

## What Is Type 1 Diabetes?

Type 1 diabetes occurs when the immune system destroys insulin-producing cells in the pancreas, leading to high blood glucose levels.

Type 1 diabetes accounts for 5% to 10% of all cases of diabetes; most cases of diabetes are type 2 diabetes.<sup>1</sup> Type 1 diabetes affects approximately 8.4 million people worldwide and approximately 2 million people in the US. Although type 1 diabetes can occur at any age, it is most commonly diagnosed in adolescence.

### What Are the Risk Factors for Type 1 Diabetes?

People who have a first-degree relative with type 1 diabetes are more likely to develop this disease, but 85% of people with type 1 diabetes do not have a first-degree relative with type 1 diabetes. Type 1 diabetes is more commonly diagnosed in the fall and winter, likely because viral infections, which are more common during these months, can increase blood glucose levels in people developing type 1 diabetes.

### What Are Common Symptoms of Type 1 Diabetes?

Patients with type 1 diabetes often have increased thirst, frequent urination, and unexplained weight loss. Other symptoms can include increased hunger, fatigue, and blurred vision. Young children may develop irritability, lethargy, and new-onset bed-wetting. At the time of diagnosis, up to 44% of children and 23% of adults have diabetic ketoacidosis, a serious medical condition that causes abdominal pain, nausea, and vomiting and requires hospitalization and treatment with intravenous insulin.

### How Is Type 1 Diabetes Diagnosed and Treated?

Type 1 diabetes is diagnosed based on symptoms and a random blood glucose level of 200 mg/dL or higher. For patients without symptoms, the diagnosis is made by 2 abnormal laboratory blood glucose test results, such as fasting blood glucose of 126 mg/dL or higher, blood glucose of 200 mg/dL or higher 2 hours after drinking a high-sugar drink, or hemoglobin A<sub>1c</sub> of 6.5% or higher. The diagnosis is confirmed by presence of specific blood antibodies targeting the pancreas, which are found in 90% to 95% of patients at diagnosis of type 1 diabetes.

People with type 1 diabetes need lifelong insulin treatment. Most patients in the US are currently treated with automated insulin pumps to decrease the risk of low blood glucose and to keep blood glucose levels within the fasting target range of 80 to 130 mg/dL and less than 180 mg/dL after meals. Insulin pumps provide continuous insulin that is adjusted throughout the day based on blood glucose levels recorded by a continuous glucose monitor attached to the skin. Alter-

**Type 1 diabetes** occurs when the immune system destroys insulin-producing cells in the pancreas, leading to high blood glucose levels.



Type 1 diabetes is most commonly diagnosed in adolescence. At diagnosis, patients often have increased thirst, frequent urination, and unexplained weight loss. Young children may experience irritability, lethargy, and new-onset bed-wetting.

**Patients with type 1 diabetes need lifelong treatment with insulin.**

Most patients in the US are treated with automated insulin pumps, which provide continuous insulin that is adjusted based on blood glucose recorded by a continuous glucose monitor attached to the skin.



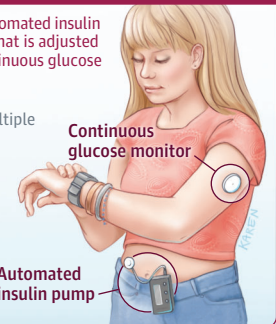
Others may be treated with multiple daily injections of insulin using an insulin pen or syringe.



Patients with type 1 diabetes should work with a dietitian to create a personalized eating plan and receive nutrition counseling.



Patients with type 1 diabetes who maintain blood glucose levels in the recommended target range are at decreased risk of developing diabetes-related complications involving the eyes, kidneys, peripheral nerves, and heart.



natively, patients may be treated with multiple daily insulin injections into the tissue below the skin using an insulin pen or syringe, usually with a combination of long-acting insulin given daily and rapid-acting insulin at mealtimes. Patients with type 1 diabetes should also be referred to a registered dietitian for an individualized eating plan and have ongoing medical nutrition counseling.

### What Is the Prognosis of Type 1 Diabetes?

More than 95% of patients with type 1 diabetes develop at least 1 diabetes-related complication, which can involve the eyes, kidneys, peripheral nerves, and heart. Maintaining blood glucose levels in the target range is associated with a lower likelihood of developing complications. Cardiovascular disease is the leading cause of death among patients with type 1 diabetes, whose life expectancy is about 8 to 10 years shorter than people without type 1 diabetes.

#### FOR MORE INFORMATION

[Centers for Disease Control and Prevention](#)

**Author:** Kristin Walter, MD, MS

**Published Online:** February 16, 2026.  
doi:10.1001/jama.2026.0561

**Author Affiliation:** Deputy Editor, *JAMA*.

**Conflict of Interest Disclosures:** None reported.

**Additional Information:** GPT 4.1 (Open AI) generated a draft of the manuscript on January 9, 2026, following

an editor-developed prompt. The final manuscript was prepared by Dr Walter, who takes full responsibility for the content.

The JAMA Patient Page is a public service of *JAMA*. The information and recommendations appearing on this page are appropriate in most instances, but they are not a substitute for medical diagnosis. For specific information concerning your personal medical condition, *JAMA* suggests that you consult your

physician. This page may be downloaded or photocopied noncommercially by physicians and other health care professionals to share with patients. To purchase bulk reprints, email [reprints@jamanetwork.com](mailto:reprints@jamanetwork.com).

1. Jacobsen LM, Schatz DA. Management of type 1 diabetes: a review. *JAMA*. Published online February 16, 2026. doi:10.1001/jama.2026.0048