What Is Prediabetes?

Prediabetes is a condition in which blood glucose levels are high but lower than in type 2 diabetes.

How Common Is Prediabetes and What Are the Symptoms?

Prediabetes affects approximately 1 in 3 US adults and about 720 million individuals worldwide. People with prediabetes often have no symptoms, so most people with prediabetes do not know they have it.

Risk Factors for Prediabetes

Risk factors for prediabetes include

- Being older than 45 years
- Being overweight or obese
- Being physically active less than 3 times a week
- Eating an unhealthy diet
- Having a parent or sibling with type 2 diabetes
- Having a history of diabetes during pregnancy (gestational diabetes) or giving birth to an infant weighing more than 9 pounds
- Having polycystic ovary syndrome

How Is Prediabetes Diagnosed?

Prediabetes is diagnosed by a blood test that checks a person's blood glucose level, typically with either a fasting glucose measurement or a hemoglobin A_{1c} (HbA_{1c} or "A_{1c}") measurement.

Who Should Be Screened for Prediabetes?

The US Preventive Services Task Force (USPSTF) recommends that adults aged 35 to 70 years who are overweight or obese should be screened for prediabetes with blood testing every 3 years.

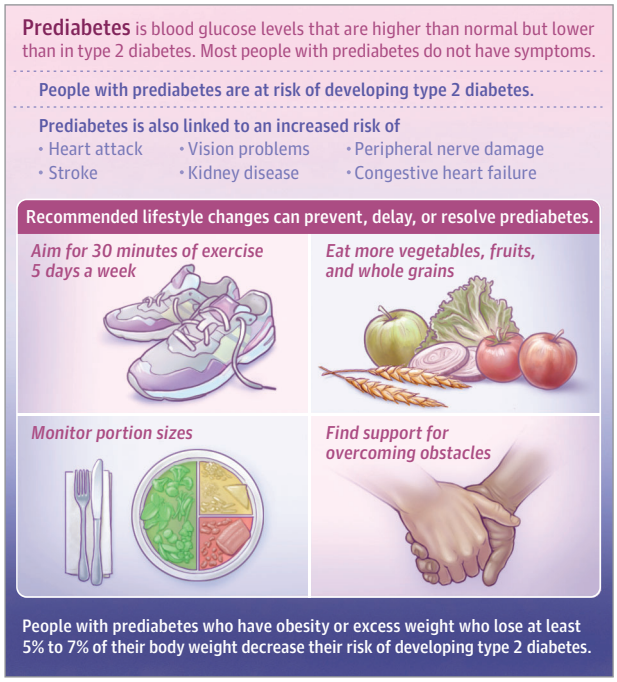
Potential Consequences of Prediabetes

In the US, about 10% of people with prediabetes develop diabetes each year. Prediabetes is also linked to an increased risk of heart attack, congestive heart failure, stroke, kidney disease, peripheral nerve damage (often causing numbness and pain in the feet), and problems with vision.

What Lifestyle Changes Are Recommended?

Prediabetes can be improved in some individuals who make serious long-term changes to their lifestyle. Recommended lifestyle changes include being more physically active each day (aim for 30 minutes of exercise 5 days a week); eating healthier food (vegetables, fruits, whole grains); monitoring portion sizes; and finding support for overcoming psychological, social, and motivational obstacles.

People with prediabetes who lose at least 5% to 7% of their body weight decrease their chance of developing type 2 diabetes. The Centers for Disease Control and Prevention (CDC) has a National Diabetes Prevention Program that offers group support, a lifestyle coach, and a weekly lifestyle curriculum developed by the CDC.



Are There Medications for Prediabetes?

Although no medication is currently approved by the US Food and Drug Administration (FDA) for treatment of prediabetes, some people with prediabetes who have other health conditions such as high blood pressure or obesity may benefit from medications such as metformin or glucagon-like peptide 1 (GLP-1) receptor agonists. It is important to note that the lifestyle changes outlined above appear to be more effective in reversing prediabetes and preventing progression to diabetes than medications alone.

FOR MORE INFORMATION

Centers for Disease Control and Prevention
www.cdc.gov/diabetes/basics/prediabetes.html and
www.cdc.gov/diabetes/prevention/index.html

Author: Jill Jin, MD, MPH
Published Online: December 1, 2023. doi:10.1001/jama.2023.17846
Author Affiliation: Associate Editor, *JAMA*.
Conflict of Interest Disclosures: None reported.