

Gestational diabetes

Poke, pee, and eat your carbs

Carmen Lavoie PhD

For the first time in my life I had to watch what I ate. Results of a glucose tolerance test at 22 weeks of my first pregnancy revealed that I had gestational diabetes mellitus (GDM). Thereafter, I was caught up in an intense regimen of medical intervention, which included

- up to 7 blood glucose tests a day,
- ketosis check 3 times per day (read: *peeing on a stick*),
- 20 minutes of exercise after each meal,
- injecting insulin up to twice a day,
- laboratory tests (read: *peeing in a cup*) on average once per week,
- nonstress tests twice a week toward the end of the pregnancy (*still peeing in a cup*), and
- of course, appointments for dietary counseling.

I worked hard every day to control my blood glucose levels, faithfully following the schedule of poking, peeing, injecting, and exercising. I wanted to be a compliant patient: if I could not do what was necessary to ensure the health of my unborn child, what kind of mother would I be? With a diagnosis of GDM, my score as a good mom was on the line.

What exactly were the target blood glucose levels? Interestingly, what seemed fine for one family doctor concerned another. Then there was the obstetrician who disagreed with both family doctors. I found different approaches to target blood glucose levels and different approaches to insulin dosing. The only topic I could be sure to get agreement on was diet.

Canada's Food Guide versus low-carbohydrate diet

Canada's Food Guide¹ seems to be the cornerstone of dietary counseling for patients with diabetes—if I could just learn to follow the food guide then supposedly my GDM would be well on track. I found, however, that when I followed the guide my blood glucose levels were difficult to control. Fruit was a common offender, as was high-fibre bread and cereal. So I did my own research to find out what was going on. I found that some in the medical community snub Canada's Food Guide, believing that the recommended carbohydrate intake is too high for patients with diabetes. I found the evidence compelling and I began to restrict my carbohydrate

intake. By varying the quantity and type of carbohydrates I ate, I was much better able to regulate my blood glucose levels than I was when I followed the guidelines given to me by the dietitian. This was thrilling. It was much easier for me to be compliant with blood glucose targets—and be the good mom I wanted to be—if I ate low-carbohydrate foods than if I followed the diet guidelines. The result: less insulin.

My enthusiasm for a low-carbohydrate diet was, however, matched by my confusion and disdain from medical professionals. "You are starving yourself," said one obstetrician. This comment was puzzling, given that I was eating as much as I wanted (as is typical with a low-carbohydrate diet) and my weight gain with the pregnancy was well within the normal range. The ultrasound scan showed that the baby was also a good size. "Your blood sugar numbers are too low," said a family doctor. This was by far the most common criticism I received. Ketones released during the low-carbohydrate diet were thought to interfere with the development of the nervous system of the fetus. I wondered about this: certain populations have subsisted on ketogenic diets for eons (eg, the Inuit), and I found no research demonstrating widespread developmental delays in this population. The crucial point for me was that ketosis is a natural biologic process that the body has developed to maintain a constant energy supply for mother and baby. Why are we comfortable with introducing synthetic insulin to pregnant women while ketones, which are a naturally occurring energy source, are viewed so sceptically?

Good-mom score

Despite my success in managing my blood glucose levels, I consistently encountered resistance to my dietary approach. When my blood glucose levels were considered too low, I was looked at with disapproval and instructed to eat more carbohydrates (good-mom score low). Then, when my blood glucose numbers went up, I was congratulated, even if this dietary change necessitated increased insulin doses (good-mom score way up). This approach to diet management effectively took the control of my blood glucose levels out of my hands. Being compliant as someone with GDM meant eating what I was told, regardless of the effect on my blood glucose levels. And stabilizing those levels? Well, that was ultimately in the hands of doctors.

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Shifting gears

I am raising this issue in the hope that the medical community might reexamine the advantages and disadvantages of low-carbohydrate diets for the management of type 2 diabetes. In my experience, there is a lack of understanding of low-carbohydrate diets, their content, and their effectiveness. There is also a knee-jerk reaction that limits our ability to make use of this simple and effective therapeutic tool. There is clearly room for more dialogue and more research on low-carbohydrate diets for GDM, especially in light of existing research that shows the success of low-carbohydrate diets for patients with type 2 diabetes.^{2,3} Further dialogue and research into the therapeutic potential of low-carbohydrate diets might give patients and doctors a powerful nonpharmacologic tool with which to control blood glucose levels and,

in so doing, perhaps improve patient compliance and empowerment. 

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Competing interests

None declared

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The opinions expressed in commentaries are those of the authors. Publication does not imply endorsement by the College of Family Physicians of Canada.

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