References


Dietary carbohydrates in the prevention and treatment of metabolic diseases

Dear Sir:

Although it is usually flattering to be quoted by other researchers, Drs Szostak and Cybulaska seem to have misinterpreted our results or possibly were intending to reference other papers of ours rather than the one cited in reference 70 of their paper (1). The authors stated, “Sucrose substitution for complex carbohydrates for 1 wk in a low-fat high-fiber diet in healthy males caused a higher glucose and insulin response to the standard glucose load (70).” In the paper cited (2) simple sugars (not only sucrose) were substituted for complex carbohydrate for 6 wk (not 1 wk). We have published a number of papers reporting studies in which sucrose was substituted for complex carbohydrates for 5 or 6 wk. In men and women over 35 y of age, sucrose increased insulin responses in carbohydrate-sensitive individuals (3). In a study of 24 hyperinsulinemic men and women (4), sucrose consumption increased fasting insulin and glucose levels and insulin and glucose responses to a sucrose (not glucose load).
The authors also stated, “On the contrary, it has been published recently that long-term fructose use by diabetic men consuming low-fat high-fiber diets did not change plasma glucose, cholesterol, and triglyceride concentration” citing the same reference 70 (1). The blood lipid results of the study cited in reference 70 were published in another article (5). When simple sugars (not just fructose) replaced complex carbohydrate, total cholesterol increased in premenopausal women and VLDL cholesterol and triglycerides increased significantly in both men and premenopausal women. There were no diabetic men in the study. The authors have already correctly stated that glucose responses were increased in these subjects (see paragraph 1).

Perhaps the authors wished to cite one of the papers in which we reported effects of long-term (5 wk) fructose consumption on lipids (6) or glucose and insulin responses (7) in normal and hyperinsulinemic men. However, the fructose studies did not use a low-fat, high-carbohydrate diet. We have never studied diabetic men. Fructose, consumed in a typical American diet, resulted in elevations of triglycerides in hyperinsulinemic men and elevations in total cholesterol and insulin responses in both groups.

Our research over the last 10 y in both animal and human studies has consistently shown that sucrose or fructose substitution for complex carbohydrate results in adverse changes in risk factors for heart disease and diabetes.

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Reply to Hallfrisch and Reiser

Dear Sir:

This is to explain and apologize for some mistakes concerning quoted literature, which unfortunately have been found in our paper (1).

In the statement “Sucrose substitution for complex carbohydrates for 1 wk in a low-fat high-fiber diet in healthy males caused a higher glucose and insulin response to the standard glucose load (70)” there are two misrepresentations. This statement should read “Simple sugars substitution for complex carbohydrates for 6 wk in a low-fat high-fiber diet in healthy males caused a higher glucose and insulin response to the standard glucose load (70)” (2).

Concerning the statement “On the contrary, it has been published recently that long-term fructose use by diabetic men consuming low-fat high-fiber diets did not change plasma glucose, cholesterol, and triglyceride concentration (70),” we cited by mistake the paper of Reiser, Hallfrisch, Fields, et al. It was our intention to cite (as reference 71) the paper of Anderson (3).

We kindly apologize for the above mistakes.

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References