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1-800-994-9662

TDD: 1-888-220-5446

Diabetes



Maria, a 25-year-old with type 1 diabetes, wanted children. Maria's doctor told her that before she got pregnant, her blood glucose (sugar) should

be close to normal and her kidneys, eyes, and blood pressure should be checked. Maria began to watch her diabetes very closely. She checked her blood glucose four times a day, ate healthy meals, and began to walk a lot.

Once Maria became pregnant, she spent a lot of time taking care of her diabetes. Her hard work paid off. Nine months later, she gave birth to a healthy baby girl.



Rose is 55-years-old and teaches at a junior high school on an American Indian reservation in New Mexico. Rose has had type 2 diabetes for almost 10 years. When

she first found out she had diabetes, she weighed too much and didn't get much exercise. After talking it over with her doctor, Rose began an exercise program. She lost weight, and her blood glucose began to come down. She felt better too. Now Rose teaches an exercise class in her spare time.

Q: What is diabetes?

A: Diabetes means that your blood glucose (sugar) is too high. Your blood always has some glucose in it because the body uses glucose for energy; it's the fuel that keeps you going. But too much glucose in the blood is not good for your health.

Your body changes most of the food you eat into glucose. Your blood takes the glucose to the cells throughout your body. The glucose needs insulin to get into the body's cells. Insulin is a hormone made in the pancreas, an organ near the stomach. The pancreas releases insulin into the blood. Insulin helps the glucose from food get into body cells. If your body does not make enough insulin or the insulin does not work right, the glucose can't get into the cells, so it stays in the blood. This makes your blood glucose level high, causing you to have diabetes.

If not controlled, diabetes can lead to blindness, heart disease, stroke, kidney failure, amputations (having a toe or foot removed, for example), and nerve damage. In women, diabetes can cause problems during pregnancy and make it more likely that your baby will be born with birth defects.

Q: What is pre-diabetes?

A: Pre-diabetes means your blood glucose is higher than normal but lower than the diabetes range. It also means you are at risk of getting type 2 diabetes and heart disease. There is good news though: You can reduce the risk of getting diabetes and even return to nor-



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mal blood glucose levels with modest weight loss and moderate physical activity. If you are told you have pre-diabetes, have your blood glucose checked again in 1 to 2 years.

Q: What are the different types of diabetes?

A: The three main types of diabetes are:

- **Type 1 diabetes** is commonly diagnosed in children and young adults, but it's a lifelong condition. If you have this type of diabetes, your body does not make insulin, so you must take insulin every day. Treatment for type 1 diabetes includes taking insulin shots or using an insulin pump, making healthy food choices, getting regular physical activity, taking aspirin daily (for many people), and controlling blood pressure and cholesterol levels.
- **Type 2 diabetes** is the most common type of diabetes — about 9 out of 10 people with diabetes have type 2 diabetes. You can get type 2 diabetes at any age, even during childhood. In type 2 diabetes, your body makes insulin, but the insulin can't do its job, so glucose is not getting into the cells. Treatment includes taking medicine, making healthy food choices, getting regular physical activity, taking aspirin daily (for many people), and controlling blood pressure and cholesterol levels. If you have type 2 diabetes, your body generally produces less and less insulin over time. This means that you may need to increase your medications or start using insulin in order to keep your diabetes in good control.

- **Gestational (jess-TAY-shun-ul) diabetes** occurs during pregnancy. This type of diabetes occurs in about 1 in 20 pregnancies. During pregnancy your body makes hormones that keep insulin from doing its job. To make up for this, your body makes extra insulin. But in some women this extra insulin is not enough, so they get gestational diabetes. Gestational diabetes usually goes away when the pregnancy is over. Women who have had gestational diabetes are very likely to develop type 2 diabetes later in life.

Q: Who gets diabetes?

A: About 24 million Americans have diabetes, about half of whom are women. As many as one quarter do not know they have diabetes.

Type 1 diabetes occurs at about the same rate in men and women, but it is more common in Caucasians than in other ethnic groups.

Type 2 diabetes is more common in older people, mainly in people who are overweight. It is more common in African Americans, Hispanic Americans/Latinos, and American Indians.

Q: What causes diabetes?

A: Type 1 and type 2 diabetes — The exact causes of both types of diabetes are still not known. For both types, genetic factors make it possible for diabetes to develop. But something in the person's environment is also needed to trigger the onset of diabetes. With type 1 diabetes, those environmental triggers are unknown. With type 2 diabetes, the exact cause is also unknown, but it



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is clear that excess weight helps trigger the disease. Most people who get type 2 diabetes are overweight.

Gestational diabetes — Changing hormones and weight gain are part of a healthy pregnancy, but these changes make it hard for your body to keep up with its need for insulin. When that happens, your body doesn't get the energy it needs from the foods you eat.

Q: Am I at risk for diabetes?

A: The risk factors for type 1 diabetes are unknown. Things that can put you at risk for type 2 diabetes include:

- **Age** — being older than 45
- **Overweight or obesity**
- **Family history** — having a mother, father, brother, or sister with diabetes
- **Race/ethnicity** — your family background is African American, American Indian/Alaska Native, Hispanic American/Latino, Asian American/Pacific Islander and Native Hawaiian
- **Having a baby with a birth weight more than 9 pounds**
- **Having diabetes during pregnancy (gestational diabetes)**
- **High blood pressure** — 140/90 mmHg or higher. Both numbers are important. If one or both numbers are usually high, you have high blood pressure.
- **High cholesterol** — total cholesterol over 240 mg/dL
- **Inactivity** — exercising less than 3 times a week
- **Abnormal results in a prior dia-**

betes test

- **Having other health conditions that are linked to problems using insulin, like Polycystic Ovarian Syndrome (PCOS)**
- **Having a history of heart disease or stroke**

Q: Should I be tested for diabetes?

A: If you're at least 45 years old, you should get tested for diabetes, and then you should be tested again every 3 years. If you're 45 or older and overweight (Calculate your Body Mass Index) you may want to get tested more often. If you're younger than 45, overweight, and have one or more of the risk factors listed in "Am I at Risk for Diabetes?" you should get tested now. Ask your doctor for a fasting blood glucose test or an oral glucose tolerance test. Your doctor will tell you if you have normal blood glucose (blood sugar), pre-diabetes, or diabetes.

Q: What are the signs of diabetes?

- A:**
- being very thirsty
 - urinating a lot
 - feeling very hungry
 - feeling very tired
 - losing weight without trying
 - having sores that are slow to heal
 - having dry, itchy skin
 - losing feeling in or having tingling in the hands or feet
 - having blurry vision
 - having more infections than usual

If you have one or more of these signs, see your doctor.



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Q: How can I take care of myself if I have diabetes?

A: Many people with diabetes live healthy and full lives. By following your doctor's instructions and eating right, you can too. Here are the things you'll need to do to keep your diabetes in check:

- **Follow your meal plan** — Eat lots of whole grain foods, fruits, and vegetables.
- **Get moving** — Health benefits are gained by doing the following each week:
 - 2 hours and 30 minutes of moderate intensity aerobic physical activity
 - or*
 - 1 hour and 15 minutes of vigorous-intensity aerobic physical activity
 - or*
 - A combination of moderate and vigorous-intensity aerobic physical activity
 - and*
 - Muscle strengthening activities on 3 days
- **Test your blood glucose** — Keep track of your blood glucose levels and talk to your doctor about ways to keep your levels on target. Many women report that their blood glucose levels go up or down around their period. If you're going through menopause, you might also notice your blood glucose levels going up and down.
- Take your diabetes medicine exactly as your doctor tells you.

Talk to your doctor about other things you can do to take good care of yourself. Taking care of your diabetes can help prevent serious problems in your eyes, kidneys, nerves, gums and teeth, and blood vessels.

Q: How can I take care of myself if I have gestational diabetes?

A: Taking care of yourself when you have gestational diabetes is very much like taking care of yourself when you have other types of diabetes. But it can be a little scary when you're pregnant and you also have a new condition to take care of. Don't worry. Many women who've had gestational diabetes have gone on to have healthy babies. Here are the things you'll need to do:

- **Follow your meal plan** — You will meet with a dietitian or diabetes educator who will help you design a meal plan full of healthy foods for you and your baby. You will be advised to:
 - limit sweets
 - eat often — three small meals and one to three snacks every day
 - be careful about the carbohydrates you eat — your meal plan will tell you when to eat carbohydrates and how much to eat at each meal and snack
 - eat lots of whole grain foods, fruits, and vegetables
- **Get moving** — try to be active for at least 2 hours and 30 minutes each week. If you're already active, your doctor can help you make an exercise plan for your pregnancy. If you haven't been active in the past, talk to your doctor. Your doctor can



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suggest activities, such as swimming or walking, to help keep your blood glucose on track.

- **Test your blood glucose** — Your doctor may ask you to use a small device called a blood glucose meter to check your blood glucose levels. You will be shown how to use the meter to check your blood glucose. Your diabetes team will tell you what your target blood glucose range is, how often you need to check your blood glucose, and what to do if it is not where it should be.

The following chart shows blood glucose targets for most women with gestational diabetes. Talk with your health care team about whether these targets are right for you.

Blood glucose targets for most women with gestational diabetes	
On awakening	not above 95 mg/dL
1 hour after a meal	not above 140 mg/dL
2 hours after a meal	not above 120 mg/dL

- Each time you check your blood glucose, write down the results in a record book. Take the book with you when you visit your health care team. If your results are often out of range, your health care team will suggest ways you can reach your targets.
- **Take your diabetes medicine exactly as your doctor tells you.** You may need to take insulin to keep your blood glucose at the right level. If so, your health care team will show you how to give yourself

insulin shots. Insulin will not harm your baby—it cannot move from your bloodstream to your baby's.

Q: Is there a cure for diabetes?

A: There is no cure for diabetes at this time, but there is a great deal of research going on in hopes of finding cures for both type 1 and type 2 diabetes. Many different approaches to curing diabetes are being studied, and researchers are making progress.

Q: Is there anything I can do to prevent type 2 diabetes?

A: Yes. The best way to prevent diabetes is to make some lifestyle changes:

- **Maintain a healthy weight.** Being overweight raises your risk for diabetes. Calculate your Body Mass Index (BMI) to see if you're at a healthy weight. If you're overweight, start making small changes to your eating habits by adding more whole grain foods, fruits, and vegetables. Start exercising more, even if taking a short walk is all you can do for now. If you're not sure where to start, talk to your doctor. Even a relatively small amount of weight loss – 10 to 15 pounds – has been proven to delay or even prevent the onset of type 2 diabetes.
- **Eat healthy**
 - Eat lots of whole grains (such as whole wheat or rye bread, whole grain cereal, or brown rice), fruits, and vegetables.
 - Choose foods low in fat and cholesterol. Read food labels. If you eat 2,000 calories per day, you should eat no more than 56 grams of fat each day.



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- If you drink alcohol, limit it to no more than one or two drinks (one 12-ounce beer, one 5-ounce glass of wine, or one 1.5-ounce shot of hard liquor) a day.
- **Get moving.** Health benefits are gained by doing the following each week:
 - 2 hours and 30 minutes of moderate intensity aerobic physical activity
 - or*
 - 1 hour and 15 minutes of vigorous-intensity aerobic physical activity
 - or*
 - A combination of moderate and vigorous-intensity aerobic physical activity
 - and*
 - Muscle strengthening activities on 3 days

Some suggestions for fitting activity in:

- Take the stairs instead of the elevator.
- Take a brisk walk on your lunch break.
- Park at the far end of the parking lot and walk.
- Get off the bus or subway a few stops early and walk the rest of the way.
- Walk or bicycle whenever you can. ■



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For more information

For more information on diabetes, call the [womenshealth.gov](http://www.womenshealth.gov) Call Center at 1-800-994-9662 or contact the following organizations:

National Diabetes Information Clearinghouse, National Institute of Diabetes and Digestive and Kidney Diseases

Phone number: (800) 860-8747

Internet Address: <http://www.niddk.nih.gov/health/diabetes/diabetes.htm>

National Diabetes Education Program

Phone number: (800) 693-6337 (publications ordering)

Internet Address: <http://ndep.nih.gov/>

Centers for Disease Control and Prevention

Phone number: (800) 232-4636

Internet Address: <http://www.cdc.gov/diabetes/>

American Diabetes Association

Phone number: (800) 342-2383

Internet Address: <http://www.diabetes.org>

Juvenile Diabetes Foundation International

Phone number: (800) 533-2873

Internet Address: <http://www.jdf.org>

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