

The Glycemic Index Is Easy and Works in Practice

As proponents of the clinical utility of the glycemic index in the dietary management of diabetes, we found a touch of irony in the title of Coulston and Reaven's editorial, "Much Ado About (Almost) Nothing" (1). According to these authors, a major reason why the glycemic index (GI) is not being incorporated into dietary recommendations in the U.S. is that it is perceived as too complex for the health professional (let alone the ordinary person) and not worth the trouble. We believe this is "much ado about nothing."

The GI concept has been widely embraced by many diabetes centers throughout Australia and New Zealand. Ordinary people with diabetes have found the GI to be simple, logical, and helpful and to be a major step forward because it widens (not narrows) the range of foods that are appropriate for people with diabetes. Yes, there has been controversy, but mainly among the dietitians, not among the diabetes community. The view that health professionals should decide that information should not be passed on to people with diabetes because they feel that it might be too complex is particularly surprising given the championing of the importance of patient empowerment in diabetes care. The application of the GI to the diabetic diet is simply a matter of a few substitutions (this for that), which are outlined in Table 1. This table has been taken from our popular book *The GI Factor* (2), which explains the practical application of the GI and provides a range of easily prepared recipes, menu suggestions, and the GI of over 300 different foods. We have a few questions for Coulston and Reaven:

1. Is it not possible that some of the beneficial effects of high-monounsaturated fat diets are due to a significant reduction in the consumption of high-GI carbohydrate (i.e., in the glycemic load)? Since it is clear that carbohydrate foods vary in their blood glucose and metabolic effects, shouldn't this be taken into account when interpreting the results of dietary studies? It would be unacceptable to report a dietary study in which the fat content was manipulated without detailing the

Table 1—Substituting low-GI foods for high-GI foods

High-GI food	Low-GI alternative
Bread, whole-meal or white	Bread containing a high proportion of whole grains
Processed breakfast cereal	Unrefined cereal such as oats (muesli or porridge) or check the GI list for processed cereals with a low-GI factor, e.g., Kellogg's All Bran
Plain cookies and crackers	Cookies made with dried fruit and whole grains such as oats
Cakes and muffins	Look for those made with fruit, oats, whole grains
Tropical fruits such as bananas	Temperate-climate fruits such as apples and stone fruit
Potato	Substitute with pasta or legumes
Rice	Use basmati or other high-amylose rices

Bread and breakfast cereal changes have the biggest impact on the diet's overall GI.

type of fat, yet such detail is not required of studies in which carbohydrate is altered.

2. The positive effects of a low-GI diet have been reported in 15 studies from around the world, including the U.K., Sweden, France, Canada, and Australia. In questioning the clinical significance of these statistically significant findings, why has the same question not been asked of studies reporting statistically significant findings with monounsaturated diets?
3. Can we afford to continue to ignore the GI when two recent epidemiological studies from Harvard have shown that the GI and the glycemic load (and not the fat, type of fat, or total carbohydrate) predicted who would develop NIDDM in 6 years of follow-up of female (3) and male (4) health professionals?

We have previously provided a hypothesis on the mechanism by which high-GI carbohydrate might influence the development of NIDDM (5). Our concern about the current debate relates to a perception that the issue of type of fat versus type of carbohydrate is not being accorded equal open-minded discussion. We agree with Wolever (6) in his questioning of the selectiveness of the GI publications cited in the technical review on which the American Diabetes Association position is based (7). Since it is likely that both carbohydrate type and carbohydrate amount will ultimately be confirmed to be clinically useful, we believe that patients are entitled to receive information about both of these aspects of dietary advice. Provided the health professional can keep an open mind, our experience is that patients do not find it difficult to use the GI concept to

adjust their carbohydrate intake and that it does not complicate or detract from other important dietary advice.

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Response to Brand Miller et al.

As we tried to emphasize in our editorial, we believe that considerable information is available to health care professionals as to the clinical utility (or lack of it) of the glycemic index in the treatment of patients with diabetes. Furthermore, if this information is deemed useful, there is nothing we or anyone else can or should do to prevent it from being communicated to patients with diabetes. The American Diabetes Association (1,2) did not question the fact that ingestion of equal amounts of different starches can lead to variations in subsequent plasma glucose concentrations, but rather the clinical utility of these findings for treatment of patients with NIDDM. In our editorial (3), we expressed our agreement with that point of view, and briefly pointed out why we believed that the experimental data were not sufficiently compelling to assign a high priority for incorporating the principles of the glycemic index into the dietary prescription for patients with diabetes. Other health care professionals feel quite passionately that we are incorrect in our view. Indeed, it is obvious from the letter of Brand Miller et al. that their adherence to the principles of the glycemic index has led to the publication of a popular book on the topic. Our congratulations to them.

Unfortunately, we do not quite see the relevance of their three questions to our editorial. In reference to question 1, of course we believe that all studies attempting to evaluate the clinical effects of dietary perturbations be conducted in a scientifically rigorous fashion. However, in the absence of specific citations, it is impossible to know what putative flawed studies are being referred to by Brand Miller et al. It would be impossible to respond to the implications in this question without writing a review article.

The issues raised in question 2 also lack the specificity needed to provide a succinct answer. However, the metabolic effects of substituting polyunsaturated and/or monounsaturated fat for saturated fat have been summarized in two recent meta-analyses (4,5). It may not be accept-

able to apply results in nondiabetic subjects to patients with diabetes, but perusal of these publications provides more than enough information to translate the fall in LDL cholesterol concentration associated with eating less saturated fat to a decrease in risk of coronary heart disease (CHD).

As regards question 3, the simplest answer is that the issues raised in Wolever's commentary (6), as well as our editorial (3), were addressed to the treatment of NIDDM, not its prevention. Furthermore, before embracing the Harvard findings (7), it is necessary to point out that there are potentially confounding variables inherent in the epidemiological studies forming the basis of question 3 that are evident to anybody familiar with the problems of self-reported dietary and lifestyle behavior. At best, the results of such epidemiological studies provide hypotheses to be tested, not definitive answers to biological questions. The current controversy over the clinical utility of antioxidants in the prevention of CHD highlights the problems of overinterpreting the results of this form of clinical investigation.

The current exchange of opinions concerning the clinical utility of the glycemic index in the treatment of NIDDM was apparently initiated by advice given to Dr. Wolever to "stop flogging a dead horse." Perhaps the best way to end it would be to follow the advice of Eliza Doolittle, who, in frustration over the use of words instead of action, exclaims toward the end of "My Fair Lady": "Words, words, words! I'm so sick of words!" She then goes on to point out that it is high time to substitute action for words, or as she put it, "Show me!"

The major point we tried to make in our editorial was that complaints about the technical review (1) and American Diabetes Association position statement (2) or about the influence of the Stanford Group served no useful purpose. It seemed to us, and it still does, that the fundamental problem preventing widespread clinical use of the glycemic index is lack of compelling experimental data from investigators who have no vested interest in establishing its utility. What is needed is not more words, but a well-planned, multicenter trial involving at least some investigators who have not embraced the glycemic index, with results demonstrating its clinical utility in the treatment of NIDDM. Until such data are available, we

truly believe that little is gained by the further exchange of letters.

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Ah, Would That It Were So!

In response to the paper by Ho et al. (1) recently published in *Diabetes Care* in which significantly more of the American Diabetes Association's standards of care were met by physicians in a diabetes clinic than physicians in a general medical clinic of a university-affiliated Veterans Administration medical center, Smith (2) commented that "[m]ost of the guidelines mentioned in the study by Ho et al. could be easily implemented as computer-generated reminders (e.g., no urinalysis in the past year, so consider ordering a urinalysis; no HbA_{1c} in the past year, consider ordering an HbA_{1c}; no eye clinic visit in