

Editorial

Nutritional Advice A Problem and a Challenge

THE science of nutrition is often made more difficult than necessary for several reasons: (1) almost everyone is a self-styled expert in nutrition and ever ready to recommend specific foods, diets or magic recipes that will provide some miraculous benefit, and (2) there is not enough recognition of the fact that food is not nutrition. Agriculture, food science and dietetics are concerned with providing a wide variety of foodstuffs in an appetizing, palatable form that presumably will carry all the essential nutrients, but nutrition is the interaction between the chemicals provided by food and the host who must digest, absorb and metabolize these nutrients to meet the total physiological requirements of the individual. Of course good nutrition depends on food, but the most nutritious meal that can be prepared is important to the nutritional status of a person only insofar as it is eaten. Lack of knowledge concerning actual nutrient intake poses an important problem in evaluating nutritional adequacy, particularly in a population with an abundant food supply where it is usually assumed that most everyone is well nourished.

From earliest recorded history, nutritional advice has been given about what or what not to eat. For example, to eat the heart of your adversary was considered to provide strength, and certain foods by tradition became associated with vigor and good health. Over the

centuries man has accumulated lists of food taboos which have been preserved in religious documents and are observed in modified form to this day. The medical writings of Hippocrates placed great emphasis on diet, and he might well be considered the father of clinical nutrition. Even athletes in our enlightened times are often given well meaning but scientifically unsound advice concerning the special merits or disadvantages of certain diets and foods in order to achieve victory. Since in most contests there must be at least one loser, if everyone follows the nutritional advice it must be at least half wrong on the face of it.

Bizarre advice about foods and dietary practices is the trademark of the food faddist, and, while such information should be refuted by scientific fact at every opportunity, most of this type of advice so deviates from habit that it becomes attractive to only a small segment of society that is often called the "lunatic fringe." Little can be done for or about this group.

Nutrition has made its contribution in the area of public health and preventive medicine; it is hoped that this will continue to be so. In considerably less than half a century the results of nutrition research have practically eradicated the frank clinical deficiency diseases, so that today it is most difficult to demonstrate these problems to medical students and house staff.



There have been some momentous and worthwhile steps taken in this country to provide the public with advice and recommendations about nutrition:

The realization that a significant part of the American diet was derived from highly processed foods which might lead to nutritional inadequacy led to the greatest large scale nutritional public health measure in our history—the enrichment of white flour and bread with certain essential vitamins and minerals. In fact the enrichment program has been the most significant improvement in the general American diet since its inception.

Nutritional advice to the public placing emphasis on the use of a variety of foods that will supply the recommended daily dietary allowances, as set forth by the Food and Nutrition Board of the National Research Council, has been a real milestone in nutrition progress and preventive medicine.

Thus, while the enrichment principle and standards for dietary allowances provide sound nutritional advice to the public, too broad an application of enrichment to specific foods, or the unsupervised and careless use of dietary allowance tables as a measure of individual nutritional adequacy, far exceeds their intended purpose and is not a proper basis for generalized nutritional advice.

While the general public might appear to be a rather homogenous mass, it is still composed of widely variable physiological units with increasing evidence of significant individual biochemical and genetic differences. Thus the average man may be only a statistic in the wide flux of biological variability. It is most difficult, therefore, if not dangerous to make dietary recommendations or give nutritional advice that may significantly alter the nutritional pattern of the public at large. The benefits to be anticipated from nutritional change must certainly far exceed the possible hazards involved. It is to the everlasting credit of the many scientists who patiently and with careful deliberation evolved the enrichment program. The results have been effective, beneficial and safe.

A new and infinitely complex challenge now faces all those concerned with the alarming in-

crease of ischemic heart disease in this and other technically well developed countries. What, if anything, should be given in the way of nutritional advice? Should such advice be of a general nature or should it be provided at the professional level through the physician? These are controversial matters and probably no completely satisfactory answer is yet available.

Nevertheless, a report has been made public of the Ad Hoc Committee on Dietary Fat and Atherosclerosis authorized by the Central Committee for Medical and Community Programs of the American Heart Association. The subject of this report is "Dietary Fat and Its Relation to Heart Attacks and Strokes."

While this report has been criticized by many—industry that might suffer from it and other scientists who disagree with its tone or implications—it remains as an important, bold step in nutritional advice by competent, thoughtful scientists who, I am sure, did a great deal of soul searching and deliberation before issuing it. Why is this report significant? It represents the considered judgment of a group of competent people who clearly recognize the role that diet may play in a disease that kills more people than any other, yet it emphasizes the fact that the final proof that heart attacks or strokes can be prevented by dietary measures is lacking, it is directed to specific segments of the public; it provides reasonable information as to the specific dietary factors that are involved; it stresses that the reduction and control of fat consumption should be under medical supervision; last, and most importantly perhaps, it gives impetus to research activity, either to add further support for the advice given, or to refute it. This then is in the spirit of inquiry and learning from which all can benefit. Scientists must be more vocal and communicate more satisfactorily to the general public if scientific information is to remain in their hands and under their direction.

The public is being exposed to much more malicious forms of nutritional advice. Although nutritional deficiency diseases are now rare, another form of malnutrition is all too prevalent: that of overnutrition, with the

resultant overweight and improperly fed American. The well publicized health hazards of obesity has recently prompted *The New York Times* to review the "calorie craze" and the impact that this is having on the food industry and advertising. The public, presumably at least the fat people in it, is avidly seeking information on how to reduce, mostly without suffering too much. The numerous books that have been written by "experts" in nutrition provide a ready source of advice about diet in relation to weight reduction, longevity, and health and well-being generally. Unfortunately, most of the advice involves a pet "gimmick" of the respective authors so that the people who read such books cannot help but be more confused than aided by the advice given. The potential buyer of most of these books is attracted by the advice conveyed in an appealing or tricky title. Certainly the advice that the fat man has always longed for is supplied in the title "Calories Don't Count."

This book was written by Herman Taller, M.D., who bases his theory of weight reduction on earlier speculations by Pennington* that: "Obesity is due to excessive intake of carbohydrates, plus a disturbance in metabolism due to a physiological (organic) disturbance of the body," and the unproved assumption that obese people seem unable to burn pyruvic acid at a reasonable rate which permits its accumulation in the body. This seems rather tenuous grounds upon which "One could assert with absolute certainty that the calorie theory had no scientific basis whatsoever." Despite this absurdity Taller observes more logically that,

* PENNINGTON, A. W. An alternate approach to the problem of obesity. *Am. J. Clin. Nutrition*, 1:100, 1952-53.

"The underlying reason, in more than 95 per cent of all cases of obesity, is an imbalance between energy output and energy intake." Weight reduction with low calorie diets is criticized as ineffective and "not harmless," and one might be inclined to agree if one knew what level of calorie restriction he was talking about in the low calorie diet. One of the keys to success in "Calories Don't Count" is safflower oil. "The easiest routine is to take at least two capsules before each meal." Certainly this represents an expensive way to take a limited amount of polyunsaturated fatty acids for which no scientific evidence is provided as to effectiveness in weight reduction. Needless to say "Calories Don't Count" is nutritional nonsense which can hardly be recommended as serious and appropriate nutritional advice.

It is unfortunate that the public will continue to look to this type of advice as long as they do not receive more satisfactory answers about nutrition from their doctors. This is too often related to the fact that many physicians have not had enough training in the fundamentals of nutrition to answer the many questions that patients ask them about foods and diet. Those of us fortunate enough to have a specialized training and an interest in nutrition must help to provide teaching in nutrition at the post-graduate level for practicing physicians. We must also exercise our influence and abilities in our medical schools to bring nutrition into reasonable perspective in the training of medical students and house staff.

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