

## Must Know Health Info

Health Information from the Experts at Johns Hopkins Medicine



### **Get Off the Blood Glucose Roller Coaster**

*Avoid the glucose highs and lows that affect your thinking and mood.*

Extreme blood sugar highs and lows can lead to major problems. There are physical symptoms; you are more likely to get long term problems from diabetes as well. Often, there are signs that your blood sugar is off target. Among the first signs are changes in your thinking and mood. Learn to spot and act on the warning signs. This will help you get off the blood sugar roller coaster. The goal is to keep your blood sugar and your mood as stable as you can.

#### **Symptoms of low blood sugar (hypoglycemia)**

When blood sugar drops below the normal range (70-120 mg/dL), you can start to feel signs. You may sweat, get a fast heart beat, and feel jittery. Blood sugar will go lower if you don't take action. Eat or drink something that has sugar. If blood sugar goes lower, things can get worse very fast; you can have confusion, loss of consciousness, or coma.

Alice is a patient of mine. She had a recent bout of low blood sugar in the middle of the night. She made it to the kitchen. She knew she needed a snack. She went to the refrigerator and she opened the door; Alice then stood there for 15 minutes. She was trying to decide which juice she should drink to raise her blood sugar. This is how low blood sugar, in its early stage, can affect thinking. Her trouble with being able to make a simple choice like this is common. Her husband Ed came downstairs to urge her to drink something. She got angry and collapsed in tears.

Moments of confusion, conflict and crying like this are rare for her. They always pass as soon as Alice's brain gets the glucose it needs. Ed gets through these times by telling himself that he's not dealing with Alice. Rather, this is her confused, evil, low blood sugar twin. If he stays calm and does the right thing, his dear Alice is soon back on the scene.

## **Avoiding the lows**

Most of the time, Alice avoids these low blood sugars. Here are the routine habits that help her.

- She is careful about how she eats. She times her meals and makes sure the portions do not vary much. She gets the nutrients she needs from all food groups.
- She stays active on a routine schedule. If she has a bout of intense exercise, she tests her blood sugar. If it is low, then she has a snack right away.
- She is sure to take all of her medicine on time. She tests her blood sugar often to be sure she stays in her target range all day.

Carrying out good control is the goal. It gives Alice more vigor and a more positive point of view.

Alice's plan works almost all of the time. When it doesn't, she and Ed are well prepared. Ed can often tell when Alice's blood sugar might be low. If she becomes listless, can't make choices, or breaks into a light sweat, he's on guard. He will ask her to check her blood sugar. Ed's attention is a big help because the signs come quickly. They can also be treated quickly with the right actions. Although Alice is the one with the signs, she may not be as quick to notice them. She may not realize they signal a possible low. Alice always has some hard candy with her in case of a low. If she does not have her meter, she errs on the side of caution. She eats 10 to 15 grams of candy. Or, she will consume another source of sugar that acts fast.

## **Symptoms of high blood sugar (hyperglycemia)**

Low blood sugar affects Alice in clear ways. High blood sugar affects her in ways that are not as easy to see. And, it does not pose the same immediate threat as low blood sugar. In most cases, it does not bring loss of consciousness or seizures like lows. This is true except when high blood sugar is very severe. But high blood sugar has just as much impact on her life. Her blood sugar is higher than target much more than it is below. This is the case for many who have diabetes.

Blood sugar can rise quickly, as it may after a meal. If so, you may get a mild form of the problems you have when sugars are too low. When blood sugar rises quickly, you:

- may not think as fast as normal
- may make more mistakes
- may feel nervous
- May have less energy.

If blood sugar stays high, you are more at risk for:

- heart disease
- stroke
- kidney disease
- loss of vision
- other long term problems.

## **Avoiding blood sugar highs**

My sister went on an insulin pump. After she did, her blood sugar control got better. It helped to improve her blood sugars after meals above all. And, it stopped spikes in her blood sugar after dinner. This gave my sister more energy and a clearer mind. Because of this, she stopped spending her nights dozing in front of the TV. And, she started doing things she really wanted to do.

There are things you can do to cut back on blood sugar spikes after eating. Stopping spikes will improve your health and boost your energy. Here are some steps to consider:

- **Keep blood sugar in control before meals.** This way, even if your blood sugar spikes, it will be from a good starting point. If you started from your target range, it won't end up sky high.
- **Test your blood sugar just before a meal and again two hours after.** If you do this just a few times, it will be helpful to you. You will find out when and how much your blood sugar spikes. This will help you and your health care team fine-tune your care plan.
- **Adjust your medicine based on what you learn from your blood sugar tests.** Ask your doctor or health care team members if you should talk to them first. Do this before you start to make changes to your doses.

- **Pay attention to starches (such as bread, potatoes, pasta, rice) and sweets in your meals; limit the amount.** These foods contribute the most to post-meal spikes.

## **Benefits of avoiding highs and lows**

Take the steps above; you will see the benefits of good blood sugar control right away. The goal is having better control through the day. This will give you advantages day by day. You will have more stamina and will be more alert. Talk to your doctor about the easiest and best ways to do that.

### **Top tips to avoid glucose highs and lows**

1. **Test, don't guess.** When people estimate their blood sugar, most guess too high or too low. Knowing your blood sugar will help you do the things that work best to control it. With your doctor or health care team, set up a testing schedule that's right for you.
2. **Keep a logbook.** Take your blood sugar log to each visit with your doctor or health care team. Any time you get a high or low reading, jot down why you think it happened.
3. **Know your blood sugar trends.** Use the information in your log to make changes. You may need to make a change in your medicine, diet, or exercise.
4. **Stick to a routine schedule for your meals and exercise.** If you eat too much or too little you can make your blood sugars swing. This is also true if you make big changes in your exercise.
5. **Know your symptoms during blood sugar highs and lows.** Describe them to family and friends so they can help you get back on track.