

Reviews of Recent Books



Protein and Amino Acid Nutrition, edited by Anthony A. Albanese. Academic Press, New York, 1959, pp. 604, \$16.00.

This volume represents a revision and considerable expansion of the previously published small monograph entitled "Protein and Amino Acid Requirements of Mammals." The stated objective is "a collection in one volume of rather detailed presentations describing the current state of knowledge concerning this aspect of nutrition." There are sixteen chapters contributed by different authors. The objectives of the various authors differ so widely that it is difficult to arrive at a single evaluation of the book as a whole.

Some of the authors have presented chapters of the kind which might be expected, that is, critical and more or less complete reviews of a particular topic. These include "Utilization of D-Amino Acids" by C. P. Berg; "Methods of Measuring the Nutritive Value of Proteins, Protein Hydrolysates, and Amino Acid Mixtures. The Repletion Method" by D. V. Frost; "The Amino Acid Requirements of Animals" by H. J. Almquist; and "Amino Acid Supplementation of Foods and Feeds" by H. R. Rosenberg. The chapter by H. H. Mitchell on "Some Species and Age Differences in Amino Acid Requirements," which is similar if not identical to that published in the previous monograph, is also stimulating and provocative. The chapter by J. B. Allison on "The Efficiency of Utilization of Dietary Proteins" is appropriate and the thesis should be understood by students in the field.

The authors of many of the other chapters have taken undue advantage of their opportunity. In some of these, the author's own work is republished extensively with long tables, charts and methodology. The extent to which these chapters are germane to the subject matter of the book, worthy of inclusion, or related to the pertinent literature varies greatly. Some of these, like the chapter on "Food Energy and Metabolism of Protein" by P. Swanson, was of interest to this reviewer although she has relied heavily on her own studies. The chapter on "Amino Acid Requirement of Young Adults" by Ruth Leverton is limited to studies on young women in several laboratories in the United States and is a recompilation rather than a re-evaluation. The bias in some of the other chapters is more pernicious in that it may not be recognized unless the reader is well acquainted with the literature and it has been achieved both by the material included and by deliberate omission. For example, the extensive studies by Holt and Snyderman on amino acid requirements of children is only casually mentioned in the chapter on "Protein and Amino Acid Requirements of Children"

by A. A. Albanese. This is not justified regardless of the author's appraisal of this work. Some other examples of work which one might expect to find reviewed would be Rose's studies on amino acid requirements of adults or Eagle's studies on tissue culture.

There is a need for a book covering this area of nutrition but this volume does not fulfill the need.

D. M. HEGSTED

Manuel of Applied Nutrition of the Johns Hopkins Hospital, by Janette Carlsen. The Johns Hopkins Press, Baltimore, 1959, pp. 134, \$3.00.

This is the fourth edition of a small pocket-size manual of diets as used at the Johns Hopkins Hospital. A wide variety of menu plans are presented, including the "Dental Soft Diet." It was compiled for the staff of that institution and, no doubt, is extremely useful to the members. However, only certain portions, albeit the majority, will be equally useful to others. Various "routines" of local use are described. Any dietitian, however, will be able to develop new ideas from the wealth of material.

One thing is clear in reading this handy book, there is an acute need for standardization of dietetic nomenclature. What is a "limited soft" diet? Should a "convalescent ulcer" regimen contain 4,350 calories? It is hoped that some day various experts will agree among themselves and eventually all hospitals will be talking the same language.

S. O. W.

Vitamin B₁₂ Metabolism. Some Studies on the Absorption, Excretion, Enterohepatic Circulation, Turnover Rate, Body Distribution and Tissue-Binding of B₁₂, by Peter G. Reizenstein. Gummessons Boktryckeri, Stockholm, 1959, pp. 31.

This work is based on a discussion of six papers by Reizenstein and his colleagues. These studies suggest that the minimum vitamin B₁₂ requirement in healthy control subjects is 1.3 or 7 μg . per day. The average requirement in patients with pernicious anemia is probably closer to 7 μg . because of indications of more rapid turnover and impaired enterohepatic circulation. A requirement of 5 μg . per day was taken as a tentative basis for discussing treatment. In healthy subjects the minimum dose of parenterally administered vitamin B₁₂ leading to the retention of about 50 μg . seems to be around 200 μg . A requirement of 5 μg . per day was taken as a tentative basis for discussing treatment. In order to enable the body to retain 150 μg . per month, about three 200 μg . injections are necessary.

Adequate parenteral therapy may demand too many injections to be convenient for the patient. Effective

oral treatment combined with the parenteral administration of vitamin B₁₂ might be a convenient way of more adequate therapy.

O. M. HELMER

Diabetes, edited by R. H. Williams. Paul B. Hoeber, Inc., New York, 1960, pp. 793, \$20.00.

Few disorders have been studied more intensively than diabetes; yet each year brings significant new developments so that the literature on diabetes and carbohydrate metabolism is truly voluminous. There exists no paucity of books on the subject. However, this text by fifty-four authors, and well edited by Robert H. Williams of Seattle, is among the very best. No book can be better than its authors, and in this textbook one will find most of the outstanding men in the field who write from a vast personal experience.

Because the new developments in our knowledge of diabetes are stressed, the first several chapters deal with the chemistry and physiology of insulin and other hormones involved in carbohydrate, protein and fat metabolism. (Included are chapters on electron microscopy of the islets, intravascular fat and plasma insulin assay methods.) Roughly half the book is devoted to what one may call the "basic science" aspect of diabetes.

The second half is clinical in orientation with chapters on diagnosis, management, complications and prognosis, all very well done.

It is a commentary on changes in medical practice that only one of forty-eight chapters deals with the routine treatment of diabetes with insulin. As our knowledge of mechanisms increase it becomes more important to understand *why* and *how*; the *what-to-do* then follows logically. The chapters on oral antidiabetic agents and diet therapy (Marble) seem well balanced.

Although coverage is very wide, one would like to see a chapter on the social aspects of diabetes, i.e., employability, insurance risk, marriage counseling, psychologic factors, etc. This might balance the strong investigative and laboratory emphasis in the book.

This is, then, the most authoritative, current basic volume on diabetes. It is highly recommended.

S. O. W.

The Lifespan of Animals. Ciba Foundation Colloquia on Ageing. Vol. 5, edited by G. E. W. Wolstenholme and M. O'Conner. Little, Brown & Company, Boston, 1959, pp. 324, \$9.50.

At this symposium fourteen papers were presented and discussed by twenty-two continental and English and five American investigators. Six papers and a general discussion of the rather haphazard collection of topics deal with longevity of man, horses, cattle and rats and eight papers with that of birds, insects and fishes. There is also an index of subjects dealt with and of authors participating in and referred to in this and the four previous colloquia on aging. Of some general interest are the papers by (1) B. Benjamin on actuarial aspects of human lifespans in which the advantages of some statistical methods are discussed, and (2) G. A.

Sacher in which an attempt has been made to correlate brain and body weight to the lifespan of mammals. In the paper by E. Jalavisto, concerned with parental age effect on longevity of man, it is concluded that advanced maternal age has no effect on longevity of the progeny, once the latter have reached the age of fifteen years, although juvenile mortality during the first year of life seems to be slightly increased when the mothers were older than thirty-five years. Paternal age did not influence survival of the offspring. The correlation of onset of disease and lifespan is discussed in the paper by Simms and collaborators, and Scheidegger reviews arteriosclerosis in birds.

The presentation of the papers and the discussions are rather subjective, and there is an unfortunate disregard of important contributions to the field. Instead, as is customary for this type of meetings, the participants restate their views without adding significant new material. The personal exchange of views made possible by these symposia is certainly of value to the participants, but the printed version of the colloquium would be of greater value as a source of reference if the earlier work in the field had been quoted or referred to. Considering the small size of the booklet, the price seems rather high.

M. SILBERBERG

World Review of Nutrition and Dietetics, edited by Geoffrey H. Bourne. J. B. Lippincott Company, Philadelphia, 1960, pp. 272, \$12.00.

This is a unique book. It consists of ten chapters which, in the words of the editor, are discursive reviews that are critical evaluations of special fields. It is international in scope with articles by French, Japanese, Central American, British and American workers. The objective is "to describe the nutritional status of peoples under different geographic, climatic and economic conditions, and to examine all available knowledge in order to find solutions wherever nutrition problems exist."

The first of what will be a series of reviews contains a concise history of nutrition by E. V. McCollum. Other topics range from the biosynthesis of vitamin C to the use of isotopes in nutrition research, from kwashiorkor to neoplasia, with chapters on specific endocrine, embryologic and hematologic topics. A curious but fascinating chapter by Suzuki is a review of the basal metabolism among the Japanese. At first glance this topic would seem to be of limited interest but some data therein are of wide significance. For example, the basal metabolic rate of the Japanese fell about 10 per cent during World War II and is attributed to the generalized food shortage. However despite an improved postwar food situation, it took one to two years for recovery of the basal metabolic rate to take place. As the author states, it is quite conceivable that long-term undernutrition has a significant influence on the living organism.

All those seriously interested in nutrition will find this volume interesting and pertinent. Even scientists not working directly in the field will find this review informative and stimulating.

S. O. W.