

More Wit and Wisdom for kids with diabetes  
(and their parents)

# Sports, Exercise, & Diabetes

## Sports & Exercise

Gary Hall swims. Jason Johnson pitches. Kelli Kuehne and Michelle McGann golf. Michael Sinclair plays football. Chris Dudley plays basketball. Steve Redgrave rows. What do they have in common? Just like you, they all have diabetes. They may be world class athletes, but no matter how good they get, they have to deal with their disease -- just like you.

You might not be interested in playing football or baseball. Or you may not live near a pool that is open year round. But there are so many other choices that it doesn't matter where you live, what equipment you have, who's around to coach you, or even that some days you just feel like sitting -- there is always some fun way to get the exercise you need.

Besides the things you already do, look at all these possibilities:


<b>Basketball</b>	<b>Dancing</b>	Frisbee	Golf
<b>Gymnastics</b>	Hockey-sack	Hiking	Hockey
Horseback riding	Ice skating	<b>In-line skating</b>	
Jogging	Juggling	Jump rope	Rowing
<b>Skateboarding</b>	Skiing	Snowboarding	Soccer
<b>Softball</b>	Tennis	Trampoline	Volleyball
			Walking

## Why Should I Exercise?

For starters, it can be a whole lot of fun. More fun than cleaning your room. Or pulling weeds. Or sweeping out the garage. Or doing the dishes. Or taking out the trash. Not that your parents will ever let exercising or sports replace these kinds of chores but they are more fun!

You don't even have to be a great athlete to have the exercise you're doing feel good. Have you ever had a day when you got back your math test and you really did bad on it? Then you had to skip the school assembly because your English report wasn't done. Lunch was lousy. And your best friend was going to the mall with someone else after school. So you went out in your backyard and kicked a ball against the garage wall as hard and as fast as you could. For as long


as you could. When you were done you felt much better in spite of the crummy day. This benefit of exercise is



called stress reduction. (And is a skill you can use while you're in school, when you have a job, and even when you get old, like your parents.)

There are also social benefits to exercise. A social benefit is when you build friendships while playing games or sports. It gives you a chance to practice teamwork, being a good sport, sharing, and competing.

Really important reasons to exercise have to do with keeping your body in shape and keeping you healthy. Exercise keeps you strong, improves your coordination (which means you're not so clumsy), and builds endurance so that you can play for more than a few minutes without having to sit down and catch your breath.



Exercise builds a stronger, healthier heart and lungs. Both of which are pretty important to doing ANYTHING. And if you are worried about being a bit larger than you want to be, exercise can help you lose weight and trim off inches.

One of the best reasons for kids who have diabetes to exercise is that it helps control blood sugars. Hard exercise today can affect your blood sugar level for up to 24 hours. Over time exercise will increase the amount of muscle you have and reduce the amount of fat stored in your body. Muscle cells use more sugar and improve your blood sugar levels.

But you don't even have to participate in regular sports or organized activities to get all these benefits. The exercise you do can be as simple as walking the dog or taking your little brother to the park for a game of catch.

### **But Watch Out!**



Everything you normally have to watch

out for, you have to watch a whole lot more when you work out. Low blood sugar, or hypoglycemia, is one of the things you need to beware of during exercise or a game. It will be important to watch yourself for signs of low blood sugar. Sometimes it's easy to think you are sweaty or lightheaded because you're playing hard. In fact, you could have low blood sugar. Stop to do a blood check as soon as you notice anything that might be a sign of hypoglycemia. If your blood sugar is low, treat for hypoglycemia, wait awhile, do another blood check, and go back to the game as soon as you feel better.

Pay attention to how your body feels when you play a certain sport or exercise for a long time or at different times of the day. You will begin to notice patterns. Like "every time I ride my bike after school, I have an insulin reaction." Noticing these things will help you plan when to exercise, what activity to do, and how long you should be active. Talk with your health care team about these patterns. The team can help you figure out how to avoid low blood sugar while you are playing a game. You may simply need to eat a snack before you work out.

Being aware of high blood sugar (hyperglycemia) when you are active is just as important. When you work out, your body releases adrenaline to send more sugar to your muscles. So your blood sugar level goes up. If your blood sugar happens to be high when you start exercising, it only gets higher as your body burns fuel for energy. Check with your health care team to find out how high your blood sugar can be before you need to stop exercising.

If your blood sugar gets too high, the cells start burning fat for energy. The problem with this is these things called ketones are produced and they act like poisons in your body. When you talk to your health care team about high blood sugar and exercise, also ask them how and when to test for ketones. They will also tell you what to do about the results of these tests.

It doesn't matter if you have diabetes or not, when you exercise you run the risk of injury. Everyone needs to take precautions like wearing helmets, knee and elbow pads, goggles, or whatever is needed for the sport you are participating in. People with diabetes have no higher risk for injuries than people without diabetes. But they do run a higher risk of infection when they do get hurt. This is because high blood sugars can interfere with healing.

Always check your feet for blisters or other injuries before and after you exercise. Ask your health care team for suggestions on taking care of your feet. And always make sure you have good shoes and socks to protect your feet while you are kicking or running or pedaling or skiing. Well, maybe not water skiing.

### **Before You Warm Up**

The things you do everyday to care for your diabetes need some special attention when you exercise. The more you can plan for the exercise you will be doing, the better off you and your diabetes will be. And the more you learn about your diabetes when you exercise, the easier planning will be. But you need to remember these things whether you plan to exercise or you just happen to join in a neighborhood basketball game.

It's important to keep your blood sugar in a safe range while you are active. There must be a balance between the sugar used for the energy you need to exercise, the sugar available from food you've eaten, and the medication you're on to lower your blood sugar. The key to this balancing act is checking your blood sugar.

When you have a set time for an activity, it's a good idea to check your blood about an hour beforehand. Keep track of what your reading was. Then when you check just before starting, you'll have a good idea of which way your blood sugar is heading. Remember to keep checking your blood sugar about every 30 minutes the whole time you are playing. Or more often if you feel like you are going high or low.

Talk with your health care team about guidelines for "too low" and "too high" blood sugars. If your blood sugar is a little low before a game, have a snack. If it's way low, treat for hypoglycemia and then eat a snack. Wait until you feel better to exercise. Problem in the other direction? With high blood sugar you need to test for ketones and treat however your doctor has told you. **don't exercise** when you have ketones in your urine.

You have to balance how hard and how long you exercise with how much food you've eaten and the insulin you've taken. About 15 grams of carbohydrates will fuel not-too-hard exercise for about 30 minutes. But of course, if you are bigger or smaller than average or work out harder than normal, this amount will need to be changed. Your health care team can help you figure out how much food to

start with and when to make what adjustments.

To help your balancing act, your doctor may suggest insulin adjustments and sites. This will depend on when and what exercise you do and how your body responds. If you inject insulin in fatty tissue over muscles you will be using within the hour, it will be absorbed more rapidly and might cause your blood sugar to drop too low. So, if you are going to be running or pedaling, don't inject in your thigh. If you are going to be serving a tennis ball, don't inject into your serving arm. A site on your abdomen will be the best bet before exercise.

### **Come Prepared**

Always, always wear your medical alert I.D. when you are playing a game or exercising. And in your gym bag or backpack always have the following things:

- ★ Glucose meter and test strips
- ★ Glucose tablets or gel
- ★ Paper and pencil to record blood checks
- ★ Snacks
- ★ Bottle(s) of water; drink water before, during, and after exercise to avoid dehydration
- ★ Emergency information including how to reach your parents, your doctor's name and phone number, and the fact that you have diabetes
- ★ Protective gear like knee pads or helmet
- ★ Your lucky socks or rabbit's foot or autographed baseball card -- whatever works for you

### **After the Game**

Even after the game, you have to keep up your balancing act. You need to continue checking your blood sugar level because often it will go down even after you're done. This usually happens if you have worked out extra hard or have played for a very long time. Just like before the game, if you're a little low have a snack. Really low, treat for hypoglycemia. Be sure to do a blood check at bedtime, too, because you might need to increase your bedtime snack to avoid you an insulin reaction during the night.

### **Don't Keep Your Diabetes A Secret**

Even professional athletes like Gary Hall and Kelli Kuehne run into trouble once in a while when they are competing. If you twist your ankle during a game, people like your coach are there to help. The same is true if you happen to have an insulin reaction. So make sure your coach and friends know you have diabetes. And that you have a plan and the supplies to deal with it.

You and your parents can discuss a personal plan for your sports participation with your health care team. Put it in writing then share it with your coach. Let him or her know you are prepared to take care of your diabetes during the game and that you have supplies in your gym bag. Also share a list of your usual signs of low blood sugar so the coach can help you be on alert.

### **A Final Time Out**

So will you win a gold medal, wear a Superbowl ring, win the Masters, or score the three-pointer that wins your team the championship? Maybe.

Maybe not. But remember this: no matter what sport you play, no matter how good you are at it, exercise does you a world of good. Don't sit it out because you have diabetes. Use your head, make a plan, and get in the game. And no matter what the score, you'll come out a winner.

**To Learn More:**

- ★ **Wizdom:** If you don't already have it, order the American Diabetes Association Wizdom™ kit for your family. They're free to kids with diabetes and are available by calling us at 1-800-DIABETES (800-342-2383).
- ★ **Magazines:** Diabetes Forecast is a monthly magazine published by the ADA for people with diabetes and their families. It's free to members of the American Diabetes Association Pick up a copy at your local bookstore, or become an ADA member by calling us at 1-800-DIABETES.

- ★ This piece is one in a series about kids and diabetes. We have titles about school, family, diabetes & the law, and more. Call us at 1-800-DIABETES (800-342-2383) or download them by logging on to <http://www.diabetes.org/wizdom/pod.asp>

- ★ For more information on kids and diabetes, log onto our Web site at <http://www.diabetes.org/wizdom/>
- ★ Questions or comments? Send us an e-mail at [wizdom@diabetes.org](mailto:wizdom@diabetes.org)

