

DIABETES PREVENTION: THE DIET

Many people still believe that eating too much sugar causes diabetes. This misconception arises because diabetes is diagnosed by measuring blood sugar (glucose). But dietary sugar is only part of the picture. According to two recent Harvard studies, a diet rich in certain high-carbohydrate foods—those low in fiber and with a high glycemic index, increases the risk of Type 2 diabetes.

Research suggests that excessive amounts of carbohydrate-rich foods with a high glycemic index (ie: white bread, white rice, potatoes and sugary soft drinks) put pressure on the pancreas to produce more of the hormone insulin, which stimulates the body's cells to take in and store glucose. Over time, the body may become resistant to insulin. In such insulin-resistant people, the cells become less and less sensitive to insulin. This is characteristic of Type 2 diabetes. Of course, not everyone on a low-fiber, high starch diet develops diabetes. There seems to be a genetic predisposition to diabetes, which may be exacerbated by this kind of diet.

Obesity is probably the leading risk factor for Type 2 diabetes. Family history of the disease, advancing age, and lack of exercise are other important factors.

Bottom line: A diabetes-prevention diet, if there is one, is the same low-fat, high fiber, semi-vegetarian diet that is known to lower risk of heart disease and cancer.

The Glycemic Index

The glycemic index indicates how fast a high-carbohydrate food is digested into glucose and how much it causes blood glucose to rise. The index doesn't depend merely on whether the carbohydrates are simple (sugars) or complex (starches). Many factors come into play, including the amount of fiber and fat in the food, how refined the food is, how fast the food is digested, whether it was cooked, and what else is eaten with it. Table sugar and honey have a high glycemic index (meaning they have a strong effect on blood sugar). But so do raisins, corn, potatoes, carrots, white bread, instant rice and most refined cereals. Though sweet, apples and peaches, as well as beans, grapefruit, and peanuts have a low glycemic index. Pasta gets a middle rating, as does oatmeal. There is no reason to avoid foods with a high glycemic index—many are very nutritious. Even people predisposed to diabetes, or with the disease, can eat these foods in moderation.



Reference

University of California, Berkeley,

Wellness Letter

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DIABETES PREVENTION: THE TEST

Diabetes is about to become a concern for millions of middle-aged Americans who never gave it much thought before. The American Diabetes Association, backed by federal health authorities, recently called for routine screening of all Americans starting at age 45, using a simple, inexpensive test, in order to detect more cases of Type 2 diabetes earlier. This form of diabetes accounts for 90-95% of cases of diabetes. Until now, the disease has generally been diagnosed when people develop symptoms, such as unusual thirst or frequent urination, or when people at high risk for the disease (such as those with a family history of it) are tested for it. Now blood sugar testing may become as routine as blood pressure screening.

The Association has issued new guidelines that lower the cutoff points between normal, borderline, and high (diabetic) levels of blood sugar. That, combined with widespread screening, is expected to identify an additional 2 million Americans as diabetics. It's estimated that 14-16 million have diabetes, but half have not been diagnosed. And the half that have been diagnosed typically have the disease for seven years before it is diagnosed. Experts hope that early detection will identify cases when they are still mild. It's

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hoped that this way, before symptoms develop, people can take steps to minimize the subtle damage to organs and blood vessels caused by years of high blood sugar levels, and avoid later complications of diabetes, such as heart disease, hypertension, stroke, and diseases of the eyes, nerves, and kidneys, which often lead to premature death.

Diabetes is a breakdown in the body's ability to utilize glucose (blood sugar) efficiently. Glucose, the main sugar into which foods are digested, can be used by our cells only in the presence of the hormone insulin. With Type 2 diabetes, the cells become resistant to the effects of insulin, and thus blood levels of glucose rise. (With Type 1, which is usually diagnosed in young people, the body virtually stops producing insulin.) The incidence of Type 2 diabetes is on the rise, largely because the U.S. population is aging and getting heavier.

The new guidelines:

- If you are 45 or over, you should be tested every three years.
- You should be tested earlier and more frequently if you:

- ◆ are obese (more than 20% above healthy body weight). The obesity rate has risen dramatically during the past two decades and now includes one-third of Americans.
- ◆ have a parent or sibling with diabetes.
- ◆ are black, Hispanic, or Native American, or belong to another high-risk ethnic group.
- ◆ gave birth to a baby weighing more than nine pounds, or developed gestational diabetes during pregnancy.
- ◆ have high blood pressure (140/90 or higher)
- ◆ have an HDL ("good") cholesterol level of 35 or below and/or a blood triglyceride level of 250 or higher.
- The ADA recommends the fasting plasma glucose test (no food for 8 hours before) because it is simplest, cheapest (about \$10) and most likely to be utilized on a regular basis. The same vial of blood drawn for the test can be used to measure cholesterol and for other standard blood work, if needed.
- A result of 126 mg/dl or more, confirmed on a second day, means you have diabetes. The former guidelines set the cutoff at 140. Researchers now believe that serious problems linked to diabetes begin with test results in the mid-120s.

Blood Sugar

Less than 110

110-25

126 and above

Diagnosis

Normal

Impaired

Diabetes

- If you are diagnosed with diabetes in its early stages, you'll be advised to lose weight if you're overweight, exercise more, improve your diet (choose the same low-fat, semi-vegetarian diet that is known to lower the risk of heart disease and cancer) and quit smoking if you smoke. The goal of early detection is to avoid diabetes medications, or at least postpone or minimize their use, not merely to start drug therapy earlier.
- If your result is between 110 and 125, you fall into a new category called "impaired fasting glucose", a danger zone or borderline area. This means that you should take the same steps as outlined above, since blood sugar levels tend to rise with age. Here is where it may truly be possible to prevent diabetes.