reasons for this discrepancy are not clear. Chromatographic fractionation of the 17-ketosteroids led the authors to conclude that the increased total excretion is due to a decreased excretion of steroid metabolites of testosterone which is more than counterbalanced by an increased excretion of metabolites of adrenocortical steroids of low androgenic potency. The mechanism of the acquired gonadotropic failure remains unknown.

Contrary to the experience of many clinicians that testosterone and its analogs are of little value in the treatment of impotence associated with diabetes, Schöffling and co-workers describe striking therapeutic results with testosterone alone, and even better results when both testosterone and chorionic gonadotropin were employed. Although they presume the primary hormonal defect to be deficient secretion of gonadotropic hormone, they state that the results of treatment with chorionic gonadotropin alone were not impressive.

This is a provocative report of an extensive, ambitious study of the endocrinology of sexual disorders in male diabetics, involving complex technics of endocrine investigation. For the clinician who is interested in diabetes it may seem to clarify the problem of impotence in male diabetics as well as its treatment. The critical endocrinologist, on the other hand, may find some of the observations and conclusions difficult to accept. The therapeutic aspects of the study are at variance with widespread clinical experience, and some of the results and interpretations of endocrine studies need confirmation by investigators of high competence in the field of pituitary and gonadal endocrinology. The authors are to be commended on the extent and importance of their study, and on the large effort involved. It is published in the hope that it will stimulate further investigation of pituitary and gonadal function in male diabetic patients with and without impotence.

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BOOK REVIEWS

DIETS ARE FOR PEOPLE—A TEXTBOOK OF DIET THERAPY. *By Caroline Wood Shearman, R.N., $2.95, pp. 126, Appleton-Century-Crofts, New York, 1963.*

This book has been written for student nurses. Its use might be broadened to include all students interested in medicine, dietetics, and nursing. The author is a well qualified dietitian, and the book is the result of her own experience with student nurses who did not enjoy the subject, diet therapy. She has successfully shown that the subject matter included in treatment of disease by diet may be a rewarding experience. Emphasis is placed on people; their treatment is secondary.

Textbooks on diet therapy have followed a traditional pattern of arrangement of material according to the modifications required or by systems. Since the book is "people-centered" she first considers the reasons people eat, followed by the dietary patterns necessary to meet particular disease conditions. Only the most commonly used diets are included. A final chapter on how to change eating habits should prove useful. The book does not contain any material which has already been covered in former courses in nutrition. There are no charts, tables of food values, or references. The author hopes that the reading of the book will encourage curiosity so that the student will seek out more information from other sources.

The eleven chapters have titles which are amusing. "By Their Fruits Ye Know Them" introduces the chapter on the management of the diet for diabetes. The title stems from the use of fruit for dessert in the diet of the majority of diabetics.

"The Eternal Struggle" discusses obesity and its treatment by diet. After reading the chapter on sodium restriction a nurse will never again be guilty of serving a glass of canned tomato juice to a person on restricted sodium intake. Cholesterol, saturated fats, and polyunsaturated fatty acids are clearly explained in the chapter, "Controversy Plus."

A summary of diets, their purpose, foods stressed and foods to be avoided are included in the Appendix.

The book is different from other text books on diet therapy, and is well worth consideration by those teaching students who still find the subject of diet therapy "dull and boring."

TEXTBOOK OF BIOPHYSICAL CHEMISTRY. *By Edward S. West. Third Edition, $17.50, pp. 1423, MacMillan, New York, 1963.*

Professor West has prepared a third edition of his *Textbook of Biophysical Chemistry.* Three-quarters of this volume consists of chapters taken from the larger *Textbook of Biochemistry* by West and Todd, chiefly without change. To this have been added chapters on atomic structure and chemical kinetics. The text is clearly written and numerical examples of the application of the equations are worked out in step-by-step developments.

There is a definite need for textbooks which will provide the background necessary for the understanding of a modern course in biochemistry. Such a book should be oriented to the requirements of medical and biology students who are unlikely to have a comprehensive exposure to physical chemistry. *Textbook of Biophysical Chemistry* is poorly designed to fill this need. Most of the chapters suffer from the compromises dictated by their preparation for the larger book. The fundamental physical chemistry needs a fuller treatment and a more integrated and exhaustive use of problems, particularly in acid-base chemistry, to prepare the student for the effective application of this material to biochemistry. The inclusion of one hundred pages on the respiratory cycle in blood and on renal physiology is poorly advised. This material should remain in the biochemistry

text where the physiological background for it is provided. The space they occupy could be used to expand the treatment of the chemistry of solutions and thermodynamics. Similarly, the treatment of bioenergetics and oxidation depends too much on the concomitant study of the biochemical applications of those topics.

It is to be regretted that a real textbook need is so poorly fulfilled and unfortunate that these miscellanea are presented with the pretentious and misleading title of *Textbook of Biophysical Chemistry.*

PHYSIOLOGY OF THE CIRCULATION IN HUMAN LIMBS IN HEALTH AND DISEASE. *By John T. Shepherd, M.D., M.Ch., D.SC., Mayo Foundation Graduate School, University of Minnesota and the Mayo Clinic, Rochester, $12.00. pp. 416, 179 illus., W. B. Saunders Co., Philadelphia, and London, 1963.*

The work herein presented is a precise and stimulating survey of intricate and detailed experiments performed on the limbs of human beings in the laboratories of physiologists, largely British, who have drawn their inspiration from Sir Thomas Lewis. Great reverence is paid to Lewis, even to the extent of omitting, as he did, the role of emotion and psyche in vascular reactions.

This text is for the experienced investigator and not for the trusting neophyte who might not be aware of the unstated assumptions nor be able to evaluate those so frequently made. Each experiment on a human arm or leg is carried out and conclusions drawn from the resulting data with complete disregard for the man as a whole.

Changes in blood flow in the arm or leg are compared to its mate as a control through the cardiac output, ventilation, and changes in *p*CO-2 or *p*H are never measured or taken into consideration. For instance in a discussion of changes in blood flow in the forearm following sympathectomy, the author states that body heating produces "no effect," whereas the opposite extremity with intact sympathetic nerves, shows the marked increase in blood flow. However, body heating increases cardiac output and therefore if the blood flow in the sympathectomized arm stays constant, this forearm must be receiving a decreased proportion of the total circulation; a relative vasoconstriction rather than "no effect."

Another major criticism concerns the definition of the word, "Physiological." Data obtained from an experiment in which the subject sits with his feet alternately in a pail of cold and then hot water, has his forearm in a plethysmograph with an occluding cuff at the wrist, with one indwelling catheter in a deep vein and another in a superficial vein of that forearm, and still another catheter in the brachial artery, are of interest more as an experimental tour de force than as observations on physiologic phenomena.

Again dealing with presumptions, on page 23, I noted the following sentence: "Since the oxygen saturation of the blood draining the forearm muscles was unchanged, the muscle blood flow presumably was unaltered." This is quite a presumption and open to serious doubt as to its validity. Nevertheless, on page 27, after detailing experiments based on this unproved presumption, the author continues, "From these experiments it can be concluded that the vessels of the forearm skin are supplied with both vasoconstrictor and vasodilator nerves, and that the vessels in forearm muscle are supplied with vasoconstrictor nerves." The author may be correct but this reviewer has serious doubts that he has proved his point.

The text is well written, succinct, and each chapter is complete unto itself. A very excellent feature incorporates each illustration with the relevant text. No thumbing about need be done.

The text is recommended to the investigator as a source of technical information and methods.

BIOCHEMICAL FRONTIERS IN MEDICINE. *Edited by Harris Busch, M.D., Ph.D., with Oscar Bodansky, M.D., Emmanuel Farber, M.D., Ph.D., William L. Nyhan, M.D., Ph.D., and Robert E. Parks, Jr., M.D., Ph.D. $12.50, 350 pp., Little Brown and Company, Boston, Massachusetts, 1963.*

This book is a collection of eight chapters on various aspects of the biochemical processes associated with inherited disease, cancer and cancer chemotherapy, and the mechanisms of action of penicillin. Also included are chapters discussing several aspects of biochemical technics in clinical diagnosis and the biochemistry of certain morphological events in tissue pathophysiology. As can be surmised from the list of renowned contributors, each chapter is lucidly presented and is supported by an excellent but not exhaustive bibliography containing most of the pertinent major publications. The chapter on the genetically determined disorders of carbohydrate metabolism by W. L. Nyhan is certainly relevant to students of diabetes and is exceptionally clear in its presentation. Diabetes mellitus, itself, is not discussed.

The book has several minor deficiencies. One, shared by all similar monographs, is the unfortunately ephemeral nature of any biochemical publication in this explosive field. A second is that it is neither a definitive treatise on the various subjects nor is it a simple casual narrative to be read at leisure but falls approximately midway between these two extremes. One specific objection of this reviewer is the arbitrary and even erroneous classification of genetically transmitted diseases in the introductory chapter (e.g., galactosuria is certainly *not* an abnormality in a blood protein).

In conclusion, the book belongs on the shelf of any physician interested in understanding the biochemical basis of diseased processes, and it should also serve as excellent reference reading for both undergraduate and postgraduate medical teaching.