Diabetes may be described as a disease of glucose intolerance: high blood glucose is both the characteristic indicator and the cause of complications. The loss of control of glucose metabolism is what makes a low carbohydrate diet a good therapeutic approach, and it's why I'm astonished that experts encourage people with diabetes to eat carbohydrates and then "cover" them with insulin [1].

I am also surprised to hear negative reactions to carbohydrate restriction from people who have actually seen the results of a low carbohydrate diet. I'm highly critical of Hope Warshaw's article, "Why You Don't Want to Go Low Carb or Vegan," April/May 2007.

Ms. Warshaw's argument is that "avoiding carbohydrate, as some low carb diets suggest, does not entirely return blood glucose to normal. In any case, ingesting carbohydrate raises blood glucose.

Ms. Warshaw goes on to say, "Second, an adequate amount of carbohydrate is an important component of a healthy eating..." Ms. Warshaw's argument is that "avoiding carbohydrate, as some low carb diets suggest, does not entirely return blood glucose to normal. In any case, ingesting carbohydrate raises blood glucose.

At the 2004 Brooklyn conference on the Nutritional and Metabolic Effects of Low Carbohydrate Diets, William Yancy, Jr., Director of the Division of Endocrinology and Metabolism at Duke University Medical Center, said that doctors should not put diabetic patients on a low carbohydrate diet without first reducing their medication.

Of course, if you are taking medication, you should reduce carbohydrates only with medical supervision. In most diseases, reducing medications is considered a sign of improvement. Why would Ms. Warshaw recommend a diet that requires more medication?

It strikes me as odd that what most experts know about metabolism - diabetes is, after all, a metabolic disease - they do not believe. One thing we teach medical students at Downstate Medical Center is that there is no biological requirement for carbohydrate. It is true that your brain needs glucose, but glucose can be supplied by the process of gluconeogenesis; that is, glucose can be made from amino acids and lactate. At any time, thirty and seventy percent of your blood glucose comes from gluconeogenesis. There is no requirement for dietary glucose.
The second thing we teach medical students is that almost all the increased caloric intake during the ongoing epidemic of diabetes involves replacing carbohydrates with fats. You can see that cereals and grains are among the major ones. (Of course, almost everything increased except red meat and eggs.)

So what is Ms Warshaw's complaint? Well, she points out that "studies that compare low carb diets to conventional diets..." [3]. But studies of low carb diets that last longer than six months do not show significantly more weight loss.

Something's wrong here. Because low carb diets do the same as traditional diets after one year, then you don't want to be doing one. Triglycerides and HDL (healthy cholesterol) were much better on the low carb diet than the low fat diet (Figure 2).

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Figure 1A. Macronutrient consumption during the diabetes epidemic. Data from National Health and Nutrition Examination Survey.

Figure 1B. Incidence of diabetes by year. Data from National Center for Health Statistics.
Reference [3] is important for showing the general health benefits of low carb diets even when a difference in weight of only 2 percent was achieved. I don't know of any study on any other diet that shows such good effects on controlling glucose and insulin without a significant change in weight.
Ms. Warshaw's complaint is that these studies "show that many study subjects drop out of the study and are unable to ... compliance rather than to dissuade people from a strategy that actually works for the many people who follow it?"

You might want to think twice before you let Ms Warshaw tell you what you don't want to do. "You'll have type 2 diabetes ... for example, D-solutions (http://www.dsolve.com/) and Dr. Richard Bernstein's forum (http://www.diabetes-book.com/).

I am most concerned that if Ms. Warshaw really had something positive to offer, she wouldn't need to dissuade people from making their personal choice. Candy followed by insulin is not good enough.

5. JS Volek, RD Feinman: Carbohydrate restriction improves the features of Metabolic Syndrome....