

## Finding Out More

There are lots of ways to find out more about diabetes. You can get to know others who are growing up with diabetes. You can subscribe to a magazine for kids with diabetes. You can also read about diabetes on the Internet. Here are some places to find out more:

**Juvenile Diabetes Research Foundation International**  
800-533-2873  
[www.jdrf.org](http://www.jdrf.org)

**Children with Diabetes**  
[www.childrenwithdiabetes.org](http://www.childrenwithdiabetes.org)

**American Diabetes Association**  
800-342-2383  
[www.diabetes.org](http://www.diabetes.org)



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[www.kramesstaywell.com](http://www.kramesstaywell.com) 800.333.3032

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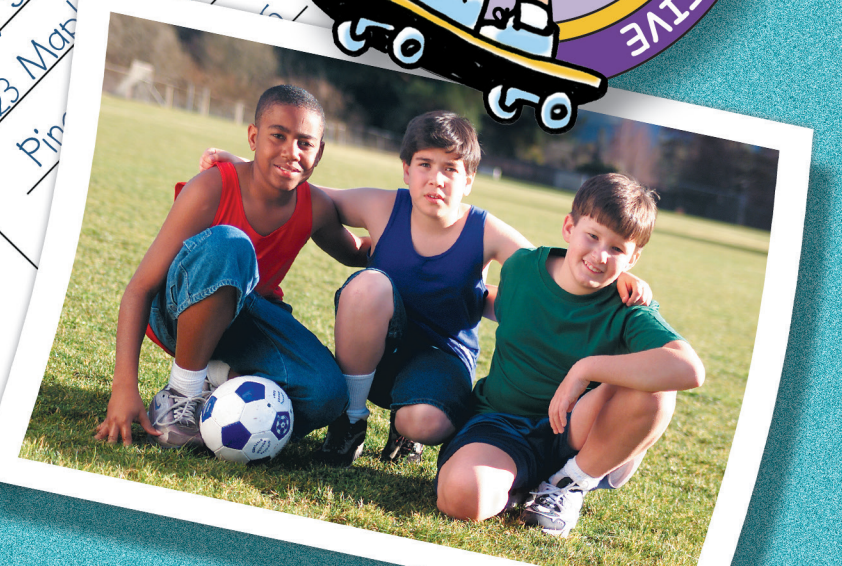
**KRAMES**  
PATIENT EDUCATION

# Growing Up with Type 1 Diabetes



Dear Terry,  
Hi! It was great meeting you  
at camp. Are you going again  
next summer? I can't wait.  
How's life with the big D? I'm  
trying out for the soccer team  
next week. Wish me luck.  
Write back to me!

See ya-  
Chris





# What's It Mean to Have Type 1 Diabetes?

Your doctor says that you have diabetes. It's a serious health problem. But you can learn how to live with diabetes and stay healthy. The more you know, the better you'll do at managing your diabetes. Asking questions is a great way to learn. Let's start with some of the questions you may be asking now.



## Q Why me?

**A** We're not sure why some people get diabetes and others don't. We do know that having diabetes is not your fault. It's not because of something you ate. It's not a punishment for anything you did wrong. And it's not your parents' or your doctor's fault.

## Q Will having diabetes change my life?

**A** It will change some things. Living with diabetes and staying healthy takes work. There's a lot to learn. Right now you may feel that you'll never understand it all. But soon you'll be a diabetes pro! And the changes won't keep you from having fun.

## Q What kinds of things will I still be able to do?

**A** You can play sports. You can eat food you like. You can have a good time with your friends. You can do well in school. Your days will be different in some ways than they were before. But diabetes doesn't have to stop you from doing anything you really want to do.

# Looking at Your Future

Learning how to take care of yourself now will help you live well with diabetes as you get older. Keep up the detective work! Your whole life is ahead of you. Whatever you do, don't let diabetes stop you.

## It'll Take Practice

You won't be good at all this stuff overnight. If you try something and it doesn't work out, you can try again. Don't be afraid to ask for help when you need it. Keep practicing and you'll get better and better.



## Learn All You Can

You'll have new questions as you grow and change. Your healthcare team is there to answer your questions. But if you want to know something, you don't have to wait until the next time you see them. You can call them. And there are other ways to learn more:

**Join a support group.** This is where people with diabetes get together. You can swap stories and tips with other kids and adults.

**Look it up.** You can find great stuff in books and magazines about diabetes. Or try the Internet. A librarian can help you.

## When You're Ready for More Responsibility

You'll always need support from your family and your healthcare providers. But someday you'll be in charge of taking care of your diabetes. It doesn't have to happen all at once. If you want to try something new, ask your parents or your healthcare team. The more you learn to take care of yourself, the more independent you can be. And you can feel more in control of your diabetes and your life.



## Dealing with Your Feelings

Diabetes won't go away. Neither will your feelings about having it. But not all of your feelings will be bad. Sometimes you'll feel proud of how well you're doing. And having diabetes may help you figure out what's important to you. Maybe you'll end up knowing more about what you want out of life than other kids.

### What's Up with My Parents?

Maybe it seems like your parents expect too much from you. Or maybe you think they're treating you like a baby. Try to understand that this is tough on them, too. They have their own feelings about you and diabetes. It's hard for them to know just how to act. They can't read your mind. So, tell them how you feel!



## It's Normal to Have Ups and Downs

There'll be times when you feel totally on top of things. But there'll also be times when you get really tired of dealing with diabetes. If that happens, don't give up. Instead, ask for help. Your parents and your healthcare team can help you find ways to make things easier and still make sure you stay healthy. You don't have to be perfect all the time.

### As You Grow Up

You've heard it before: alcohol, drugs, and smoking are bad for you. It's true. They're even more unhealthy for a person with diabetes. If other kids are pressuring you to smoke, drink, or do drugs, talk to your parents or your healthcare team. Remember, you're working hard to stay healthy. Alcohol, drugs, and cigarettes just mess that up.

### You're Not Alone

Finding out that you have diabetes can be hard. But you don't have to handle this by yourself. Lots of people can help.

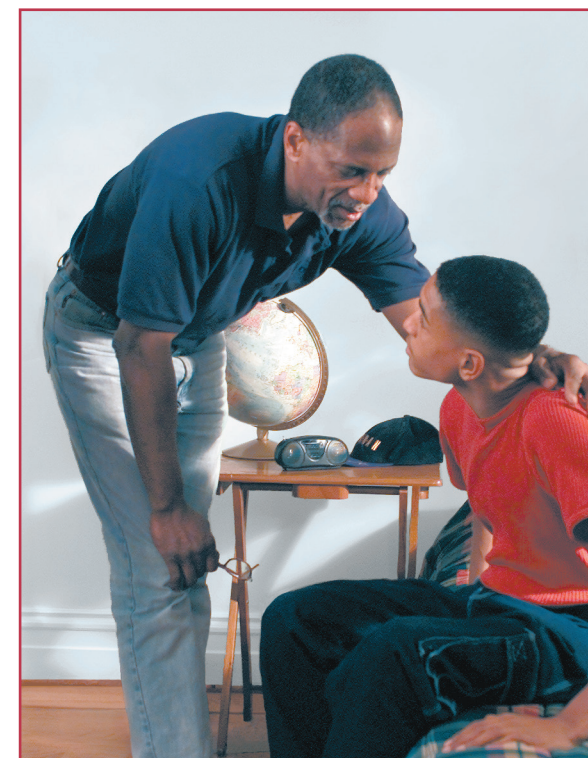
### Angry? Scared? Sad?

Right now, you may feel angry, scared, or sad. You may not even know how you feel. Or you may not want to think about it. But expressing what you feel can make things easier. Try talking to friends, drawing pictures, or writing about your feelings.

### People Will Help You

Your family, your friends, and your family doctor will help you. You may also see some special healthcare providers:

- An **endocrinologist** ("endo") is a doctor who treats people with diabetes.
- A **dietitian** helps you learn about food and healthy eating.
- A **diabetes educator** helps you learn more about living with diabetes.



### Be a Diabetes Detective!

You'll see your healthcare team often. Working with you is their job. But, the most important person who can help you is YOU! You'll need to become a **diabetes detective**. You'll look for clues to what's happening in your body. Your detective work will help you learn how to stay healthy.



Find Out How to Be a Diabetes Detective...



## Your Body Needs Energy

Your body gets energy from the food you eat. First, it breaks down the food into a kind of fuel it can use: **glucose**. Then the glucose travels to all the parts of the body where it is used for energy. When a person has diabetes, the body can't use glucose the way it's supposed to. Here's what happens:

### The Case of the Missing Insulin

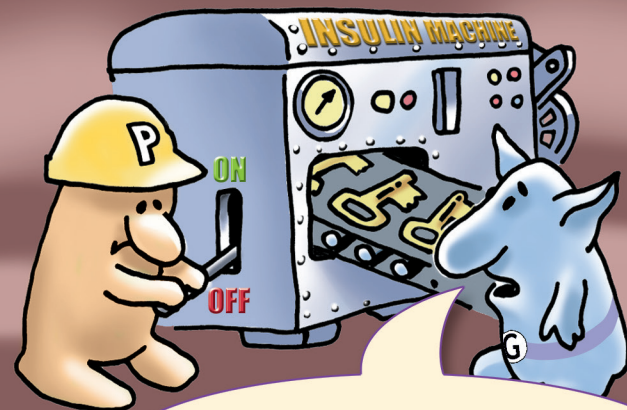
On an ordinary day, Andrew and his mom and dad sit down to dinner. Little do they know that something different is happening inside one of them—Andrew! Let's look inside.



As Andrew eats his dinner, food goes into his stomach. Then, the food gets digested into...



Back at Andrew's pancreas, trouble is brewing...



Oh, no! The pancreas has shut down insulin production! No wonder insulin never showed up at that cell!

Without insulin, glucose can't get into the cells to be used for energy. Andrew's blood glucose level keeps rising.



## Going to School

Your teachers and other adults at school will learn how to help you. By the time you talk to them, you'll probably know more about diabetes than they do. So you can be the teacher for a change!

### Talking to Your Teachers

You and your parents will meet with people from the school and may make a contract. This contract is about you and your diabetes. So you need to speak up. You can also help decide what to tell the other kids about your diabetes.

### Talking to Your Friends

How you talk to your friends about diabetes is up to you. Here's some stuff to think about.

- You don't have to talk about diabetes with anyone unless you want to.
- Your friends may ask questions that seem stupid. Try not to get mad. Remember, before you had diabetes, you probably didn't know very much about it either.
- Your true friends are kids who support you in taking care of yourself.



### You Have Rights

- The right to a private place (if you want one) for doing blood sugar checks and shots.
- The right to eat, check your blood sugar, and take insulin when you need to.
- The right to drink water and to use the bathroom when you need to.
- The right to participate in P.E.
- The right to go on field trips.





# Being Active

People may try to tell you that you can't be active or play sports. Well, they're wrong! But to feel good and do your best, you'll need to keep your blood sugar in target range before, during, and after exercise.

## Before You Exercise

First, check your blood sugar.

- If your blood sugar is over 240, DO NOT exercise. Check for ketones, and work on bringing your blood sugar down.
- If your blood sugar is high, but under 240, you probably don't need to eat a snack before you exercise.
- If your blood sugar is low, don't exercise right away. Treat the low and check again in 15 minutes.
- If your blood sugar is in target range, you may need to eat a snack before you exercise. Try different snacks to find out which ones work best for you.

## Be Prepared for Lows

- Have your emergency sugar with you or nearby.
- If you play team sports, make sure your teammates and your coach know how to help you if you have a low.

## Snacks for Exercise

- A carton of milk
- Cheese and crackers
- An energy bar
- Half a sandwich
- A sports drink



## DID YOU KNOW?

There are people with Type 1 diabetes who:

- Play pro baseball and basketball.
- Have won Olympic gold medals.
- Are professional ballet dancers.
- Have climbed some of the highest mountains in the world.

**They don't let diabetes slow them down, and neither should you!**

## What Does That Word Mean?

**Blood glucose level:** The amount of glucose in your bloodstream.

**Insulin:** The hormone that helps glucose get from your blood into your cells.

**Cell:** The basic building block of all the parts of your body.

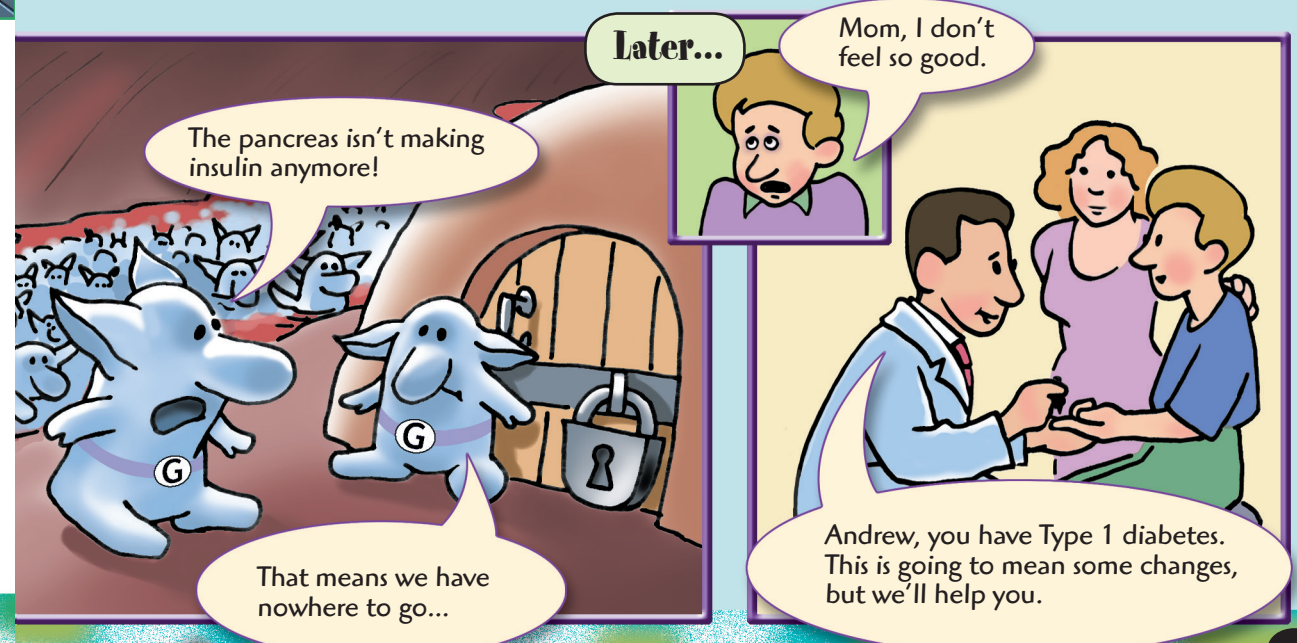
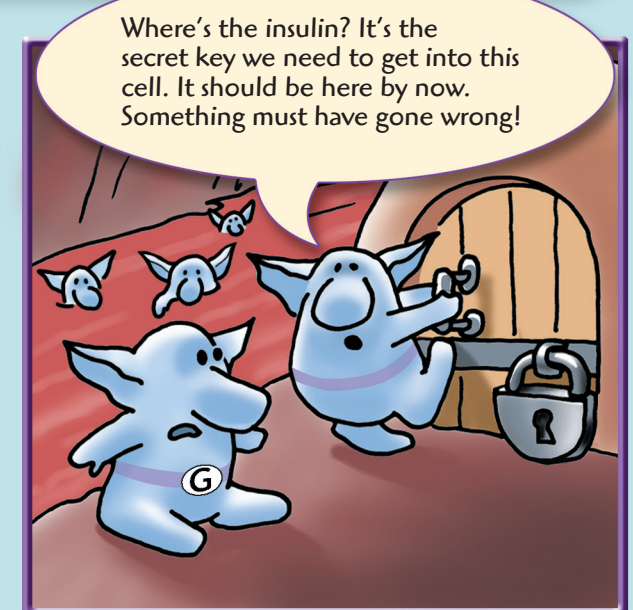
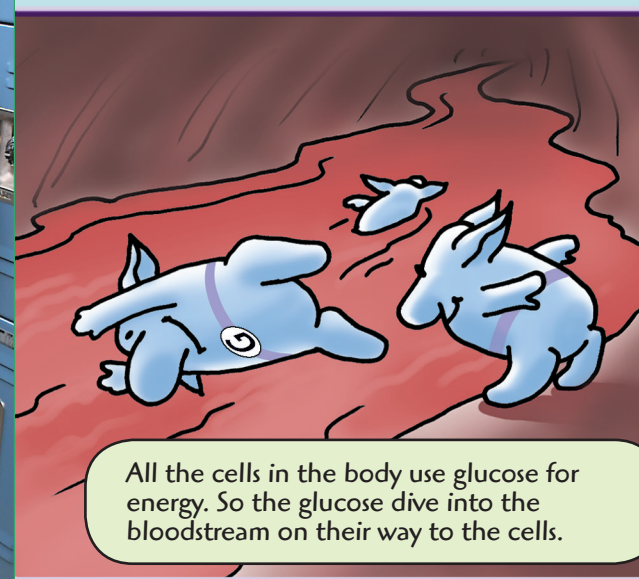
**Ketones:** Substances that are produced when your body can't get energy from glucose.

**Glucose:** A kind of sugar that your cells use as fuel to give your body energy.

**Ketoacidosis:** A very dangerous condition that happens when ketones build up in your bloodstream.

**Hormones:** Substances that send messages from one part of the body to another.

**Pancreas:** The part of your body that makes insulin.





# Checking Your Blood Sugar

You can stay healthy by controlling your blood sugar. Your healthcare team will help you set blood sugar target ranges. You won't hit these targets all the time. But the more often you do, the better you'll feel.

## Use a Meter to Find Clues



Sometimes you can feel when your blood sugar is high or low. But sometimes you can't. So you'll use a **blood glucose meter** to check your blood sugar. There are different meters, but all of them need a small drop of your blood. Checking your blood sugar is a big part of your detective work. It helps you find out things like what happens to your blood sugar when you eat pizza or play basketball.

You can decorate your meter to make it look cool.



Carrying a meter isn't that different from carrying a cell phone or a pager.

## A Good Detective Keeps a Notebook

Keeping a **log** (a notebook or diary), helps you remember stuff. You can use a log to see problems that happen over and over. Then you can do something about them. Bring your log with you when you see your healthcare team. This isn't so your team can check whether you've been "bad." It's so they can help you figure out what's going on. Then they can help you fix any problems.



## My Target Blood Sugar Target Ranges (Ask your doctor)

Before Breakfast (Fasting)  
(Fill In)

Before Meals  
(Fill In)

After Meals  
(Fill In)

Before Bed  
(Fill In)

**Q** What's the big deal about sugar?

**A** Doctors used to think that people with diabetes shouldn't eat any sugary foods. Some people may even tell you, "You have diabetes! You can't eat that!" Really, sugar is just another carb. Sweets aren't as good for your body as fruit or many starchy foods. But they're okay to eat sometimes.

**Q** What if I want to pig out?

**A** It's not a great idea. Eating a lot of food at one time can make it very hard to keep your blood sugar in target range. If you're doing well, your diabetes team may say it's okay for you to have a "diabetes holiday" for special days like your birthday. (That doesn't mean you can skip insulin shots, though.)



**Q** How do I take my morning insulin if I want to sleep in?

**A** You need to take your insulin at about the same time every day. So, if you want to sleep late on weekends, get up, take your insulin, and eat breakfast. Then you can go back to bed.

**Q** What about when I'm away from home?

**A** Be prepared. When you're away from home, carry glucose tablets. Also, carry snacks with you, like peanut butter and crackers, a piece of fruit and some nuts, or an energy bar. That way you'll be okay if you miss the bus or get stuck somewhere. It's also a good idea to carry a "diabetes kit" (meter, insulin, and emergency phone numbers), just in case.





## Eating Healthy

You can still eat your favorite foods. But you'll need to balance what you eat with insulin. This means learning how much of each kind of food you can eat at one time. Your dietitian will help you and your family plan meals and snacks that help you stay in your target range.

### What's for Lunch?

The energy in food comes from three things: **carbohydrates** ("carbs"), **protein**, and **fat**. A balanced diet includes all three. Carbs raise your blood sugar the most. They're in sweet foods like candy and fruit. They're also in starchy foods like rice, noodles, and potatoes. Let's look at all the different parts of a lunch to see what they do.

**Bread** is a starchy food, so it will raise your blood sugar. It'll also help give you energy.

**Lettuce, tomato, and other veggies** have carbs, but not a lot. They won't raise your blood sugar much. And they have vitamins and fiber, which help your body work and keep it healthy. Eat lots of these!

**Mustard** is mostly just flavor.

**Mayo** is mostly fat. Fat doesn't usually do much to your blood sugar.

**Roast beef** and other meats are mostly protein and some fat. Protein helps build muscle. It won't raise your blood sugar very much.

**A bag of chips** has carbs, fat, and lots of salt, but not many vitamins. You can eat these once in a while.

**Milk** has it all: carbs, protein and fat. It also has calcium, which is good for your teeth and bones.

**Strawberries** and other fruits are sweet. They have natural sugar. So they give you energy, and they raise your blood sugar. Like veggies, they have lots of fiber and vitamins.



## Taking Insulin

Your pancreas isn't making insulin. So you need to get insulin into your body some other way. You can't take insulin in a pill.\* Insulin has to be taken in a shot. This may seem scary, but you CAN learn to deal with it. Your team will help you. It may be easier than you think!

### Being on a Schedule

You'll most likely take two kinds of insulin. **Fast-acting** is for meals. **Long-acting** is so you always have a little insulin in you. When you take fast-acting insulin, you have to eat. You may also need snacks to keep your blood sugar steady. Your healthcare team will help you find the best schedule for you.

### Using Needles

Nobody likes shots. But insulin shots aren't usually too bad. There are tricks to make shots hurt less and be less scary:

- You don't have to look. This is not a test to see how brave you can be!
- When it's time for a shot, don't put it off or try to get out of it. That just makes the whole thing last longer.

### Using a Pen

An insulin pen looks like a big pen with a needle on one end. Instead of ink, it has insulin. A pen makes it easy to measure your dose. Other people don't notice a pen, so it's great to use when you're away from home.

### Using a Pump

An **insulin infusion pump** is worn all the time, day and night. It's attached to your body by a long, thin tube. Using a pump can mean better blood sugar control. It can also mean more freedom in your daily schedule. But the pump doesn't check your blood sugar. You still have to do that yourself. And you or your parents have to push buttons on the pump to give yourself a dose at meals.

\*Some people take pills for diabetes, but they have a different kind of diabetes than you do.



Make sure to eat when it's time for a meal or snack.



Don't use alcohol to clean the place you inject. That just makes it hurt more.



An insulin pen is easy to carry wherever you go.



You can wear a pump in a case under your clothes. Or just stick it in your pocket.





# Controlling Your Blood Sugar

Your mission is to keep your blood sugar in balance. There will be times, though, when your blood sugar is above or below your target range. If that happens, know what to do to get it back into range. Your healthcare team will help you learn how.

## What's Low Blood Sugar?

Low blood sugar (hypoglycemia) means that there's too little glucose in your blood. It can happen when you exercise, don't eat enough, or take too much insulin.

### Q Why should I care?

**A** Low blood sugar makes you feel rotten. If it gets really low, you may have to go to the hospital. If you get low blood sugar a lot, you may not be able to tell when a low is happening.

### Q What are the signs?

**A** Different people have different signs. You might feel dizzy, hungry, confused, weak, or headachy. You might feel shaky, sweaty, clumsy, or forgetful. Or you may not notice any of these. Learn your own signs so you can tell when you're low.

### Q What can I do about it?

#### You can treat it!

- 1 Tell an adult right away. Then, check your blood sugar. If it is too low, go to step 2.
- 2 Take 15 to 20 grams of fast-acting sugar. This could be 3 or 4 glucose tablets or  $\frac{1}{2}$  cup (4 oz) fruit juice.
- 3 Check your blood sugar again in 10 to 15 minutes. If it is still low, repeat step 2. Check again after another 15 minutes. If it's back in range, eat a snack to keep from going low again. If it's still too low, call your healthcare provider right away.

#### You can prevent it!

- Take your insulin on time and in the right amount.
- Eat meals and snacks on time.
- Eat a snack before or after exercise and before bed.



## TIPS

- ALWAYS carry quick sugar, like glucose tablets, hard candies, or juice. Remember, these are like medicine, not snacks.
- If you know that your blood sugar always goes low at a certain time of day, eat a snack BEFORE the low hits.
- Your parents and your school will each keep a **glucagon** kit. In the kit is a special shot for low blood sugar emergencies.



## What's High Blood Sugar?

High blood sugar (**hyperglycemia**) means that there's too much glucose in your blood. It can happen if you eat too much food at once, or if you don't take enough insulin. It can also happen when you're sick or when you're worried, upset, or excited.

### Q Why should I care?

**A** High blood sugar makes you feel tired and sick. If it gets really high, you may have to go to the hospital. High blood sugar can also lead to **complications**. These are problems like damage to your eyes, kidneys, blood vessels, and nerves. Complications may happen after many years of having diabetes. Keeping your blood sugar in control helps prevent them.

### Q What are the signs?

**A** You probably had some of these signs right before you found out you had diabetes. You may feel very thirsty and have to pee a lot. Your eyesight may get blurry, or you may feel weak, dizzy, tired, or like you want to throw up. But you may not have any symptoms at all. This is one reason you need to check your blood sugar often.

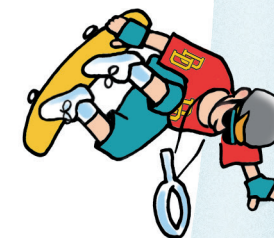
### Q What can I do about it?

#### You can treat it!

- 1 Check your blood sugar. If it's over 250, tell your parents or another adult right away. You may also need to check for ketones. (Your team will show you how.)
- 2 Drink water or other non-sugary drinks.
- 3 You may need to take extra insulin. Your healthcare team will teach you to figure out how much to take.
- 4 Check blood sugar at least every 2 hours to be sure it is going down. Tell your healthcare provider if it doesn't go down in 2 checks.

#### You can prevent it!

- Be sure to take your insulin on time and in the right amount.
- If you're sick, follow the sick-day plan your healthcare team has given you.
- Don't eat too much food at one time.



## TIPS

- Don't exercise if your blood sugar is over 250 and you have ketones.
- Drink lots of water, especially when you're exercising.
- If you feel sick, tell an adult right away.

