

# What You Should Know About Diabetes

**D** iabetes is a common disease. About 9.3 million U.S. women—nearly nine out of every 100 women over age 20 years—have it, and about one in three don't even know they do. The numbers have been growing steadily for at least 20 years. Most women with diabetes are 45 years old or older, but the number of younger women, and even children, with diabetes is increasing as well. What is diabetes? Should you be tested for it? Can it be prevented?

## Diabetes Defined

Diabetes is a chronic (lifelong) disease that causes high levels of sugar in the bloodstream. Over the years, diabetes damages the nerves and blood vessels, resulting in problems with vital organs such as the kidneys, heart, brain, and eyes. By the time that most people are diagnosed with diabetes, damage has already occurred. So, it makes sense to have diabetes detected early, to avoid or delay problems later on.

To understand diabetes, you need to know that the food you eat is changed into a sugar called glucose in the body. In order to use the glucose as your body's fuel source, special cells in your pancreas (a gland located behind your stomach) produce insulin. In people with diabetes, the pancreas does not produce enough insulin, the body becomes resistant to the insulin and cannot

respond to it properly, or both. Therefore, too much glucose remains in the bloodstream.

There are three main types of diabetes:

- In Type 1 diabetes, the pancreas makes little or no insulin. This type usually affects children and must be treated with daily insulin injections. It almost always causes symptoms, such as being very hungry but losing weight despite eating more, being extremely thirsty, and urinating excessively.
- Most people (90%) have Type 2 diabetes, which mainly affects adults. In Type 2 diabetes, the pancreas is usually able to produce some insulin. Type 2 and gestational diabetes often cause no symptoms.
- Gestational diabetes occurs during pregnancy in women who did not previously have diabetes. It usually goes away after the baby is delivered. However, women who have gestational diabetes are more likely than those who do not to develop Type 2 diabetes later.

## Risk Factors For Diabetes

Women and men with certain conditions in their personal or family health history are more likely than those with-

out them to develop Type 2 diabetes. These are called "risk factors." Having one or more of the following risk factors means you are more prone to diabetes than others without them.

- An immediate family member—parent, brother, or sister—with diabetes.
- Being overweight.
- Being older than age 45 years.
- Belonging to certain ethnic groups—Hispanic American, black, Native American, Asian American, Pacific Islander.
- Having had gestational diabetes or delivered a baby weighing more than 9 pounds at birth.
- Having a particular type of abnormal cholesterol problem—high triglycerides and/or low high-density lipoprotein cholesterol.
- Having polycystic ovary syndrome, a condition that causes infrequent menstrual periods, difficulty getting pregnant, and numerous small cysts on the ovaries.
- Physical inactivity.
- High blood pressure.
- A history of vascular disease—circulation problems diagnosed by a health care provider.

To determine your personal risk of diabetes, take the Diabetes Risk Test at <http://ndep.nih.gov/ddi/resources/risk-test.pdf>.

## Who Should Be Tested? Why? When? How?

Since diabetes is such a common and increasing problem, why not test everyone? Although it may seem like a good idea, there are drawbacks to testing everyone for diabetes. For one thing, it

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would be expensive. Also, as with other tests, false-positive and false-negative results can occur. A false-positive test is one that indicates diabetes in someone who actually does not have it. So some women and men would be told they have diabetes when they actually did not, necessitating more tests, more costs, and unnecessary anxiety.

Women and men with false-negative tests—showing they did not have diabetes when they actually do—might be falsely reassured and miss the opportunity to get early treatment.

Those who develop diabetes symptoms should, of course, be tested.

Women and men without symptoms who have one or more of the risk factors discussed above should have a blood test for diabetes, regardless of their age. It is also recommended that everyone over age 45 years be tested every 3 years, even if they have no other risk factors.

The diabetes blood test may also tell if you are likely to develop the disease in the future, a condition called prediabetes. This can give you the information and the motivation you need to reduce your risk factors.

These are the tests most commonly used to diagnose diabetes:

**Fasting Blood Glucose.**—This blood test is performed when you have not eaten (fasted) for 12 hours. If you have any of the risks described above and are planning to see your health care provider, it is a good idea to schedule your appointment for the morning, before you've eaten. (This is also the best time to do cholesterol testing.) A normal fasting blood glucose level is less than 100 mg/dL. A result above 126 mg/dL means you are likely to have diabetes, but one test is not enough to make the diagnosis. The test should be repeated on a different day for confirmation. A result below 126 mg/dL but above 100 mg/dL is classified as prediabetes. Although not

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all people with prediabetes will later develop diabetes, this diagnosis gives you a “second chance” to change your risk factors and maybe prevent the disease.

### **Casual, or Random, Blood**

**Glucose.**—Sometimes it is easier to have a diabetes blood test right away, even if you have already eaten, rather than come back another day. A casual blood glucose level at or above 200 mg/dL, especially if you have symptoms, strongly suggests that you do have diabetes. As above, the test will usually be repeated fasting on a different day to make sure of the diagnosis.

### **Two-hour Post Glucose Challenge**

**Test.**—If you have been through a pregnancy, you probably remember this test. You drink a bottle of glucose solution, and 2 hours later a blood sample is taken. This test, used to diagnose gestational diabetes, may also be used to confirm the results of an abnormal fasting or casual glucose test, or as an initial test for women with multiple risk factors for diabetes.

### **Prevention: What To Do About Risk Factors Or Prediabetes**

If your tests show you have diabetes, you should get treatment for this condition. Treatment may include medication; it will certainly include learning to decrease or control factors that contribute to the diabetes. Help with these life-style measures is available at The National Diabetes Information Clearinghouse (see Resources box,

below). Here are some things you can do that probably sound familiar:

- If you're overweight (you can find out at <http://www.cdc.gov/nccd/php/dnpa/bmi/calc-bmi.htm>), get your weight closer to or into a healthier range. Losing even a small amount of weight (e.g., 5 or 10 pounds), and keeping it off, reduces your risk of diabetes, or helps control diabetes if you already have it.
- Stop smoking (get help at <http://www.4woman.gov/QuitSmoking/>)
- Begin exercising; keep it up for life.
- Control your cholesterol levels, with diet, exercise, and if necessary, medication.
- Control your blood pressure, with diet, exercise, weight control, and if necessary, medication.

If your test shows prediabetes—or if you have neither diabetes nor prediabetes but do have risk factors—you may be able to prevent or delay developing diabetes by making the life-style changes above. In fact, don't wait until you're diagnosed with diabetes or prediabetes to get started. Do it now.

## Resources

### **Centers for Disease Control and Prevention Public Inquiries**

1-877-CDC-DIAB  
<http://www.cdc.gov/diabetes/consumer/index.htm>

### **National Diabetes Information Clearinghouse**

1-800-860-8747  
<http://diabetes.niddk.nih.gov/>

### **American Diabetes Association**

1-800-DIABETES (1-800-342-2383)

[www.diabetes.org](http://www.diabetes.org)

### **Joslin Diabetes Center**

[www.joslin.org](http://www.joslin.org)

