



How What You Eat - And When - Affects Blood Sugar

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Hi there I'm Dr. Sara Meltzer I work at McGill in the Diabetes in Pregnancy Clinic and I have been doing that since about 1978 so I've seen a lot of pregnant ladies getting a lot of gestational diabetes.

Every time we eat, glucose gets into the blood and needs to get into the cells so insulin has to be there *at that time*. If it's not, if it's late or early or isn't enough, glucose doesn't go into the cells. So what we try to do when you get gestational diabetes is to make sure that you have enough insulin for what you're eating.

Women who get gestational diabetes tend to have a limit on how much insulin they can make. And they're a little slow to get it out. So when they do eat a larger amount of any kind of glucose they won't have the insulin in the right place for glucose to enter the cells. And they will end up having high sugars in the blood. So high sugars in the blood for mom. High sugars in the blood for the baby.

You should consider the kinds of carbohydrates - or sugars - that you are eating. Foods that are simple carbohydrates, or actually glucose and single glucose molecules tied together, are easily broken down. So they are absorbed quickly and easily. From the time that you eat them until the peak of the sugar in the blood is fast. But they also don't last. They're gone almost as quickly as they came in. If you drink juice instead of eating fruit, the glucose in that juice will be absorbed very quickly because you don't have to break it down or do anything to it. Your body is unlikely to be able to make insulin fast enough to absorb that juice. That's the reason we don't want you to take sugar in your coffee or tea. That's why we don't want you to have a real Coke or real Pepsi. So that's why we try to make sure that you eat solid fruit, that you eat vegetables.

Anything that is starchy is also sources of glucose. Because they're basically a bunch of glucose molecules connected together they have to be broken down and then they are absorbed. So because it's a more complex form of carbohydrate or glucose containing food, it gets broken down by the gut and that takes time. The more fibre, the more whole grains that you eat, the longer that's going to take. That's why we ask you to eat brown rice instead of white, brown bread instead of white.

The other very good food for pregnant ladies is milk and milk products. About half of what you take in milk products and milk ends up being glucose and is absorbed fairly quickly. But not quite as quickly because there's fat and there's protein with it. So those are the main food: fruits and vegetables, starchy foods of any kind, and milk products. These are the ones that have glucose in them that we have to really consider when we're planning our diet.

If you think about it, what we're trying to do is to get a meal that is not too big in terms of sources of glucose and balanced in terms of when each of those sources of glucose are absorbed. Fruits and vegetables, some starchy foods, and some protein to slow up the absorption process. And that gives you a balanced meal that makes it possible for the insulin that you do have to come out at the right moment because there is a limit of how much insulin you can make you and your baby will both be exposed to high glucose and that's not good for either of you.

So we probably will ask you to eat slightly smaller meals for breakfast, lunch and dinner than you may be used to. But we are going to add snacks. We know you can't make a lot of insulin at one time, so we have to make the meals a little smaller than you might expect, certainly no bigger than would eat non-pregnant, but we add in the snacks. That does 2 things. It gives you the additional nutrition you need but it also lets you make insulin more often without having to make too much at one time.

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