

Editorials

The Education and Function of the Nutritionist

IT is obvious from the make-up of recent lists of best selling books that the public is interested in nutrition, fact or fiction, magic or sober truth. About forty years ago the vitamin era began in an atmosphere of wonder and hope which has produced a multimillion dollar business, some of which is justified by needs and results. In recent years the control of body weight, of blood cholesterol and of blood pressure by low calorie, low fat and low salt diets has captured the attention of medical and lay public alike. Books on folk medicine, practiced chiefly through the use of homely foods, and on youth and beauty, achieved through fantastic food fads, have added to this irrational mass preoccupation with health through diet.

Many of the writers of these popular books, columns and pamphlets on food and diet have had little scientific training of any kind and know even less about the fundamentals of the science of nutrition. The best of them extrapolate confidently from old and new animal experiments to human conditions and the worst of them exploit their readers' gullibility for profit. The dangers to public health inherent in propaganda of this kind should be apparent to every medical practitioner. Of course the medical practitioner himself must be well

enough grounded in the fundamentals of normal nutrition to be able to differentiate between the truth and nonsense of these claims.

Despite some intelligent efforts during the last fifty years, nutritional science as distinguished from both biochemistry and dietetics has been given little space in medical education. The student is expected to learn all that he needs in this field from his biochemistry and physiology courses. Perhaps some of the students may be stimulated to follow up the hasty leads obtained in these courses, but the majority undoubtedly do not. In some first rate medical schools, for instance, the whole subject of vitamins—discovery, function and use—is covered in three to five lectures in the biochemistry course, with little or no laboratory work illustrating the findings. Basal metabolism is often presented by formulas only, food composition is not touched on at all and isotopic or other experiments dealing with intermediary metabolism are seldom included. The addition later of a course in diet therapy, usually one morning a week for a semester, can do little to bridge the gaps. Thus there is a large area of important nutritional theory and experimentation of which medical students are not ordinarily aware. It is not surprising that the public often is disappointed in the un-



convincing *riposte* by their medical advisers to food fakes. Full advantage of the health preserving and restoring effects of proper food choices may not be taken by the busy medical practitioners who are only vaguely aware of these things.

In an editorial early last year,* Paul György suggested a sensible and highly desirable improvement in the nutrition training of medical students. He believes that such instruction should be interlaced throughout all the supporting medical departments such as biochemistry, physiology, pathology and clinical experience. But, in addition, in one or more of these departments or in an independent course, rigid training and practice in the scientific foundations of nutrition are essential. This key pillar of the whole structure usually is missing.

Most of our public health and hospital dietitians received their undergraduate preparation in food and nutrition in home economics departments. Some of these departments support a competent group of nutrition instructors and also a research program in the field. This is particularly true of the large land-grant and state universities which, for more than thirty-five years, have maintained research programs in both experimental and human nutrition. But in some of these institutions, the research and teaching departments often are entirely separate. The majority of home economics departments in the smaller colleges have no such program and their nutrition teachers are sometimes themselves graduates of general home economics curricula. The graduates of all these departments are accepted for intern training in hospital dietetics if their transcripts show the proper number of units of nutrition, biochemistry and other instruction without distinction as to quality of courses.

The difference in depth and understanding of nutrition as a science between the home economics graduate of a general curriculum and of the food and nutrition major is striking. Dietitians and nutritionists in the hospital and the community, particularly in public health

and agricultural extension programs, may be of either kind. The gradual erosion of the professional prestige of the dietitian seen in recent years in some institutions may well be due to this unrecognized dichotomy. The nutritionist, a term of wider significance than dietitian, may well be considered part of the paramedical personnel, parallel in training and duties with the x-ray specialist, anesthesiologist and pathologist. His or her function can well be that of consultant and adviser as well as of technical aid to the medical man. The writing and calculation of diets ordered by the physician is only part of this service, a fact recognized by some progressive internists. The nutritionist may be of help in the management of some cases, particularly in the recognition and treatment of nutritional deficiencies and metabolic disorders, such as gout, diabetes, nephritis, anemia, liver and thyroid disturbances and allergies.

Public health and university administrators have long recognized the need for the nutritionist's services and have supported nutritional status and dietary survey studies. The regional cooperative studies in this field initiated by the State Agricultural Experiment Stations have demonstrated the capability of nutrition departments in many home economics departments and schools. A summary of these studies carried on from 1947 to 1959, published as Bulletin 769 by the California Agricultural Experiment Station in 1959, under the title of "Nutritional Status, U.S.A." emphasizes the value of the biochemical tests of blood and urine in checking the dietary records. The same conclusion was reached by A. E. Schaefer of the ICNND in 1960, who has extensive experience in this field. The developing countries in Africa and Asia need early and extensive surveys of the food habits and the nutritional status of their populations. Both WHO and FAO officials are cognizant of this need and have set up machinery to aid these countries. The nutritionist entrusted with such a survey hardly can function without the aid of qualified physicians and chemists and ideally should be both a physician and a biochemist as well as nutritionist. Without greatly increasing the educational requirements

* GYÖRGY, P. Education and training in nutrition. *Am. J. Clin. Nutrition*, 10: 1, 1962.



now set up for dietitians, the biochemical technics and understanding can be added either in the undergraduate or graduate curriculum. Such a nutritionist should be competent to set up, supervise and interpret the biochemical data along with the diet records. The increasing use of machine calculations of these records points also to the need for a sound grounding in statistical and computer theory and practice. It should be possible to substitute these studies for some of the food preparation and social studies in the present curricula.

Many well trained nutritionists or dietitians have retired to their own homes while their children are young. When the children are in school, or later, these women may be ready to undertake at least part time service in their profession. Such service is not only likely to be advantageous to the community, but also a psychologic life saver for these women. In some communities groups of three to six of these women have combined to offer professional part time help, paid or unpaid, to local physicians and hospitals. The development of nursing homes for the elderly has recently opened a new field for such services. Clinics for mothers and infants as well as for overweight and metabolically crippled adults have need for the nutrition consultant. Groups of

medical practitioners sometimes employ such a consultant but in many cases these attempts eventually have failed. There are diverse reasons for these failures but, in general, lack of understanding by the physicians of the kind of help to be expected rather than lack of scientific background by the nutritionists has been the stumbling block. The method of payment of the nutritionist's fee also is unacceptable at times. The physician refers the patient and expects the dietitian to collect her own fees. The patient sometimes resents the additional billing. In a few cases the medical group employs the dietitian in the same way as the laboratory technician and includes the fee in the total medical bill. This usually is satisfactory to all concerned.

The outstanding need in clinical nutrition therefore appears to be improvement in instruction in the fundamentals of nutritional science for both the medical and nutrition student, some standardization of undergraduate curricula for the nutritionist, further improvement of the nutrition internships and more realistic use of nutrition consultants by medical groups.

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