

# Diabetes: Is It Inherited?



Diabetes often runs in families. Studies have revealed that while genetics do play a role in diabetes, what is inherited is a “pre-disposition” to the disease and not the disease itself. Studies show that genetics have a far stronger influence in Type 2 diabetes (non-insulin dependent) than in Type 1 diabetes (insulin dependent).

## **Type 1 Diabetes**

In Type 1 diabetes, people inherit risk factors from both parents. In addition to a genetic predisposition to the disease, researchers are studying the role environmental triggers play in developing the disease. One of those triggers is cold weather. Researchers note that Type 1 diabetes occurs more often in the winter and colder climates. Other factors that may trigger the onset of Type 1 diabetes include viruses and diet earlier in life. Many people who have Type 1 diabetes developed it later in life. Researchers have discovered that most people who develop diabetes have certain autoantibodies in their blood. Antibodies are proteins that destroy bacteria or viruses. Autoantibodies are antibodies that attack the body’s own tissue.

## **Type 2 Diabetes**

Type 2 diabetes has a stronger genetic basis than Type 1, but also depends on environmental factors. Family history is a strong indicator for getting Type 2 diabetes, but these risk factors play a larger role in people who have too much fat and carbohydrates in their diets and who get too little exercise.

Thirty-nine percent of people with Type 2 diabetes have a close family member with the disease. They may also have conditions commonly associated with diabetes such as high blood cholesterol and triglyceride levels, high blood pressure, or obesity. The lifetime risk that a first-degree relative (sister, brother, son, daughter) will develop diabetes is five to ten times higher than that of a person of similar age and weight who has no family history of diabetes.

In the case of gestational diabetes, women who get diabetes while they are pregnant are more likely to have a family history of diabetes, especially on their mother’s side. But as in all other forms, non-genetic factors play a role. Older mothers and overweight women are more likely to develop gestational diabetes.

## **What If There Is Family History?**

The American Diabetes Association recommends screening high-risk people every three years after the age of 45 for Type 2 diabetes. Risk factors include: a family history of Type 1 or Type 2 diabetes; or a personal history of gestational diabetes, obesity, inactivity, delivering a baby weighing 9 pounds or more, or having high blood pressure; or being of African, Hispanic, Native American, or Pacific Island descent.

People that meet these criteria should see their doctor for a fasting glucose test or a glucose tolerance test. These tests will determine if blood sugar levels are where they should be. If tests show blood sugar levels higher than they should be, the doctor may recommend a management plan that includes diet and exercise. They may recommend medications that will help the body use insulin more effectively, or may recommend insulin injections.

**For more information see the following websites:**

[www.diabetes.org/about-diabetes.jsp](http://www.diabetes.org/about-diabetes.jsp)

<http://www.mayoclinic.com/health/type-2-diabetes/DS00585/DSECTION=4>