It is gratifying to learn that our paper has been so frequently cited. In 1962 it was widely accepted that a high consumption of saturated fat was responsible, at least in part, for the increase of coronary heart disease in the US.

During a three-hour wait in the rail station at Chicago, I observed the different selections made by patrons from vending machines. To my surprise, 37 people selected the highly sugared items and only one person selected an apple. This impromptu observation provoked my thoughts on the role of carbohydrates. Before 1960, little work had been carried out with dietary carbohydrates. Therefore, we studied the changes in food consumption in the US and investigated the effect of the kind of carbohydrates upon serum lipids in man.1

Although as a fellow I had minimal resources to work with, I was fortunate to be able to perform my research in four different labs (those of M. Ohlson, W. Connor, G. Stearns, and M. Osborn, to whom I am most grateful). The grueling task of calculations and analysis of data was done by hand using a mechanical calculator.

I recall distinctly how I was both surprised and pleased to observe emerging specific patterns. There was a great progressive decline (more than 55%) of complex carbohydrates with their fiber, and a concurrent dramatic increase of simple sugars (more than double) over the last 70 years. The even greater surprise was the finding that polyunsaturated fatty acids had increased by 40% while saturated acids hardly increased. The rise in dietary cholesterol was minimum. These data did not fit the hypothesis that low ratios of dietary polyunsaturated to saturated fatty acids contribute to the increase of coronary heart disease. In contrast, changes in the type of dietary carbohydrates may be a factor. Such a simple and obvious conclusion proved to my amazement not only a source of initial skepticism and controversy, but also a stimulant for research in this area. Since our initial report, hundreds of articles, several books, editorials, an Australian Academy of Science report, and two congressional Senate hearings have dealt with the subject.

This paper is widely cited in my belief because: (a) it is one of the first comprehensive studies to offer another light on the relationship of dietary factors and coronary heart disease (carbohydrate connection) and to present a challenge to the then widely accepted hypothesis ‘lack of unsaturated fat’ and (b) the data were shown to have many ramifications into other fields such as dental caries, obesity, hyperinsulinemia, and cancer of the colon and rectum.

Several years later, we found a synergistic hyperlipidemic effect between dietary simple sugars and saturated fat in patients2 (i.e., when saturated fat levels surpassed a certain threshold, excess simple sugars with concomitant low complex carbohydrates were hyperlipidemic). These hypotheses may offer a better explanation of the problem and stimulate further research.