

The Anesthesiologist's Bookshelf

Edited by HUBERTA M. LIVINGSTONE, M.D.

Hypoxia. By EDWARD J. VAN LIERE, M.D., Professor of Pharmacology and Dean Emeritus of the Medical School, and J. Clifford Stickney, Professor of Physiology, West Virginia University. Cloth. \$8.75. Pp. 381, with 11 tables and 11 figures. The University of Chicago Press, Chicago, 1963.

This detailed compilation of work pertaining to oxygen deficiency, "is destined for wide readership, including physiologists, biochemists, pharmacologists, psychologists, experimental pathologists, and in particular, physicians engaged in aviation and space medicine." The first two chapters are concerned with the historical background of the subject and a classification of hypoxia. Fifteen of the following chapters deal with the effects of hypoxia upon body systems, and the remaining two chapters discuss acclimatization and resistance to hypoxia. Each chapter, except one, concludes with a bibliography. The exception is the chapter on the nervous system which has seven sections, each with its own series of references.

The organization of chapters and indeed the material within chapters lacks continuity. The subject matter is often split into such small sections that confusion, lack of cohesion and redundancy result. In many areas, treatment is superficial and the discussion of fundamental facts notably absent. Old and well-known material is generally adequately covered but new work is lightly touched upon or ignored. Lactates, pyruvates and their relations to each other are dismissed in one-and-a-half pages and the statement made that "the cause of liberation of lactates in severe hypoxia is not entirely understood . . . it may be the result of increased activity of the sympathetico-adrenal system." The discussion of reports is not particularly critical.

The style of writing is pleasant; the indexing is satisfactory. The book may be valuable for beginning medical students and to students in paramedical sciences.

JAMES E. ECKENHOFF, M.D.

Computer Applications in Medicine. By EDWARD E. MASON, M.D., PH.D., Professor Department of Surgery, State University of Iowa, Iowa City, Iowa, AND WILLIAM G. BULGREN, M.S., Graduate Student in Mathematics, State University of Iowa. Cloth ? Pp. 171, with 5 figures and 6 tables. Publication No. 557 American Lecture Series. Charles C Thomas, Publisher. Springfield, Ill. 1964.

This exciting little book in relatively simple language opens attractive vistas of the automation revolution, giving ordinary physicians a foretaste of ways in which computers can be used to save time from boring, routine tasks and to make available more time for reflection, constructive thinking and synthesis of ideas. It is pointed out that man's forte is not in memory recall, but in interpretation and imaginative synthesis from available facts recalled. If computers can (and they do) provide increased information and offer alternative, often unsuspected, pathways of interpretation, the ultimate judgments and decisions determined with their help are achieved more quickly and are probably more applicable to current problems than would be possible without computer help. The authors broaden the reader's concept through delightful analogies and introduce one to the jargon of computer terminology while offering examples of ways in which computer programming can be profitably used for solving problems in hospital administrative policy, medical differential diagnosis, evaluation of treatment, and explorative research (including such aspects as enzyme kinetics and equations of chemical reactions in cellular metabolism).

Specifically, for clinicians in anesthesia it is worth knowing that computers can now be used to interpret ECG, EEG, and give an almost instantaneous readout of cardiac output from dye curves. Many more practical applications are undoubtedly close at hand. The use of improved data storage and retrieval methods facilitate computations which allow accelerated and more so-

phisticated medical research, as well as reduce the probabilities of costly abortive efforts and duplications in research effort. Those who take the trouble now to understand the capabilities and limitations of such tools may be well rewarded.

An excellent bibliography of 522 references is used as an example of the value of coding techniques for cross reference of information.

LUCIEN E. MORRIS, M.D.

Hypnosis Throughout the World. EDITED BY F. L. MARCUSE, Ph.D., Professor, Department of Psychology, Washington State University, Pullman, Wash. Foreword by Bernard B. Raginsky, M.D. Cloth. \$11.00. Pp. 312. Charles C Thomas, Publisher, Springfield, Ill., 1964.

This book has 17 chapters, each of which contains a detailed review of the status of the practice of hypnosis in a different country. These countries are Brazil, Canada, Czechoslovakia, Denmark, Finland, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, The Netherlands, Norway, Sweden, the Union of Soviet Socialist Republics, and the United States. Each chapter is written by a leading doctor (M.D. or Ph.D.) or psychologist of the respective country who has profound interest and experience in hypnosis. Topics discussed include history, attitudes of the medical, dental, legal, psychological, clerical professions and the public, teaching and research, misconceptions, laws, etc. There is also a short chapter on international communication and organizations in hypnosis.

Wide variation exists in the manner of application of hypnosis, as well as medical and legal attitudes towards its use. Some use hypnosis almost entirely for therapy, others almost entirely for analysis. This readable book is far more than a valuable statistical reference. It helps to clarify much existing confusion in terminology. Almost every country has made some unique contribution to hypnosis. Explanations of several practices which have been surrounded with an aura of mysticism such as Yoga and Tantra in India, and Miko and Shyugenkyo in Japan, are included. Hypnosis has been used in some countries by dentists, rarely as adjuncts to general anesthesia. There were almost no references to its use as total anesthesia.

The book would be of great interest and help to the serious student of hypnosis, especially in the fields of psychiatry and psychology. Although of no practical value to the anesthesiologist, he would find it interesting for leisure reading.

RUTH M. ANDERSON, M.D.

Nitrous Oxide. EDITED BY D. W. EASTWOOD, M.D., with 10 Contributors. Cloth. \$7.50. Pp. 156, with illustrations. F. A. Davis Company, Philadelphia, 1964.

This is the first volume 1964 in the Clinical Anesthesia series. The editor and contributors are well known for their work with nitrous oxide. Although each chapter is written by a different author, there is remarkably little overlap.

A tabular as well as narrative history of nitrous oxides gives some little known facts, and is brought up-to-date with the fail-safe system of administration. The pharmacology and toxicity of the drugs are presented in some detail. The more recent information on uptake and distribution is summarized. The rationale of adjuvants is presented; nitrous oxide used in maximum concentration compatible with oxygenation and various types of drugs that are used to supplement it. A chapter devoted to nitrous oxide with relaxants include prolonged curarization, the apneic threshold, and the patient's ability to remember. There is an interesting chapter on industrial use, particularly in the preparation of aerosols in the food industry, in refrigeration, leak testing and packaging. Because of its similarity to nitrous oxide, a brief review of ethylene is presented.

The chapter in which nitrous oxide is re-evaluated as an analgesic in labor is particularly valuable. The importance of technique in eliciting different pharmacologic effects is explained. Methods of obtaining optimum results are described.

Each chapter is followed by an extensive list of references. This book is recommended for anesthesiologists, and is essential reading for those in training.

JAY JACOBY, M.D.

Artificial Respiration—Theory and Application.

JAMES L. WHITTENBERGER, EDITOR. \$10. Pp. 276, with illustrations. Hoeber Medical Division, Harper & Row, Publishers, New York City, 1962.

This book presents current concepts of common methods of artificial respiration along with the practical and physiologic considerations on which these are based. Most of the contributors have been associated in their research efforts and through conferences.

An introduction by D. B. Dill, formerly medical director Army Chemical Center Medical Laboratories, outlines briefly the research projects set up to determine the method or methods of manual artificial respiration best adapted for military use, including the preferred type of device. This is a very interesting historical account.

Part One of the book is concerned with Physiology of Respiration. A chapter on *Respiratory*