetes—blood sugar levels that are higher than normal but not high enough to be considered diabetes.¹ Nine out of 10 (90 percent) of people with prediabetes do not even know they have the condition, and many do not realize that prediabetes is a serious health concern that increases risk for developing type 2 diabetes, heart disease, and stroke.²

Diabetes Explained

Diabetes is a disease in which blood sugar (glucose) levels are too high, which can lead to serious health complications. The glucose (sugar) in a person's blood comes from the foods they eat. When some foods—like carbohydrates—are digested, glucose enters the bloodstream immediately. The pancreas is a gland within the body that produces a hormone called insulin. Insulin circulates through the body, moving sugar from the bloodstream into the body's cells to produce energy. As glucose is moved into cells, the amount of glucose in the blood decreases. When a person has diabetes, either the pancreas completely stops producing insulin or the body is unable to use the insulin that is produced.³

There are two types of diabetes: type 1 and type 2. With type 1 diabetes, the pancreas does not produce enough insulin or stops producing insulin altogether. With type 2 diabetes—the more common type—the body's cells become resistant to the effects of insulin, resulting in glucose remaining in the blood instead of being moved into the cells to become energy.⁴

Risk Factors for Prediabetes

Prediabetes has no signs or symptoms, so it often goes undetected. However, prediabetes can progress to type 2 diabetes. Thus, it is important to understand risk factors for prediabetes when evaluating the likelihood that an individual may have the condition. Factors that increase risk for prediabetes include the following:⁵

- **Weight:** Being overweight, as measured by body mass index
- **Inactivity:** Not getting enough physical activity to support weight control
- **Waist Size:** Having a large waist size (over 40 inches for men and over 35 inches for women)
- **Diet:** Eating red and/or processed meat and drinking sugar-sweetened beverages, instead of a diet high in fruits, vegetables, whole grains, nuts, and olive oil

- **Age:** Being age 45 or older
- **Genetics and Family History:** Having a parent or sibling with type 2 diabetes
- **Race:** Being African American, Hispanic, Native American, or Asian American/Pacific Islander
- **Gestational Diabetes:** Being a woman with a history of pregnancy-related (gestational) diabetes or delivering a baby weighing 9 pounds or more
- **Lack of Sleep:** Having obstructive sleep apnea or working a job with changing shifts or night shifts

The Centers for Disease Control and Prevention (CDC), The American Medical Association, and the Ad Council have partnered on a risk test comprising seven simple questions that provide scores indicating low, medium, and high risk for prediabetes.^{6,7} The risk test is only a predictor of prediabetes. Individuals scoring in the high-risk range⁸ on the test should have their blood tested by a health professional to determine whether they actually have prediabetes.⁹

An Evidence-Based Intervention to Combat Prediabetes

Not everyone will be able to fully reverse prediabetes, depending on their risk factors. However, most people will be able to combat prediabetes and lower their risk for developing type 2 diabetes by modifying three factors: physical activity, eating habits, and weight loss. Several scientific studies have evaluated the effect of making small changes to these lifestyle factors and have consistently shown such changes to be effective in preventing or delaying the onset of type 2 diabetes in people with prediabetes.¹⁰ These changes include losing between 5 to 7 percent of current body weight (10 to 14 pounds for a 200-pound person) and getting regular physical activity—at least 150 minutes a week of brisk walking or a similar activity (30 minutes a day, 5 days a week).¹¹

Based on these promising research findings, the CDC now recognizes classes—called Lifestyle Change Programs—that are proven to help people reverse prediabetes and prevent or forestall the onset of type

2 diabetes. These year-long classes focus on teaching people how to safely increase physical activity, eat a healthier diet, and lose a modest amount of weight.^{12,13} For most people, certified classes can be taken online or in person (see below).

Medicare Coverage for Prediabetes Intervention Programs

The cost of Lifestyle Change Programs varies depending on where they are being offered, the sponsoring organization, and whether they are offered online versus in person. Some employers and health insurance companies will pay for the classes.¹⁴ Medicare pays for the in-person classes as a covered Part B benefit—at no out-of-pocket cost to beneficiaries.¹⁵ The Medicare-covered classes are a once-per-lifetime benefit, and online classes are *not* covered by Medicare.

Medicare coverage of Lifestyle Change Programs—called the Medicare Diabetes Prevention Program (MDPP)—began in April 2018,¹⁶ but, to date, few providers have signed up to provide the benefit. At least one study has found that low reimbursement rates may be a deterrent to provider participation.¹⁷ It is unclear whether other factors are at play—like lack of Medicare coverage for online classes or difficulty getting beneficiaries to commit to taking classes that span several months.

Conclusion

Nearly half of adults ages 65 and older have prediabetes, putting them at high risk for developing type 2 diabetes and its associated health problems.¹⁸ The high prevalence of prediabetes among older adults creates an imperative to intensify outreach and education about prediabetes among Medicare beneficiaries. It is also important to educate beneficiaries about the prediabetes risk test. Beneficiaries at high risk for prediabetes should be encouraged to seek a definitive diagnosis from their health care provider and to enroll in the MDPP if diagnosed with prediabetes. Efforts to enroll beneficiaries in MDPP are currently hampered by a critical shortage of certified providers. Thus, it is important to better understand barriers to provider participation and implement policies to overcome them.

- 1 Centers for Disease Control and Prevention (CDC), National Center for Chronic Disease Prevention and Health Promotion, Division of Translation, *National Diabetes Statistics Report, 2017: Estimates of Diabetes and Its Burden in the United States* (Atlanta, GA, CDC, 2017) accessed at <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>.
- 2 Centers for Disease Control and Prevention (CDC), *Diabetes Home, Prediabetes*, (CDC, Atlanta, GA, no date) accessed at <https://www.cdc.gov/diabetes/basics/prediabetes.html>.
- 3 Mayo Clinic, *Prediabetes Risk Factors*, accessed at <https://www.mayoclinic.org/diseases-conditions/prediabetes/symptoms-causes/syc-20355278>.
- 4 U.S. National Library of Medicine, Medline Plus, *Diabetes Summary*, (National Library of Medicine, Bethesda, MD, no date) accessed at <https://medlineplus.gov/diabetes.html>.
- 5 Mayo Clinic, *Prediabetes Risk Factors*, accessed at <https://www.mayoclinic.org/diseases-conditions/prediabetes/symptoms-causes/syc-20355278>.
- 6 The risk test can be accessed at *Do I Have Prediabetes, About the Risk Test*, American Medical Association (AMA), Centers for Disease Control and Prevention (CDC), and Ad Council, accessed at <https://doihaveprediabetes.org/take-the-risk-test/#>.
- 7 The American Diabetes Association launched its first risk test in 1993. The risk test was adapted by a published study and validated using data from the CDC. When developing the test, researchers looked for specific characteristics that made a person more likely than average to have undiagnosed type 2 diabetes. To make the tool as easy to use as possible, they considered only health characteristics that people would know about themselves without needing a blood test or other medical evaluation—such as age, height, and weight, but not including blood glucose or cholesterol levels. AMA, CDC, and Ad Council, *Do I Have Prediabetes, About the Risk Test*, accessed at <https://doihaveprediabetes.org/take-the-risk-test/#/about>.
- 8 A high score on the online risk test (5 or higher) means an individual has a significant risk for having undiagnosed prediabetes or type 2 diabetes; however, only a blood test can determine a diagnosis. AMA, CDC, and Ad Council, *Do I Have Prediabetes*.
- 9 Any of the following results will confirm a diagnosis of prediabetes: (a) Hemoglobin A1C (a blood test used to measure the average level of glucose in the blood over the last two to three months) of 5.7 percent to 6.4 percent; (b) fasting plasma glucose (a measurement of a person's blood sugar level after fasting or not eating anything for at least 8 hours) of 100–125 mg/dL (impaired fasting glucose); or (c) two-hour post-75-gram oral glucose challenge (a fasting blood draw to test fasting glucose level followed by drinking 8 ounces glucose solution. Follow up blood is drawn to determine how well the body is producing insulin to metabolize the sugar in the body) of 140–199 mg/dL (impaired glucose tolerance). The A1C test offers advantages for patients and providers because it removes the burden of fasting and/or lengthy lab visits. Although the future development of type 2 diabetes is possible when blood test results are below these ranges, the risk for progression becomes higher for individuals with these more elevated test results.
- 10 For a brief summary of the research, see American Medical Association (AMA), *What Is the Evidence Base for the Prevention of Prediabetes through Lifestyle Change*, (AMA, Chicago, Illinois, no date), accessed at <https://assets.ama-assn.org/sub/prevent-diabetes-stat/downloads/AMA-evidence-supporting-dpp.pdf>.
- 11 Centers for Disease Control and Prevention (CDC), *Prediabetes: Your Chance to Prevent Type 2 Diabetes: Preventing Type 2 Diabetes*, (CDC, Atlanta, GA, no date), accessed at <https://www.cdc.gov/diabetes/basics/prediabetes.html>
- 12 CDC-certified programs run for one year. During the first six months of the program, participants are required to meet once per week. During the second six months, participants meet once or twice a month. Centers for Disease Control and Prevention (CDC), *National Diabetes Prevention Program: Key Components of a CDC-Recognized Lifestyle Change Program* (CDC, Atlanta, GA, no date), accessed at <https://www.cdc.gov/diabetes/prevention/lifestyle-program/experience/index.html>.
- 13 Centers for Disease Control and Prevention (CDC), *National Diabetes Prevention Program: Lifestyle Change Program Details, Time Commitment* (CDC, Atlanta, GA, no date), accessed at <https://www.cdc.gov/diabetes/prevention/lifestyle-program/experience/index.html>.
- 14 Centers for Disease Control and Prevention (CDC), *National Diabetes Prevention Program: Lifestyle Change Program Details, The Cost* (CDC, Atlanta, GA, no date), accessed at <https://www.cdc.gov/diabetes/prevention/lifestyle-program/experience/index.html>.
- 15 Medicare calls its benefit the Medicare Diabetes Prevent Program (MDPP). Medicare beneficiaries who are enrolled in Medicare Part B (medical insurance) are eligible for the MDPP benefit if they meet the following requirements: are overweight or obese;

have blood sugar laboratory values that indicate they have prediabetes; have no previous diagnosis of diabetes (except for gestational diabetes); and have not been diagnosed with end-stage renal disease. A lab value in the prediabetes range is determined by one of the following: a hemoglobin A1C test with a value between 5.7 and 6.4 percent; a fasting plasma glucose of 110–125 mg/dL; or a two-hour plasma glucose (glucose tolerance test) of 140–199 mg/dL. Centers for Medicare & Medicaid Services (CMS), *Medicare Diabetes Prevention Program, Expanded Model Fact Sheet* (CMS, Washington, DC, no date), accessed at https://innovation.cms.gov/Files/x/MDPP_Overview_Fact_Sheet.pdf. The core MDPP service consists of 16 sessions over a six-month period, during which program participants receive in-person practical training in long-term dietary change, increased physical activity, and problem-solving strategies for overcoming challenges to maintaining weight loss and a healthy lifestyle. The six-month core sessions are followed by another six months of in-person monthly maintenance sessions. Medicare beneficiaries who meet certain weight loss and attendance requirements are eligible a second year of in-person maintenance sessions

16 On April 1, 2018, the Centers for Medicare & Medicaid Services began offering an evidence-based lifestyle change programs called the Medicare Diabetes Prevention Program. In addition to being offered as a fee-for-service benefit, all Medicare health plans—including Program of All-Inclusive Care for the Elderly (PACE) providers—are required to cover the service for eligible beneficiaries.

17 Natalie D. Ritchie and Robert M. Gritz, “New Medicare Diabetes Prevention Coverage May Limit Beneficiary Access and Widen Disparities,” *Medical Care* 56, no. 11 (2018): 908–11.

18 Ibid.

Fact Sheet 647, November 2018

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