



Patient Information

Preventing Complications in Patients With Type 2 Diabetes

A diagnosis of diabetes mellitus (dyuh-bee-teez mel-et-uhss) means you have too much sugar, or glucose (glue-kose), in your blood. If you have type 1 diabetes, your body isn't making any insulin (in-suh-lin), the hormone that helps cells take in sugar from your bloodstream so it can be used as energy. If you have type 2 diabetes, your cells aren't responding to the insulin your body makes.

How do I know if I'm at risk?

Individuals with the following risk factors are at a greater risk of developing diabetes:

- Prediabetes—blood glucose levels that are higher than normal but not yet high enough to be diagnosed as diabetes
- Over age 45
- Family history
- Overweight
- Lack of regular exercise
- Low, high-density lipoprotein cholesterol, high triglycerides, or high blood pressure
- Women who had gestational diabetes or who have had a baby weighing 9 pounds or more at birth

What are the warning signs?

Common diabetes symptoms include:

- Excessive thirst and appetite
- Increased urination (sometimes as often as every hour)
- Unusual weight gain or loss
- Nausea, perhaps vomiting
- Blurred vision
- In women, frequent vaginal infections
- In men and women, yeast infections
- Dry mouth
- Slow-healing sores or cuts

What tests do I need?

With a disease like diabetes raising your risk for conditions that may affect your eyes, nerves, heart, teeth, and more, you want to keep track of your diabetes ABCs:

- **A1C.** Your doctor uses this test to measure your average blood sugar over the last 2 or 3 months. The goal is to keep your A1C around 6.5% without risking low blood sugar.
- **Blood Pressure.** Having diabetes puts you at greater risk of developing high blood pressure. Have your blood pressure checked 2 to 4 times a year to ensure that your blood pressure is at a healthy rate.
- **Cholesterol.** If you have diabetes, then you may be at risk for high cholesterol—a risk factor for heart disease and stroke. Have your cholesterol checked yearly.

How can I avoid problems?

Diabetes is a lifelong condition. Follow all of your doctor's instructions closely: Take your medications on time, stick to your diet and exercise plans, and keep all your appointments.

- **Medication.** Your doctor can determine whether or not you need medication to help treat your diabetes.
- **Lifestyle.** With a dietitian's help, you can learn how food affects your blood sugar. Talk with your doctor about how to safely incorporate exercise into your routine and about weight loss if you're overweight.
- **Monitoring your diabetes.** You can learn from your health care team how



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to monitor your blood sugar and what to do to avoid highs and lows.

How is it treated?

Your doctor may prescribe oral medications or an injectable drug such as insulin. Follow your doctor's guidelines on when to take your medication. Treatments may include:

Insulin:

- **Rapid-acting.** This type of insulin covers insulin needs for meals eaten at the same time as the injection and is used with longer-acting insulin.
- **Short-acting.** This type of insulin covers insulin needs for meals eaten within 30 to 60 minutes.
- **Intermediate-acting.** This type of insulin covers insulin needs for about half the day or overnight and is often combined with rapid- or short-acting insulin.
- **Long-acting.** This type of insulin covers insulin needs for about 1 full day and is often combined with rapid- or short-acting insulin, when needed.
- **Premixed.** This insulin is usually taken twice a day before mealtime.

Other injectable medications:

- **Glucagon (gloo-kuh-gon)-like peptide-1 receptor agonists.** These drugs help the pancreas make more insulin after eating a meal.
- **Incretin mimetics (ink-rit-in) (mih-met-ik).** These drugs act like the natural hormones in your body that lower blood sugar.
- **Amylin (am-ih-lin) analogues.** This type of drug helps control blood sugar after eating.

Oral medications:

- **Sulfonylureas (suhl-foh-nil-yoo-ree-us).** This medication lowers blood sugar by stimulating the pancreas to release

more insulin.

- **Biguanides (by-gwan-idez).** In addition to improving insulin's ability to move sugar into cells (particularly the muscle cells), this medication also prevents the liver from releasing stored sugar.
- **Thiazolidinediones (thy-uh-zuhl-uh-deen-dy-unz).** These drugs improve insulin's effectiveness (improving insulin resistance) in muscle and fat tissue and lower the amount of sugar released by the liver.
- **Alpha-glucosidase inhibitors (al-fuh-gloo-koh-sih-dayss) (in-hib-ih-turz).** This medicine blocks enzymes that help digest starches, which slows the rise in blood sugar.
- **Meglitinides (meh-glih-tih-nydz).** These drugs stimulate the pancreas to release more insulin, lowering blood sugar.
- **Dipeptidyl peptidase-4 (dy-pep-tih-dil) (pep-tih-dayss-for) (DPP-4) inhibitors (in-hib-ih-turz).** These drugs lower blood sugar in patients by increasing insulin secretion from the pancreas and reducing sugar production, signal the liver to stop producing excess amounts of sugar, and control sugar without causing weight gain.

Appropriate treatment for diabetes complications varies from person to person. For more information on preventing diabetes complications, visit the Web site of the American Diabetes Association (www.diabetes.org).

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