

# Type 1 Diabetes Information-EC 49452.6

## Description of Type 1 Diabetes (T1D)

T1D usually develops in children, teens, and young adults, but it can happen at any age. In T1D, the insulin-producing beta cells in the pancreas stop making insulin and the immune system attacks and destroys the insulin-producing cells, which is why the condition is referred to as an autoimmune disease. Viral infections can cause developing T1D. Diet and lifestyle habits do not cause T1D.

## T1D Risk Factors

- Family history: Having a parent, brother, or sister with T1D.
- Age: You can get T1D at any age, but it's more likely to develop when you're a child, teen, or young adult.

\*\*\*Because T1D can run in families, a study called [TrialNet](#) offers free risk testing to family members of people with the disease even if they don't have symptoms. [T1Detect](#), the Juvenile Diabetes Research Foundation(JDRF)'s screening education and awareness program, also offers screening for T1D autoantibodies for anyone at any age even without a family history of T1D\*\*\*

## Warning signs of T1D

Warning signs of T1D may occur suddenly but have been developing over weeks or months. Many family members do not recognize the signs. Increased urination and thirst are the initial signs of diabetes in children. Other symptoms include drowsiness or lethargy, increased appetite but inexplicable weight loss, sudden blurry vision, excessive urination, urinary infections, fruity odor on the breath, heavy or labored breathing, and stupor or unconsciousness. Children might also seem to be more irritable and restless than usual. It is recommended that the parent/guardian of a child displaying warning signs associated with T1D consult with the child's primary care provider immediately for an accurate diagnosis.

## Diabetes Screening Tests

Diagnosis generally requires more than one abnormal test result. Your child's doctor will use one or more of the following tests to confirm the diagnosis.

- Random Blood Sugar Test: This is an initial screening test for all types of diabetes. A blood sample is taken at a random time, regardless of fasting or eating. A blood sugar level of 200 milligrams per deciliter (mg/dL), or 11.1 millimoles per liter (mmol/L), or higher, along with symptoms, suggests diabetes. Further testing is required to confirm a diagnosis as well as to differentiate between type 1 and type 2 diabetes.
- Glycated hemoglobin(A1C) Test: The A1C test measures your average blood sugar level over the past 2 or 3 months. An A1C below 5.7% is normal, between 5.7 and 6.4% is the range for prediabetes, and 6.5% or higher generally indicates diabetes.
- Fasting Blood Sugar Test: This test measures your blood sugar after an overnight fast (not eating). A fasting blood sugar level of 99 mg/dL or lower is normal, 100 to 125 mg/dL is the prediabetes range, and 126 mg/dL or higher with symptoms indicates diabetes.

- Oral glucose tolerance test: A test measuring the fasting blood sugar level after an overnight fast with periodic testing for the next several hours after drinking a sugary liquid. A reading of more than 200 mg/dL after two hours indicates diabetes.
- Autoantibody blood test: If your child's doctor thinks he/she has type 1 diabetes, his/her blood may also be tested for autoantibodies (substances that indicate your body is attacking itself) that are often present in type 1 diabetes but not in type 2 diabetes. You may have your urine tested for ketones (produced when your body burns fat for energy), which also indicates type 1 diabetes instead of type 2 diabetes.

### **Recommendation for Students Diagnosed with T1D**

Parents or guardians should consult with their primary care provider to develop an appropriate treatment plan, which may include consultation with an examination by a specialty care provider, including, but not limited to, a properly qualified endocrinologist. According to the U.S. Centers for Disease Control and Prevention (CDC), T1D can be managed successfully by;

- Following doctor's recommendations for living a healthy lifestyle
- Managing blood sugar
- Getting regular health checkups
- Getting [diabetes self-management education, and support](#)

### **References**

[Center for Disease Control and Prevention](#)

[American Diabetes Association](#)

[National Institute of Diabetes and Digestive and Kidney Diseases](#)

[Nemours Children's Health](#)

[National Library of Medicine and National Institutes of Health's MedLine](#)

### **Resources**

[Type 1 Diabetes TrialNet](#)

[The Juvenile Diabetes Research Foundation\(JDRF\)](#)

[Diabetes self-management education and support](#)

[Managing Diabetes at School](#)

[The Type 1 Diabetes Self-Care Manual](#)