The Anesthesiologist's Bookshelf

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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-