



"Your child has diabetes." Many parents, friends and family members who hear these words feel dazed, shocked, afraid, or guilty. It's natural to have such feelings.

This brochure is intended to answer some of the questions you may have. Learning more about diabetes may help to ease your worries and fears.

What is Diabetes?

Diabetes is a chronic condition that impairs the body's ability to use food.

The hormone insulin, which is made in the pancreas, helps the body change food into energy. In people with diabetes, either the pancreas doesn't make insulin or the body can't use insulin properly. Without insulin, glucose, or sugar – the body's main energy source – builds up in the blood.

Children with diabetes usually have type 1 diabetes, in which the pancreas doesn't make insulin. They need daily insulin shots to help their bodies use food.

Type 1 diabetes is one of the most common chronic diseases in children. Approximately one out of every 400-500 children or teenagers has type 1 diabetes. Researchers are studying how and why it happens, but there is no known way to prevent type 1 diabetes.

Although diabetes cannot be cured, it can be treated. With family support, daily care, and treatment, a child with diabetes can lead a healthy, active, and fun-filled life.

High Blood Glucose, Low Blood Glucose, and Ketoacidosis

High Blood Glucose (hyperglycemia) – When blood glucose levels get too high, due to the body getting too little insulin or too much food.

Symptoms of high blood glucose are:

- Excessive thirst
- Blurred vision
- Fatigue
- Dehydration
- Frequent urination
- Weight loss



High blood glucose is treated by checking blood glucose levels and giving the child insulin. Untreated, high blood glucose may develop into ketoacidosis, a very serious condition.

Ketoacidosis is caused by inadequate amounts of insulin, leading to very high levels of ketones in

blood and urine. Ketones are waste products that build up when the body burns fat for energy. Check with your health care provider about when to do urine or blood ketone checks, especially when the child is sick. Call your health care provider **immediately** if the child has more than small levels of ketones in urine or blood or any of the following symptoms:

- Dehydration
- Vomiting
- Drowsiness, labored breathing
- Abdominal pain
- Fruity smelling breath

Low Blood Glucose (hypoglycemia) – When blood glucose levels get too low due to the body getting too much insulin or too little food. It is a common problem in children with diabetes. Symptoms include:

- Trembling
- Hunger
- Sleepiness
- Pale skin
- Dizziness
- Crying
- Clumsiness
- Headaches
- Sweating

Low blood glucose can be treated by giving the child carbohydrates, such as glucose tablets, fruit juice, regular soda, sugar cubes, or hard candy, followed by a snack of crackers with cheese or peanut butter, half a sandwich, or cereal with milk.

Treating Diabetes

The goals of diabetes treatment for children are:

- To maintain normal growth and development
- To keep blood glucose levels within a target range (not too high, not too low) as often as possible
- To promote emotional well-being and ensure that as the child grows s/he will take good care of his or her own health when s/he is an adult

Keeping blood glucose levels in a target range means balancing insulin, food, and exercise. *Remember:* food raises blood glucose levels, while insulin and exercise lower them.

A good diabetes treatment plan includes:

- Eating healthful foods and taking insulin injections based on the child's meal plan
- Checking blood glucose levels regularly
- Adjusting insulin doses as blood glucose levels, diet and activities warrant
- Exercising regularly

Ideas about how to treat diabetes have changed a lot in recent years. Diabetes treatment plans are more flexible than they used to be. Treatment is geared to the needs of the individual child and his or her family.

Insulin Shots

Most children manage diabetes with two or three insulin shots a day. However, some need four or more shots. Insulin is usually given at regular times each day.

Different kinds of insulin work at different times. Most children take more than one kind of insulin. The kinds of insulin the child takes and the times they are taken will depend on the child's needs.

There is no strict rule about how old a child should be to give his/her own insulin shots. It depends on the child.

Some children and teenagers with diabetes use an insulin pump. The pump delivers a flow of insulin to the body continuously, plus extra insulin at mealtime. Working closely with an expert team of health care providers helps to ensure safe pump use.

Blood Glucose Checking

Regular checking of blood glucose levels gives information about how well the diabetes care plan is working. Checking is done by taking a drop of blood, usually from a finger (a "fingerstick") or another site like the arm. The blood is placed on a special test strip in a glucose meter.

Blood glucose levels are measured in milligrams per deciliter of blood (mg/dl). A goal blood glucose level for a person with diabetes generally falls between 90 and 130 mg/dl.

The child's health care provider should identify a target range for the child's blood glucose level -- for example, 80 to 180 mg/dl. One aim of diabetes care is to try to keep your child's blood glucose level within his or her target range.

However, keeping blood glucose levels within the target range isn't always possible. Especially in children, blood glucose levels may be out of range for no apparent reason. It's important that children are never made to feel it's their fault if their blood glucose level is out of range.



Meals and Snacks

Eating meals at about the same time every day helps keep blood glucose levels in the target range. Children with diabetes often need to eat snacks during the day and before, during, or after exercise. Examples of snacks include crackers with peanut

butter or cheese, pretzels, or apples. Many children are taught to count the carbohydrate in foods, which allows for easy substitutions.

If you prepare meals for the child, you will want to know in advance about any special activities that will change the child's usual meal times. Meal planning for children with diabetes is fairly flexible these days. A schedule change can usually be dealt with by changing the child's meal plan or insulin dose.

Parties

Many party foods are high in sugar and fat. Generally, children with diabetes need to limit eating a lot of these foods.

A child with diabetes can, on occasion, eat birthday cake or other special foods, especially if the child is counting the carbohydrates and substituting the special food for a usual food. He or she may need to take more insulin than usual to prevent high blood glucose.

Playing an energetic game can also be a good way of lowering blood glucose levels after eating sweets.

Discuss special events with the child's parents or health care team.

Sports and Exercise

Children with diabetes can – in fact, they should – play games and sports with their friends. Exercise helps to lower blood glucose levels. In addition, taking part in gym class and team sports can help the child make friends and feel like "one of the gang."

Getting regular exercise is important for children with diabetes because of the need to balance the effect of exercise with food and insulin.

Because children's lives involve a lot of unplanned activity, it's a good idea for the child to always carry snack foods like pretzels or crackers with cheese or peanut butter. Youngsters should also carry glucose tablets, juice boxes, hard candy, or another form of carbohydrate to treat low blood glucose.

The timing of exercise may affect your child's meal plan and need for insulin. If you prepare meals for the child, it's a good idea to ask the child's school to notify you in advance if a game or sports event will change the child's meal time.

The child should not exercise if he or she is having symptoms of low blood glucose.

Age-Related Issues

Preschoolers: Preschool-age children with diabetes often have not learned to recognize the symptoms of low blood glucose, or they aren't able to tell others when they are feeling "low." For this reason, it's important that they have frequent blood glucose checks.

Preschoolers who are frightened by fingersticks and insulin shots may try to avoid or delay them. It may help to say: "Yes, I know it hurts" and "You're being very brave." Stickers and stars can help encourage a child to have a fingerstick or a shot.

Young children with diabetes can go through the same fussy eating phases as other children. It's usually best not to force a fussy child to eat. Have a variety of foods available. If the child rejects one food, offer something else, or offer juice or milk instead.

School-age children: School-age children want to be like their peers. It's not unusual for children with diabetes to feel "different" because they need insulin shots, check blood glucose regularly, and use a meal plan. Talk with the child's parents or health care team about how to help the child. Some children are comfortable openly talking about their diabetes care while others prefer to keep it private.



Teenagers: For the teenager with diabetes, having to take insulin, check blood glucose, and use a meal plan is both-ersome. Diabetes often adds to the normal difficulties of growing up. It is not unusual for a teen with diabetes to ease up on diabetes care and try to act "like everyone else."

A relationship with an adult outside the family, such as a teacher, coach, or health professional may provide the teenager with the extra support he or she needs.

Staff at the child's school need to know about the child's diabetes. At the beginning of the school year, you or the child's parents should ask for a conference with the child's teachers, coaches, the school nurse, the principal, bus driver, and other school staff. This way, everyone hears the same information at the same time and questions can be answered.

Work with the child's school to prepare a written plan. It should include information such as:

- When to check blood glucose and take insulin
- Meal and snack times
- Preferred snacks and party foods
- Usual symptoms of high or low blood glucose
- Preferred treatment for high or low blood glucose
- Phone number for parents and other emergency contacts

The plan should outline how the child's special health care needs are to be met at school and designate a school staff member who is responsible for implementing the plan. The child's parent or guardian must be consulted about the plan, which cannot be changed without their consent. The plan should be updated every year.

Diabetes and the Law

There are laws protecting students with disabilities from discrimination in all public and most private schools and day care centers. These laws make sure that the child is treated fairly at school and that his or her medical needs are met.

Key Points to Remember:

Good diabetes care practices include:

- Setting a target blood glucose
- Eating healthful foods and on schedule
- Checking blood glucose levels regularly
- Adjusting insulin as needed
- Exercising regularly
- Having regular check-ups with diabetes health care providers

Diabetes care should be flexible and individualized.

Diabetes is not contagious.

Additional Resources available from the American Diabetes Association include:

General Information: Call 1-800-DIABETES (342-2383).

Wisdom: The kit of wit and wisdom for kids with diabetes (and their parents). Free to families with diabetes. Call 1-800-DIABETES or email wizdom@diabetes.org to order.

Web sites:

www.diabetes.org

www.diabetes.org/wizdom

Print-On-Demand titles: Such as *Managing School; Diabetes, School, & the Law; Just for Parents; Just for Teens; Surviving Sick Days; and Your Parents & Your Diabetes*. Call 1-800-DIABETES or download free copies at www.diabetes.org/wizdom/download

Magazines: *Diabetes Forecast*, the magazine of the American Diabetes Association.

Call 1-800-806-7801 for subscription and membership questions.

Books: We have many titles just for kids and parents. Browse online at <http://store.diabetes.org> or call 1-800-ADA-ORDER (232-6733) to order books or a catalog.

Brochures: *Your School & Your Rights*

Children with Diabetes – Information for School and Child-Care Providers.

School Discrimination Packet – call 1-800-DIABETES (342-2383) to order.



A Child You Care
About Has Type 1
Diabetes...

WHAT YOU SHOULD KNOW