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 positive effects of such diets. Ms. Warshaw's argument is that "avoiding carbohydrate, as some low carb diets suggest, does not entirely return blood glucose to normal levels." In my experience, this is not the case. 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." If this is true, then why is it necessary to treat diabetes with medication? When adding carbohydrates to a diet, the number of carbohydrates added must be taken into account. When gluconeogenesis is stimulated, the liver manufactures a quantity of glucose that is consistent with the number of carbohydrates ingested.

At the 2004 Brooklyn conference on the Nutritional and Metabolic Effects of Low Carbohydrate Diets, William Yancy, Jr., stated: "It is true that your brain needs glucose, but glucose can be supplied by the process of gluconeogenesis. It is true that your brain needs glucose, but glucose can be supplied by the process of gluconeogenesis. It is true that your brain needs glucose, but glucose can be supplied by the process of gluconeogenesis."
Low Carbohydrate Diets

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

Figure 1B. Incidence of diabetes by year. Data from National Center for Health Statistics.

The second thing we teach medical students is that almost all the increased caloric intake during the ongoing epidemic of obesity has come from carbohydrates. People want to know why. There are two reasons. One is that cereals and grains are among the major increased items. (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 on a low carb diet for longer than a year. Triglycerides and HDL (healthy cholesterol) were much better on the low carb diet than the low fat diet (Figure 2).
Low Carbohydrate Diets

Figure 2. Results at 6 months and 1 year for a multicenter study in which obese men and women were assigned at random to a low-carbohydrate diet or a conventional low-fat diet. Data from reference [3].

Reference [3] is important for showing the general health benefits of low carb diets even when a difference in weight reduction is not significant. Those who were content with the diet, lost weight, had improved lipid profiles, and increased insulin sensitivity by 75 percent.

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.