

# Reviews of Recent Books



**Modern Problems in Pediatrics II**, by A. Hottinger and F. Hauser. S. Karger, Basel, 1957, pp. 222, Sw. Fr. 32.

This book is a report of a symposium on the "Physiology and Pathology of Digestion in Infancy" held in the Children's Hospital at Basel, Switzerland from August 1 to 3, 1956. Participants were pediatricians from various countries throughout the world who had attended the International Congress of Pediatrics in Copenhagen in July.

A total of 18 papers are presented, most of which are followed by the general floor discussion. Seven of the 18 papers are in English, ten in German, and one in French. Two of the German papers have brief summaries in English. It would have been helpful to potential readers not conversant with German or French, if all had been similarly treated.

This symposium dealt only with problems related to the gastrointestinal tract. György discussed the intestinal flora in human milk-fed infants and described his discovery of a specific mutant of *L. bifidus* which was named *L. bifidus var. pennsylvanicus*. He concluded that the role of *L. bifidus flora* in the physiology of the human milk-fed infant is still shrouded in mystery, but expressed the hope that the beginning which has been made may lead to a better understanding of the problem.

Holt reported upon his studies on fat absorption in infants. Most important of these, he believes, is the observation that the quantity of fat absorbed appears to be proportional to the intake, even though absorption is very inefficient, as for instance in diarrhea.

To this reviewer, the paper contributed by Dean from Kampala, Africa, on digestion in kwashiorkor, is of special interest. In describing the pathology of the digestive organs in a child who has died of kwashiorkor the author makes the startling statement that the walls of the small intestine may be so "diaphanous that print can easily be read through them," and that the pancreas may be so reduced in size that it is a "small cord stretching from the duodenum to the spleen." His further observations on the therapeutic attempts with various types of diet are most enlightening.

It is not possible in this brief review to summarize each paper. Suffice it to say that a wide variety of topics were covered which included intestinal allergy, pathology of parenteritis, pathogenic intestinal bacteria, absorption of various types of lipids, and metabolic disturbances. The authors are to be congratulated for their industry in seizing upon the opportunity

to bring together a group of international experts for an exchange of views and for publishing the proceedings in book form. As stated previously the value of the book to many Americans could have been enhanced by the inclusion of abstracts in English.

LEE FORREST HILL

**Analytical Microscopy. Its Aims and Methods in Relation to Foods, Water, Spices, and Drugs**, by T. E. Wallis, Little, Brown, & Co., Boston, 1957, pp. 215, \$5.50.

This is the second edition of a book that originated in a series of articles first published in the *Pharmaceutical Journal* more than thirty years ago. It has more than double the illustrations of the original work. The book gives methods for preparation of materials for microscopic examination and is surprisingly encyclopedic for its size. Bacteriology and crystallography are deliberately omitted, however. The text represents a commendable effort toward providing, as a substitute for a broad knowledge of biologic structures, a manual of procedures, descriptions, and illustrations with a profusion of original drawings.

Three-quarters of a microscopist's time might be spent in preparing material for examination. The textbook covers this area by giving minutiae of procedures for sifting powders for seeds and vegetable fragments, as well as part of contaminating insects. Procedures for preparation and sectioning of mixtures of leaves, barks, seeds, and fruit (as in the culinary herbs) are described; plant anatomy of pertinent species is given in detail. A whole chapter is devoted to the technology of sedimentation and centrifugation, primarily for taxonomic aspects of limnology, but also for sediments in liquids other than water. For example, kneading flour or starch in a cloth bag under water gives a variety of different types of sediments for examination; the chapter on that subject describes typical findings. On the other hand, the technic of concentration (elutriation) is really a differential centrifugation procedure that can be used to examine rice for facing, or to establish the foraminiferous origin of a chalky limestone. The nature of the starch of sago or tapioca can be determined by elutriation. The chapter on elutriation discusses the treatment of jams and honeys by water solvent to identify the source of origin.

A general chapter on solvents and clearing agents is interwoven with the morphology and mounting methods for insects and mites, as well as the identification of canned fish, or fish pastes by scale characters. Chemo-

microscopy reagents and their applications are discussed in another section; miscellaneous tests for apple-pulp in jam, nutmeg in powdered mace, calcium carbonate in calcium oxalate, blood, etc., are described.

The chapters on sublimation, precipitation, and staining, as well as the chapter on quantitative microscopy, might well have followed, but are separated from chemomicroscopy by a section on micromorphology. However, many nonbiologic materials can be conclusively identified by use of the microscope. Precipitated sulphur may be differentiated from sublimed sulphur by such procedures.

The remainder of the text is comprised of discussions of methods of measurement, illustration, and photography, plus an appendix of miscellany. An invaluable bibliography contains references as recent as January 1956, but much space is taken up with unavailable publications. Other references are given in the text of the book. The index could be more comprehensive. Despite these limitations, this textbook should prove a welcome addition to the bookshelf of the food and drug laboratory.

ELI COHEN

**Annual Review of Medicine, Vol. 8**, edited by D. A. Rytand. Annual Reviews Inc., Palo Alto, 1957, pp 478, \$7.00.

The 1957 edition of Annual Review of Medicine continues in the best traditions of this distinguished series. The section on nutritional problems was written by M. I. Grossman, who does a commendable job based on some 124 references. Certain recent advances in the study of liver disease, amino acid requirements, cholesterol, and obesity are presented.

This issue has a number of chapters devoted to somewhat neglected topics including renal fibrosis, pneumoconiosis, helminthic diseases, and drug addiction. As usual the authors have all had extensive experience in their fields and an obviously wide familiarity with the literature.

It is apparently customary for book reviewers to make some constructive criticism, and in this case one would comment that the Annual Reviews would be even more valuable if there were more frequent reference to the foreign literature. Certainly this would be a boon to the investigator who is presumably the reader benefiting most from these excellent reference volumes. No doubt the embarrassment of riches representing the vast medical literature makes the preparation of these reviews a difficult task. Nevertheless we must not be medically chauvinistic and limit ourselves to English language science. With this comment noted the book can be strongly recommended to all engaged in teaching and research.

S.O.W.

**The Yearbook of Endocrinology (1956-1957 Year Book Series)**, edited by Gilbert S. Gordon. The Year Book Publishers, Chicago, 1957, pp. 377, \$6.75.

There are many points at which the sciences of endocrinology and nutrition meet in the study of human and

experimental metabolism and biochemistry. Rapid advances in endocrine chemistry have revolutionized earlier concepts of hormone actions and have added new substances of particular interest to physicians engaged in the study of nutrition. The current Year Book of Endocrinology effectively distills the important contributions in this field during 1956 into a single volume. The six sections of the book are devoted to the pituitary, thyroid parathyroid glands, and metabolic bone diseases, the adrenal glands, the reproductive system, and carbohydrate metabolism. There are two original contributions, one by Elrick dealing with recent developments with glucogen and one by E. C. Albright and Larson on thyroid hormone transport. These discussions are thorough and succinct, bringing the reader abreast of the latest knowledge available in these areas of metabolic research. The delightful interpolations of the editor following many of the abstracts greatly enhances the value of this book.

The nutritionist will be particularly interested in the discussions on calcium and phosphorus metabolism, hormonal influences upon lipid and cholesterol levels, and upon nitrogen and carbohydrate metabolism, and the recent concepts of the effects of aldosterone upon electrolytes. This is a book which will serve as an excellent reference for the significant articles of the past year in clinical and investigative endocrinology.

C.R. SHUMAN

**Body Measurements and Human Nutrition**, edited by Josef Brožek. Wayne University Press, Detroit, 1956, pp. 167, \$3.50.

Anthropometry has the very real potentiality of contributing to the advancement of nutrition, especially in providing a better basis for the physical characterization of an individual. This would be especially desirable in evaluating the degree of leanness and obesity. During the past few years, a committee established by the Food and Nutrition Board of the National Research Council has been considering the anthropometric measurements which might be most useful in nutrition work. The final act of the committee was to sponsor a conference at Harvard University in June 1955 at which the minimum anthropometric measurements which should be used in assessing the nutritional status of an individual were agreed upon by those attending the conference. The first chapter of the book presents these for both adults and children, with the various measurements indicated as being those that are the least that should be included in any set of measurements, those that should be added as a minimum for nutritional survey work, and those that would be desirable for surveys.

The remainder and by far the larger part of the book is given over to a series of reports by the conferees on studies that have utilized one or more anthropometric procedures. In the first of these Brožek presents the correlations between a variety of anthropometric measurements and body weight. The skinfold thick-



nesses of Minneapolis firemen are given for the upper arm and subscapular area. An interesting observation is that although only 20 per cent of the Minneapolis firemen had arm skinfolds of 9 mm or less, 51 per cent of Sardinian policemen, 56 per cent of Cape Town colored, and 60 per cent of Cape Town Bantu fell in this group.

R. M. White presents body weights and heights and a number of other anthropometric measurements of 2,650 25-year-old white men who were discharged from the Army in 1946. Each man was characterized as small, medium, or large, on the basis of both chest width and bi-iliac diameter. The mean body weights for different heights were given for each of these groups. The maximum weights listed in the Metropolitan Life Insurance Company's table for men with small, medium, and large frames approximated the mean weights of the Army men segregated on the basis of bi-iliac diameter.

M. Trotter examined 24 male skeletons of individuals ranging from 18 to 87 years of age and found a high correlation between the weight of the femur and the total weight of the skeleton. The male American Negro was reported by R. W. Newman to be leaner than his white counterpart as shown by a study of a large group of young men on discharge from the Army. Pascale and co-workers present a multiple regression equation for the calculation of body density in young men from skinfold thicknesses as measured on the chest, abdomen, and upper arm. L. B. Pett and G. F. Ogilvie report on the height-weight survey recently completed in Canada. M. A. Ohlson and co-workers provide a preliminary report on a variety of anthropometric measurements of adult women in the North Central states. A. B. Kurlander and associates report that among a group of Negro patients at the municipal hospital in Washington, D. C., the excess mortality of overweight men could not be correlated with their body fat content as determined by a variety of anthropometric measurements. This report is followed by a defense of life insurance statistics by H. M. Marks. S. M. Garns and associates report that the amount of fat in an infant at birth provided no reliable indication of the changes in this body component during the first year of life. E. E. Hart and E. Giles discuss the changes that occur in the concentration of water and fat in growing animals and children.

The book provides a great deal of information which will be of interest to workers in human nutrition. It is hoped that the investigators making anthropometric measurements on human subjects will follow the recommendations in the introduction to the work. By this means it may be possible to compare in a more rational way the results of different studies.

OLAF MICKELSEN

**Regulation and Mode of Action of Thyroid Hormones.** Ciba Foundation, Colloquia on Endocrinology, Vol. 10,

edited by G. E. W. Wolstenholme and E. C. P. Millar. Little, Brown, Boston, 1957, pp. 311, \$8.50.

Among the participants in the symposium on the thyroid hormone and iodine metabolism are leading investigators from many parts of the world whose contributions have helped to clarify some of the obscure problems in thyroidal physiology. The first seven papers deal with various aspects of the regulation of thyroid activity. Considerable attention is paid to the role of the hypothalamus in the control of the thyroid gland through the anterior pituitary gland. In studying this system a number of investigators have used the iodine ( $I^{131}$ ) output method for observing changes in thyroid activity in the rabbit. The effects produced by adrenalectomy, steroid hormone and goiterogen administration, hypothalamic lesions and other conditions upon this aspect of thyroid function were described with several new hypotheses being offered to explain the observations. Brown-Grant, in presenting the Feed-Back Hypothesis, suggests that the release of thyrotropin from the anterior pituitary is regulated by the amount of thyroid hormone reaching this site through the portal system emerging from the hypothalamus. Modification of the thyroxine content of the blood supplying the anterior pituitary may adequately explain many experimental and clinical observations in thyroidology.

The metabolism and actions of thyroid hormone are discussed in the remaining twelve contributions. The enzymic formation of tetra- and tri-iodinated thyroacetic acids and the ability of these derivatives to increase immediately oxygen consumption of the animal are described. Because of the several modifications of the hormone which have been described in the gland itself as well as in the tissues, it seems more correct to refer to the thyroid hormones. It is possible that each of these active derivatives is specific for particular functions attributed to the thyroid secretions. The intricate problems of the mechanisms involved in the formation of these derivatives such as deiodination or side chain modifications are discussed as are their modes of action, not only upon tissues but upon cell fractions and enzyme systems.

This text provides a detailed account of the most recent experimental advances in iodine dynamics and thyroid function. Each of the authoritative papers is followed by a thorough and uninhibited discussion by the participants. This serves to broaden the entire presentation.

C. R. SHUMAN

**The Importance of Overweight** by Hilde Bruch, W. W. Norton, New York, 1957, pp. 412, \$5.95.

The author of this significant book has devoted much time and thought to the understanding of obesity from the psychologic standpoint. Her contributions are major milestones in the "psychosomatic" approach to this complex subject. In this readable survey, there is a thorough discussion covering the various psycho-bio-

logic reaction patterns which underlie the pathogenesis of obesity. If her theme can be summarized, it is that there should be a more serious and respectful approach toward the obese. Effective treatment, furthermore, is made unnecessarily difficult because of the derogatory social attitude toward corpulence. Because of unfavorable early experiences and conditioning obese people often lack a strong sense of self, with a continuous damage to their self-esteem by a punitive environment. What is greatly needed is a more accepting and encouraging social climate.

Although there is some discussion of physiologic, endocrine, and metabolic aspects of obesity, including the basal metabolism, the largest and the best portion is devoted to the interpersonal milieu surrounding the obese subject. Since much of the author's work has been with children, the obese child is perhaps the core of the clinical material. This is as it should be because our understanding of obesity will come from our appreciation of how or why obesity develops. The gleanings from chronically obese adults may be more meager.

Two aspects with which the practicing physician may be relatively unfamiliar are the Family Frame and the Cultural Frame; in chapters of the same name these subjects are greatly clarified. Because eating is a lifelong social matter we cannot recognize the complex interactions of modifying factors unless we understand the family background and the culture in which the subject participates.

There are perhaps three general aspects to clinical obesity: environmental forces, psychologic responses, and physiologic reactive patterns. We need to know more about all three before we can answer, "Why is Mary fat?" This book, in its persuasive style, suggests that with our present knowledge we could do more in therapy if we took the time to investigate and reflect on each obese patient. Bruch believes, however, that "only those overweight people who are emotionally well enough to carry it through should undertake a reducing regime." While a reader schooled in the traditional strict-dieting-for-obesity concept may be dissatisfied with this conclusion, some honest analysis will convince him that there may be better ways of treating obese people than by the traditional standard diets and depressing cycle of weight loss and rapid regaining. As the author says, the need for a radical re-evaluation of every aspect of the obesity problem is real and urgent.

Clinicians, even if not psychiatrically oriented, will find this important book useful in practice. It is full of examples of typical cases which will be all-too-familiar to the physician. In addition, there are interesting practical hints. Thus there is an enlightening discus-

sion of the significance of the patient's answer to the question "What difference will it make for you to be fat or thin?" The author deserves warm praise for her preparation of a strong thesis of the psychologic significance of obesity. S.O.W.

Books received for review by THE AMERICAN JOURNAL OF CLINICAL NUTRITION are acknowledged in this column. As far as practicable those of special interest are selected, as space permits, for a more extensive review.

*Obesity: Its Cause, Classification and Care* by E. P. Gelvin and T. H. McGavack, Hoeber-Harper, New York, 1957, pp. 146, \$3.50.

*Vitamin A* by Thomas Moore, Elsevier, Houston, 1957, pp. 645, \$14.00.

*Experiments in Biochemical Research Techniques* by Robert W. Cowgill and Arthur B. Pardee, John Wiley & Sons, New York, 1957, pp. 189, \$3.50.

*Health, Success and Happiness for You* by Irwin F. Krimm, Vantage Press, New York, 1957, pp. 247, \$3.50.

*Health Yearbook 1956* by O. E. Byrd, Stanford University Press, Stanford, Calif., 1957, pp. 278, \$5.00.

*The Premature Baby* by V. Mary Crosse, Little, Brown and Co., Boston, 1957, pp. 242, \$5.00.

*Swine Feeding and Nutrition* by T. J. Cunha, Interscience, New York, 1957, pp. 296, \$5.00.

*It Pays to be Healthy* by R. C. Page, Prentice-Hall, New York, 1957, pp. 285, \$4.95.

*Cholesterin Ernährung Gesundheit* by W. Halden and L. Prokop, Verlag Urban & Schwarzenberg, Berlin, 1957, pp. 80, Sw. Fr. 20.

*Essentials of Fluid Balance* by D. A. K. Black, Charles C Thomas, Springfield, Ill., 1957, pp. 123, \$3.75.

*Methodology of the Study of Ageing*, edited by G. E. W. Wolstenholme and C. M. O'Connor (Ciba Foundation Colloquia on Ageing, Vol. 3), Little, Brown, and Co., Boston, 1957, pp. 196, \$6.50.

*Biochemistry of the Amino Acids* by Alton Meister, Academic Press, New York, 1957, pp. 485, \$10.00.

*The Physiology and Biochemistry of Lactation* by S. J. Folley, Charles C Thomas, Springfield, Ill., 1957, pp. 153, \$3.75.

*Degenerative Changes in the Sternoclavicular and Acromioclavicular Joints in Various Diseases* by Anthony F. DePalma, Charles C Thomas, Springfield, Ill., 1957, pp. 178, \$5.50.

*Practical Nutrition* by Alice B. Peyton, Lippincott, Philadelphia, 1957, pp. 379, \$3.60.

*Basic Nutrition* by E. W. McHenry, Lippincott, Philadelphia, 1957, pp. 389, \$5.00.