

Diabetes and Women



ACOG PATIENT EDUCATION

About 15 million Americans have diabetes (also called diabetes mellitus). It is a condition that causes high levels of **glucose** in the blood. Health problems can arise if the glucose level becomes too high or is not well controlled. Only about half of the people with diabetes have been tested and given a diagnosis. Knowing the warning signs of diabetes and how to help prevent it is the key to staying healthy. This pamphlet explains:

- Types of diabetes
- Symptoms of the disease
- How it can be prevented



If you are at risk of getting diabetes, get tested.

What Is Diabetes?

Diabetes is a disease in which the body does not make enough insulin or does not use it as it should. Insulin is a *hormone* that helps balance the amount of glucose in your blood.

Normally, your body changes most of the food you eat into glucose. Glucose is then carried to the body's cells with the help of insulin. If your body does not make enough insulin, or the insulin does not work as it should, the glucose cannot enter the body's cells. Instead, it stays in the blood. This makes your blood glucose level too high.

In some cases, diabetes may first occur during pregnancy. This is called gestational diabetes. In most cases, gestational diabetes goes away after the baby is born. However, women who develop diabetes during pregnancy are at greater risk for diabetes later in life. There are two types of diabetes: type 1 and type 2.

Type 1 Diabetes

Type 1 diabetes also is known as insulin-dependent diabetes. A person with type 1 diabetes needs to take insulin to survive because their body makes little or no insulin on its own. Type 1 accounts for 10% of all cases of diabetes.

Type 2 Diabetes

Type 2 diabetes also is known as non-insulin-dependent diabetes. In type 2 diabetes, insulin is produced, but it does not work as it should. The body becomes resistant to the effects of insulin and produces more insulin to keep glucose levels normal. Over time, the body cannot maintain high enough levels to keep the glucose levels normal, and diabetes occurs. Type 2 diabetes also may occur as a result of other diseases or as a side effect of certain medications.

People with type 2 diabetes may not need to take insulin. They may be able to control their glucose with proper diet, medication, or both.

Risk Factors

Diabetes can occur at any age. Some people develop diabetes as children or teens. Most cases of diabetes (90%) occur in adults aged 45 years or

Are You at Risk for Diabetes?

To find out if you are at risk, write in the points next to each statement that is true for you. If a statement is not true, write a zero. Next add all the points to get your total score.

- | | |
|---|-----------------|
| 1. My BMI is above normal | True ____ 5 pts |
| 2. I am younger than 65 years and I get little or no exercise during a usual day. | True ____ 5 pts |
| 3. I am between 45 and 64 years of age. | True ____ 5 pts |
| 4. I am 65 years of age or older. | True ____ 9 pts |
| 5. I am a woman who has had a baby weighing more than 9 pounds at birth. | True ____ 1 pt |
| 6. I have a sister or brother with diabetes. | True ____ 1 pt |
| 7. I have a parent with diabetes. | True ____ 1 pt |

Scoring 3–9 points

You are probably at low risk for having diabetes now. But do not forget about it—especially if you are African American, Hispanic, Native American, Asian, or Pacific Islander. Keep your risk low by losing weight if you are overweight, being active most days, and eating low-fat meals that are high in fruits, vegetables, and whole grains.

Scoring 10 or more points

You are at high risk for having diabetes. Only your health care provider can check to see if you have diabetes. See your doctor soon and find out for sure.

Adapted from American Diabetes Association. American Diabetes Association's diabetes risk test. Alexandria, VA: ADA, 1999

older. Some people have an increased risk of developing diabetes. It may run in families or be linked to certain lifestyle factors. You should be tested if you have any of these risk factors:

- Age 45 years or older
- Overweight
- Family history of diabetes
- Physical inactivity
- Ethnic background:
 - Native American
 - Asian
 - Hispanic
 - African American
 - Pacific Islander
- Previous abnormal glucose screening results
- High blood pressure
- High cholesterol
- History of gestational diabetes or a baby weighing more than 9 pounds at birth
- *Polycystic ovary syndrome*
- History of *cardiovascular disease*

Take the quiz in the box to see if you are at risk for diabetes. If you are at risk, get tested.

Symptoms

The symptoms of type 1 and type 2 diabetes often are alike (see box). Type 2 diabetes is harder to detect than type 1. In some cases, there are no symptoms with type 2 diabetes, or symptoms can be so mild that they are not noticed. If symptoms occur, it often is because blood glucose levels are very high.

Testing

Blood glucose testing can detect a high level of glucose in the blood. If the blood test shows you have a high level of glucose, it may mean you have diabetes. There are three types of tests used to diagnose diabetes:

1. Fasting plasma glucose test—This is the easiest and most common way to test for diabetes.

Before the test, you must fast (not eat or drink anything but water) for at least 8 hours. One sample of blood is obtained.

2. Random, also called casual, plasma glucose test—Your doctor may screen you when you are not fasting by measuring your glucose levels.
3. Oral glucose tolerance test—Before you have this test, you must fast overnight. You will first have a fasting plasma glucose test and drink a sweet-tasting liquid that contains glucose. Blood samples are taken to measure your blood glucose over several hours.

If you are aged 45 years and older, you should be tested for diabetes every 3 years. If you have other risk factors, you may get tested more often.

Prevention

To help prevent diabetes, follow a healthy diet and get regular exercise. This also can help keep your weight down—a key part of preventing diabetes.

Symptoms of Diabetes

Type 1

- Increased thirst or urination
- Constant hunger
- Weight loss without trying
- Blurred vision
- Extreme fatigue

Type 2

- Any symptoms of type 1 diabetes
- Sores that are slow to heal
- Dry, itchy skin
- Loss of feeling or tingling in feet
- Infections, such as a yeast infection, that keep coming back

There are steps you can take to help prevent the disease:

- Keep your weight in the range that is healthy for you. Many doctors use the body mass index (BMI) chart to assess healthy weight (see box).
- Eat a well-balanced diet to help keep your cholesterol, blood pressure, and weight at a healthy level.
- Try to exercise for at least 30 minutes on most days of the week.

Problems

If your test results show you have diabetes, talk to your doctor about treatment to control your diabetes. If diabetes is not controlled, long-term, severe health problems may occur:

- Kidney disease that can lead to high blood pressure or kidney failure
- Eye problems that can lead to blindness
- Nerve damage and blood vessel damage in the feet that can cause pain, numbness, infection, and possibly the need to remove a toe, foot, or leg
- High blood cholesterol levels that can lead to stroke and heart disease
- Certain infections, such as bladder or kidney infections, vaginal infections, yeast infections, and skin infections
- Problems in pregnancy
- Thyroid problems

The best defense against these problems is keeping your blood glucose at a normal level and taking good care of yourself. This often can be done with lifestyle changes, but may require taking medications.

Special Concerns During Pregnancy

If you have diabetes, preparing for pregnancy can improve your health and that of your future child. Plan to see your doctor before you get pregnant to discuss your care. You should try to have good control over your glucose level a number of weeks before you become pregnant. Your doctor may sug-

gest changes in your care that will help lower your glucose to a normal range.

The organs of a fetus begin to develop as soon as you become pregnant, before you may even know you are pregnant. This development can be affected by poorly controlled glucose levels in the weeks before conception or the first few weeks of your pregnancy.

Your doctor will help you monitor your blood glucose levels both before and during your pregnancy. If your glucose levels are high, you will be

Health Care for Women With Diabetes Planning a Pregnancy

Your doctor may want to make some changes to your health care to better control your glucose levels. He or she may suggest you:

- Monitor glucose levels more often. You may be asked to check your glucose level more times a day than you have been doing.
- Increase intake of folic acid. You may be advised to take more than the recommended 0.4 milligrams a day of folic acid. Folic acid may help prevent certain birth defects called neural tube defects. It can be taken as a vitamin or can be found in certain foods such as leafy, dark-green vegetables, citrus fruits, beans, and bread.
- Change in work and lifestyle. You may be asked to stop any strenuous work and to stop any habits that could harm the pregnancy.
- Change your diet. The kinds of food you eat as well as how often a day you eat will affect your glucose levels. Your doctor may make changes in your diet to control your levels.
- Change in medications. If you are taking certain medications, you may need to switch to others. This may include those bought over-the-counter.

Body Mass Index Chart

The body mass index (BMI) compares a person's height to their weight to see if they are overweight. Having a BMI of 20–24 is normal, and 25–29.9 is overweight. A person with a score of 30 or higher is obese. To calculate your BMI, find your height in inches in the left column. Next look across the line to find your weight in pounds. The number at the top of that column is your BMI.

	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Height (inches)	Weight (pounds)													
58	91	96	100	105	110	115	119	124	129	134	138	143	148	153
59	94	99	104	109	114	119	124	128	133	138	143	148	153	158
60	97	102	107	112	118	123	128	133	138	143	148	153	158	163
61	100	106	111	116	122	127	132	137	143	148	153	158	164	169
62	104	109	115	120	126	131	136	142	147	153	158	164	169	175
63	107	113	118	124	130	135	141	146	152	158	163	169	175	180
64	110	116	122	128	134	140	145	151	157	163	169	174	180	186
65	114	120	126	132	138	144	150	156	162	168	174	180	186	192
66	118	124	130	136	142	148	155	161	167	173	179	186	192	198
67	121	127	134	140	146	153	159	166	172	178	185	191	198	204
68	125	131	138	144	151	158	164	171	177	184	190	197	203	210
69	128	135	142	149	155	162	169	176	182	189	196	203	209	216
70	132	139	146	153	160	167	174	181	188	195	202	209	216	222
71	136	143	150	157	165	172	179	186	193	200	208	215	222	229
72	140	147	154	162	169	177	184	191	199	206	213	221	228	235
73	144	151	159	166	174	182	189	197	204	212	219	227	235	242
74	148	155	163	171	179	186	194	202	210	218	225	233	241	249

(National Heart, Lung, and Blood Institute. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity. U.S. Department of Health and Human Services, 1998).

advised to wait until they are in the normal range before you get pregnant. The normal range for pregnancy is lower than when you are not pregnant. It may take weeks or months to get your blood glucose to a normal level and keep it stable throughout the day. Be patient. This control is vital for the growth of a healthy baby. If your blood glucose level is in the normal range during pregnancy, you will have as good a chance as anyone (even someone who does not have diabetes) to have a healthy child.

If You Have Diabetes

There are many ways to help reduce the risk of problems. You can stay healthy by:

- Reaching and keeping a healthy weight.
- Eating healthy, low-fat foods.
- Getting regular exercise.
- Not smoking.

- Checking your feet each day. Prevent ingrown toenails, corns, and calluses on your feet to reduce the risk of infection.
- Getting regular health care. Have your feet, eyes, and kidneys checked by a doctor on a routine basis.
- Keeping your blood glucose level close to normal. If glucose cannot be controlled through weight loss, diet, exercise, or oral medication, insulin therapy may be needed. Insulin can be given by injection or pump.
- Asking your doctor about thyroid testing.

Finally...

If you are at risk of getting diabetes, get tested. You can lower your risk by keeping your weight down, eating a healthy diet, exercising, and getting regular checkups from your doctor. If you have diabetes, get care from a doctor to keep it under control and help prevent long-term problems.

Glossary

Cardiovascular Disease: Disease of the heart and blood vessels.

Glucose: A sugar that is present in the blood and is the body's main source of fuel.

Hormone: Substance produced by the body to control the functions of various organs.

Polycystic Ovary Syndrome (PCOS): A condition in which increased androgen occurs and eggs are not released from the ovaries.