

**Type 1 diabetes:**  
The S I M P L E Explanation  
C R I T I C A L Warning Signs and Symptoms



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## Alarming News

**Twice as many children are diagnosed with Type 1 diabetes today than were diagnosed 25 years ago!**



**Undiagnosed and untreated Type 1 diabetes is fatal.** Parents and caregivers need to know the warning signs and symptoms.

**kids with courage**  
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*Keeping Dreams Alive!*

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Mission: Together with caring individuals Kids With Courage embraces children and young people battling the life long disease Type 1 diabetes, providing positive and distinctive support programs which have a direct, immediate and lasting influence in their lives.

# What is Type 1 Diabetes?

Simply stated, Type 1 diabetes develops in children and young people when their own body's immune system mistakenly attacks and destroys pancreatic beta cells. These beta cells produce the life sustaining insulin required by the body to fulfill its most essential function of converting food into energy to fuel the body's organs. (*Type 2 diabetes, on the other hand occurs when the body doesn't respond to the insulin that's being made.*)

Being diagnosed with Type 1 diabetes places children and young people in a world of medical procedure and protocol requiring rigorous every day care and treatment to stay alive. Without intensive insulin therapy and carefully monitored medical attention, organs begin to fail, eventually causing blindness, kidney failure, heart disease and death.

## On the Rise

Since the 1980's, the number of kids being diagnosed with Type 1 diabetes has gradually crept up at a rate of about 3 to 5 percent per year. That may not sound like much, but it's alarming when you consider that twice as many kids are diagnosed with Type 1 diabetes today than were diagnosed 25 years ago according to Harvard Medical School's Joslin Diabetes Center. Experts believe that environmental factors like children's reduced exposure to germs may be partly to blame. Reduced exposure to early childhood infections may also alter certain children's immune response, leading to the autoimmune attack on the body's insulin producing beta cells.

Why some kids get Type 1 diabetes is also a mystery. White children and those with a family history of Type 1 are most at risk, but only about 10 percent of those with Type 1 diabetes have a family history of the disease. There is no cure! These children are patients for life.

## Warning Signs and Symptoms

Undiagnosed and untreated Type 1 diabetes is fatal, so parents and caregivers need to know the symptoms and warning signs. The symptoms are all too easy to dismiss as they can mimic flu and other childhood illnesses or be chalked up to kid quirks or growth spurts. Symptoms can come on suddenly.

- **EXTREME THIRST & FREQUENT URINATION:** When excess sugar builds up in your bloodstream, fluid is pulled from your bodily tissues leaving you thirsty. As a result children will drink and urinate more than usual.
- **BED WETTING:** By a child who does not usually have this problem.
- **INCREASED APPETITE:** Without insulin to move sugar into cells, a child's muscles and organs become under nourished and depleted of energy. Intense hunger may persist even after they have eaten. Energy from food never reaches their energy-starved tissues and organs. Basically, even though children are eating, they are literally starving to death.
- **WEIGHT LOSS:** Despite increased eating to relieve hunger, a child will likely lose weight—*sometimes rapidly.*
- **BLURRED VISION:** When blood sugar levels remain high fluid may be pulled from the lenses of your eyes. This may affect a child's ability to focus clearly.
- **FRUITY, SWEET OR WINE LIKE ODOR ON BREATH**
- **FATIGUE, DROWSINESS, LETHARGY:** When cells are deprived of sugar, they may feel tired and irritable.
- **HEAVY, LABORED BREATHING**
- **UNUSUALLY EMOTIONAL OR IRRITABLE:** For no known reason.



## AFTER THE DIAGNOSIS: *Every Day Intensive Treatment* TO STAY ALIVE!

If a child has Type 1 diabetes it's critical that their blood-sugar levels stay in a safe range. This will be determined by an endocrinologist, a doctor who specializes in diabetes. They will want the child's blood-sugar level to be slightly higher than the normal blood-sugar level range of 70mg/dL to 120mg/dL. Levels that drop too low or spike too high can lead to seizures, coma, and even death. Whenever the child eats or drinks anything or is physically active, it's necessary to take a droplet of blood pricked from their finger and check the sugar level using a handheld blood-glucose meter. To cut down on finger sticks, some families have switched to continuous glucose monitoring systems, devices that constantly check a child's sugar levels through a sensor inserted into their skin for up to six days at a time. But these readings aren't as accurate as metered ones, so kids must still endure a few finger pokes each day. The sensors are also very expensive.

Blood-glucose monitors determine how much insulin the child's body needs, but they don't actually dispense insulin. For that children with Type 1 diabetes need their parents to inject insulin into their stomach, upper arm, outer thigh, or buttocks four to six times a day. Eventually, many people with diabetes switch to an insulin pump, a pager-size device that straps to the waistband or adheres directly to skin and delivers a steady supply of insulin via a small tube inserted into the skin. A pump gives kids more freedom, but shots are much less expensive, simpler to use, and more likely to be covered by insurance.

Parents must be vigilant about their child's diet, though it's a myth that kids with diabetes can't enjoy cookies, cake or sweet treats. No foods are off limits. No child should have lots of sweet drinks and treats, and this also goes for children with diabetes. Parents need to accurately count the carbohydrates and adjust their child's insulin to ensure that their blood-glucose levels don't spike too high or drop too low.

Having Type 1 diabetes is about checks and balances. Checking blood sugar ranges and balancing food intake, activity, insulin, and trying to factor in emotions, growth spurts which all have an impact on blood sugar levels. It can be especially challenging keeping blood sugar between safe levels when a child with Type 1 diabetes gets a virus, runs a fever or has the flu. What might be considered a simple childhood illness could land a child with Type 1 diabetes in the hospital. Nighttime can be especially perilous for those with diabetes. Blood-sugar levels can drop dangerously low and cause a sleeping child to have seizures or fall into a coma. This holds especially true at the end of an active day, if a child hasn't received extra carbs or reduced amounts of insulin. Parents of children with Type 1 must prick their child's finger in the middle of the night once or twice and arouse them to drink juice if necessary and follow up with protein if the reading is too low; or give insulin if the reading is too high. It is necessary for parents, children, or caregivers to monitor their blood sugar levels all day and all night.

### ACCORDING TO THE 2012 NATIONAL DIABETES STATISTICS:

In the U.S. there are more than 30,000 new diagnosis of Type 1 diabetes each year.

Approximately 80 children and young people per day. 1 in 450 children!

[www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)