Richard D. Feinman, PhD, is Professor of Biochemistry at State University of New York Downstate Medical Center, co-editor-in-chief of the journal Nutrition & Metabolism, and Director of the Nutrition and Metabolism Society (www.nmsociety.org).

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 remarkable success of low carbohydrate diets on their blood glucose.

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 plan. Without that, people are forced to rely too much on protein, which is not a safe or healthy long-term approach for weight loss."

At the 2004 Brooklyn conference on the Nutritional and Metabolic Effects of Low Carbohydrate Diets, William Yancy, Jr., M.D., commented, "In general, patients are counseled by their doctors that they should eat an amount of carbohydrates that will keep their blood glucose levels normal. But if your blood glucose is normal when you are on a low carbohydrate diet, then you don't really need as much carbohydrate as your doctor has advised you to eat."

Of course, if you are taking medication, you should reduce carbohydrates only with medical supervision. In most diseases, a reduction in medication 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 don't 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 fat and protein. At the molecular level, it is estimated that 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 is due to increases in fat and saturated fats, not carbohydrates. (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 ... 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 using them.
Reference [3] is important for showing the general health benefits of low carb diets even when a diet was essentially followed.

I don't know of any study on any other diet that shows such good effects on controlling glucose and insulin.
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...