Fast Facts

In the United States:

- About 21 million people know they have diabetes.¹
- Another 8 million people have diabetes without knowing it.¹
- About 86 million adults have prediabetes.¹
- The lifetime risk of adults developing diabetes is about 40%.²
- Diabetes is the seventh leading cause of death.²

Diabetes in Young People

The growing number of children and young people with both types of diabetes is of great concern. In people younger than 20 years of age in 2012, about 208,000 (0.25%) had diabetes.¹

The Diabetes Epidemic

Diabetes has been on the increase in the last 30 years. The number of adults with diabetes has grown nearly 4-fold.² At the same time, the number of obese adults has also increased. Scientists believe these two trends are related. Given the magnitude of the diabetes and obesity epidemics, as many as one-third of adults could have diabetes by the year 2050.² But this story has a silver lining. Early diagnosis and intervention can help reduce the number of cases. So they could help stem the tide of this epidemic.

The Importance of Detecting Prediabetes

People almost always have prediabetes before they get type 2 diabetes. In this stage, blood glucose levels are above normal but not high enough to be considered diabetes.

Studies have shown that taking action at this stage can reduce the incidence of diabetes. Action can take the form of lifestyle changes such as weight loss and increased physical activity. Changes in diet plus 150 minutes of moderate exercise a week can reduce diabetes risk by 58%.³ Metformin can also be used to reduce risk.³ Thus, early detection of prediabetes is critical.

Risk Factors for Prediabetes and Diabetes

The risk factors for prediabetes and diabetes are very similar. They include:

- Being 45 years of age or older
- Having a family history of type 2 diabetes
- Being overweight or obese
- Having high blood pressure
- Having abnormal blood lipids
- Being inactive
- Being a member of certain racial/ethnic backgrounds⁴
- Having polycystic ovary syndrome
- Having gestational diabetes during a pregnancy
- Giving birth to a baby weighing more than 9 pounds
- Some sleep problems

⁴Includes Asian, African American, Hispanic, Native American, and Pacific Islander.
Screening for Prediabetes and Diabetes

For many years, only blood glucose and/or oral glucose tolerance tests were recommended by guidelines. However, testing for hemoglobin A1c is now also widely used. It measures the amount of glucose bound to hemoglobin. It’s high when the average blood glucose level is high over the preceding 2 to 3 months.

Blood glucose and oral glucose tolerance tests are sensitive. But they reflect only short-term glucose levels. They also require fasting or glucose loading and give variable results during stress and illness.

The hemoglobin A1c test doesn’t require fasting or glucose loading. Guidelines recommend its use for screening for prediabetes and diagnosing diabetes because it:

- Estimates average glucose levels over a longer term than glucose testing
- Changes less than glucose levels during stress and illness
- Is more specific than glucose testing for identifying people at increased risk

Despite its value, hemoglobin A1c is not a perfect test. Results are inaccurate in some conditions such as anemia and malaria. In addition, hemoglobin A1c doesn’t measure blood glucose fluctuations after meals. Scientists think these are linked to increased risk for problems with blood vessels and the heart.

Results from glucose and hemoglobin A1c tests don’t always agree. So many doctors use both. Together they identify more people with prediabetes or diabetes than does either test alone.5,6

How the Laboratory Can Help

Quest Diagnostics offers tests for blood glucose, glucose tolerance, and hemoglobin A1c. Quest also offers a test to determine the diabetes risk score: Diabetes Risk Panel with Score. It can be ordered with or without the Cardio IQ® report and can be used to:

- Diagnose prediabetes
- Assess risk for developing type 2 diabetes within 8 years
- Identify people who could benefit from lifestyle changes and/or medication
- It includes fasting glucose level, lipid measurements, and hemoglobin A1c. It also includes an 8-year risk score for developing type 2 diabetes. The score is based on test results and clinical and family history data. It’s calculated by adding points for each risk parameter. This test can be used for people 30 to 79 years of age.

References