



Why do your blood sugar levels go up and down throughout the day?

If you measure your blood sugars from minute to minute, they actually change and it's because there's a balance of the availability of the sugar and how much sugar your cells are using. So your cells can use various forms of energy, but sugar, which is glucose, is their main source of energy for the most part. If you're fasted, or if you're on a very low carbohydrate diet, for example, then your cells can use triglycerides or fat instead. There's also a variable supply of sugar, so the foods that you're eating can have various amounts of carbohydrates, versus proteins, versus fats. And your liver is always storing and releasing glucose in response to your hormones. So everything's sort of changing sort of minute and minute. Your cells might be using a bit more, say, if you're exercising, you're using more glucose.

They may also change what fuel they're using. The amount of fuel is variable because the liver might be storing the glucose or it might be releasing the glucose. So that's why it fluctuates up and down throughout the day. The main thing that we look at is, in order to sort of even it out, is this hemoglobin A1C, which is a three month average of the blood sugar. It gives you a good idea of what your sugar levels are over that entire period of time. Because if you simply measure it from minute to minute, it changes so much. If you eat, your blood sugar goes up. If you don't eat, your blood sugar goes down. So there's too much fluctuation to make it useful. So that's why we mostly use the A1C.