

This monograph concerns itself chiefly with headache induced by medical diseases. It is an excellent review of the various forms of headache and their management. Migraine is especially well treated. There is nothing of particular interest to anesthesiologists. Post-spinal headache is mentioned in one or two lines.

VINCENT J. COLLINS, M.D.

**The Effect of Pharmacologic Agents on the Nervous System.** Proceedings of the Association for Research in Nervous and Mental Disease. Volume 37. By forty authors. EDITED BY FRANCIS J. BRACELAND, M.D. Cloth. \$13.50. Pp. 488, with 38 tables, 102 figures and 53 structural formulas. The Williams & Wilkins Co., Baltimore, 1959.

This book contains the Proceedings of the Association for Research in Nervous and Mental Disease at their meeting in December, 1957. The editor is Dr. F. J. Braceland, who is president of the Association. It includes 26 chapters by separate authors, with the discussions that took place when these papers were presented.

The early chapters stress the therapeutic aspects of treatment with drugs including the effects of antibiotics, of specific immunological agents, and of antibodies and vaccines. Mechanism of action of anticonvulsants is considered, along with the effect of carbon dioxide when it is involved. This is followed by an evaluation of drugs used clinically in neuromuscular disorders, especially parkinsonism. Difficulties in accurate testing of drug effects on animals and man occupy two chapters. The positive effect of the placebo reaction is presented. An excellent chapter describes the metabolic and chemical effects of diseases of the nervous system. Activity of steroid and thyroid hormones is related to central nervous system activity. Pharmacological and clinical effects of stimulants and tranquilizers are thoroughly treated. The probable mechanisms of action of dimethylaminoethanol, reserpine, the phenothiazines and iproniazid are discussed at length. A chapter by Lasagna makes a plea for objective evaluation of the action of sedatives and states, "We do not understand the mode of

action of these compounds." Wikler's chapter discusses the mode of action of narcotics, and points out the problem of "relapse after cure." Himwich offers a classification of stimulants based on their influence on the electrical activity of the brain. Abgood writes concerning biochemical abnormalities in schizophrenics which have been claimed to be related to the disease process. There is also a chapter which deals specifically with the position of taraxene in schizophrenia.

This book is quite acceptable as to binding, type of paper, and ease of reading. The figures are distinct. References and index are adequate. The authors write well, and their style is easier to read than most books with numerous authors, and each makes his own points succinctly.

Anesthesiologists, pharmacologists, psychiatrists, and general practitioners will be interested in the material presented.

ROBERT W. VIRTUE, M.D.

**A Primer of Water, Electrolyte and Acid-Base Syndromes.** BY EMANUEL GOLDBERGER, M.D., F.A.C.P., Lecturer in Medicine, Columbia University, New York City. Cloth. \$6.00. Pp. 322, with 19 tables and 19 illustrations. Published by Lea & Febiger, Philadelphia, 1959.

This elementary book was written by a lecturer in medicine at Columbia University, whose previous work has been mainly in the field of cardiology. His approach to the subject is that of a clinician who wishes to clarify and simplify a difficult subject.

The book is divided into sections which describe the normal water and electrolyte balance of the body, disturbances of water balance, and disturbances of salt balance. The largest section is devoted to acid-base balance, with detailed descriptions of the changes which occur in respiratory and metabolic acidosis and alkalosis. Small chapters are also devoted to the changes which occur with kidney disease, diabetes, aldosteronism, burns, salicylate poisoning, and alterations of potassium, calcium, magnesium and phosphate levels. The last section discusses principles of fluid therapy for surgical patients and children.

The author is successful in his attempt to

simplify a complicated subject. The basic physiology and the application to clinical conditions are clearly explained, and there are many detailed examples of clinical management.

This book is recommended for all physicians as well as anesthesiologists. It is easy to read, with large, clear type on glossy paper. Subheadings and outlining make the thought easy to follow.

JAY JACOBY, M.D.

**Respiration—Physiologic Principles and Their Clinical Applications.** By P. H. ROSSIER, A. A. BÜHLMAN, K. WIESINGER (German Edition); EDITED AND TRANSLATED by PETER C. LUCHSINGER, M.D. and KENNETH M. MOSER, M.D. Cloth, \$15.75. Pp. 505 with 95 illustrations. C. V. Mosby Co., St. Louis, 1960.

The first English edition of *Physiologie und Pathophysiologie der Atmung*, by Doctors Rossier, Buhlman, and Wiesinger (Springer-Verlag, 1955 and 1958), will be enthusiastically received by clinicians, physiologists, and others concerned with respiration. Doctors Luchsinger and Moser, highly qualified in the fields of pulmonary function and chest disease, not only have translated into lucid English a book which represents the experience in respiration of Doctor Rossier and his colleagues since 1928, but they have extensively edited and revised the 1958 German edition. The resulting handsome volume is thoroughly interesting and readable; and the illustrations, all with English legends, are excellent, as are the 66 tables.

Of particular interest to anesthesiologists are the sections in Part I (Normal Physiology of Respiration) on respiratory mechanics, clarified by copies of tracings of pressures and flows in lung models or in human subjects, which serve to illustrate, for example, the influence of unilateral stenosis of a bronchus on distribution of gas to the two lungs and in the production of "Pendelluft." Seldom has the concept of respiratory dead space been better discussed than here, which is not surprising in view of Rossier's many contributions to this topic, including the invaluable "alveolar ventilation equation." Also discussed in Part

I are blood as carrier of gases, pulmonary diffusion, and regulation of respiration. Among the topics discussed in Part II (Investigative Methods in Pulmonary Function) are general principles of spirometry, techniques for studying respiratory mechanics, examination of the blood gases, and specific tests, such as the now widely used high oxygen breathing test devised by Rossier to distinguish between right-left shunts and diffusion difficulty, and exercise tests to evoke signs of pulmonary insufficiency. In Part III (Pathophysiology of Respiration), Doctors Luchsinger and Moser have brought together the different terms used in Germany, Zurich, and America for classifying pulmonary insufficiency and pulmonary vascular disorders. It is to be hoped that this useful step might lead even to further simplification of existing classifications, possibly by way of an international committee similar to the one which in 1950 standardized the symbols for respiratory physiology. Part IV discusses the application of pulmonary function tests to clinical practice. Specific information is provided relating both to diagnosis and treatment. Of particular interest here to anesthesiologists are records showing changes in ventilation and respiratory gases during anesthesia, records showing pressures and flows in various types of artificial respiration, and a brief discussion of the effects of anesthetic agents and other drugs on respiration. Finally, the 80 pages of classified bibliography will be most useful to all interested in respiration.

A complete discussion of the now widely used nitrogen washout curve for detecting unevenness of distribution of inspired gas was sought in vain by this reviewer, the omission representing the one small fault he could find in this otherwise excellent book.

By making available and adding to, in this beautifully presented English edition, the many contributions of Doctor Rossier and his "Zurich School," Doctors Luchsinger and Moser have done a great service.

JOHN F. PERKINS, JR., M.D.

**The Pathology of Cerebral Palsy.** By ABRAHAM TOWBIN, M.D., Pathologist, Community Memorial General Hospital, La Grange, Illinois. Formerly, Associate Professor of