
This is a morphological description of the afferent innervation of the human and animal heart. The initial chapter recounts previously published work in this field and states that "all that can be found in the non-Russian literature on this subject is either a repetition of work done by Russian scientists or an insignificant addition." The remainder of the book is occupied with a description of the author's technique, her findings, copiously illustrated, and her conclusions. The fact that afferent nerves take a deeper silver stain than do efferent nerves is the basis for much of the work. While the various nerve endings and pleases are described in great detail, no attempt is made to discuss the physiological significance of these. The only physiological cardiac reflex alluded to is the Bainbridge Reflex.

This monograph may be of considerable value to anatomists and to those studying cardiac reflex activity. However, it holds little of interest to most anesthesiologists. The book is well printed and the figures reproduced nicely.

James E. Eckenhoff, M.D.


As physiology of circulation becomes better understood and the importance of blood flow becomes more evident, the need of adequate blood volume is being recognized. Practical application of blood volume determination has been delayed due to inadequacy in methodology. This monograph attempts to establish the significance of blood volume measurements and to present information concerning the most useful techniques employed today.

After a rather cursory review of the constituents and functions of blood, the basic principles underlying regulation of cardiac output are simply presented. Homeostasis of blood volume is shown to be dependent on variations of capillary membrane permeability, volume receptors, anti-diuretic hormones, and the liver. Systemic response to hypo- and hypervolemia are differentiated and are classified with reference to changes of both red cell mass and plasma volume. Variations of normal blood volume with age and weight are presented, including correction factors to be employed. The author stresses the inadequacy of the hematocrit as an index to blood volume, and points out discrepancy between peripheral and central hematocrit values, and lack of correlation to red cell mass. The chapters on effects of disease on blood volume, and changes during anesthesia employing various agents, techniques, and position, are of importance to anesthesiologists. Numerous case reports clearly illustrate the use of red cell and plasma volume determinations in preoperative preparation, and postoperative management of surgical patients.

Part two is devoted to technology, including dilution techniques used and calculations involved. The superiority of determining red cell mass over plasma volume is confirmed. The remainder of the book presents physical principles, instrumentation and preparation of isotopes employed.

This concise monograph should be read by every anesthesiologist and will be rewarding reading for clinicians, surgeons and cardiologists. Although the final solution has not been found, the methods offered will suffice for those who have isotopes available. The book is easy to read and understand. The paper and print are of excellent quality, the index detailed, and references abundant. By revealing short-comings of present methods, this book will encourage investigators to seek further development of simple and reliable methods of blood volume determination, and evaluation of blood volume deficiencies.

D. C. Grosskreutz, M.D.


This book contains the proceedings of the J. S. Haldane centenary meeting, which was held in the University Laboratory of Physiology, Oxford, at the end of July, 1961 under the aegis of the Physiological Society. The Centenary was marked by a four day symposium on the regulation of respiration, followed by a meeting of the Physiological Society at which tributes were delivered to Haldane's pioneer work in a number of fields of pure and applied physiology. The occasion was commemorated not only by members of the Physiological Society but also by many other distinguished scientists from overseas. This complete record of the papers presented (including references) and the ensuing discussions is an authoritative summary of present day knowledge of respiratory physiology and at the same time a worthy tribute to the work of J. S. Haldane.

As described by the editors introduction, this volume begins with a reprinting of the obituary notice written in 1936 for the Royal Society by Professor C. G. Douglas. All that Professor Douglas said in his short addresses at the be-
ginition of the Symposium and at the joint meeting is to be found in this article. It is preceded by a Curriculum Vitae and a full bibliography of J. S. Haldane. There follow the tributes to the work of J. S. Haldane in various fields of physiology, read at the joint meeting of the Symposium and the Physiological Society. The papers read at the Symposium are presented in groups, after each of which appears an edited version of the discussion of the papers. The next section of the book contains the abstracts of the special communications on original work on subjects related to J. S. Haldane’s other interests. The volume is well indexed, and a list of commonly used symbols and abbreviations related to respiratory physiology, with some examples, is given.

This book is of both historic and scientific value to those interested in the pioneer work of J. S. Haldane and in current concepts regarding respiratory physiology. Although it is neither a textbook nor an historic novel, it does provide authoritative scientific reference material concerning the regulation of human respiration and also fascinating accounts of the personal experiences and accomplishments of J. S. Haldane and others who have made significant contributions to our progress of knowledge in this field. Anesthesiologists and others whose interests are associated with respiratory physiology in pure research or in practice would find this book a valuable and enjoyable addition to their libraries.

Charles M. Landmesser, M.D.

Vade-Mecum de Réanimation Respiratoire.


This book was written for persons interested in all types of resuscitation which are necessary after cardiac arrest and respiratory insufficiency from any cause. It is divided into three parts, the first dealing with physiology and pathology of respiration, presented in schematic form. The second part is concerned with the symptomatic and emergency treatment of cardiac decompensation and respiratory insufficiency. In this section various respirators and assistants are described somewhat in detail. Unfortunately, none of the assistants commonly used in the United States are described. The third part deals with recognition and treatment of circulatory and respiratory problems seen in cases of coma, tetanus and chronic lung conditions.

This manual is written in short synopsis form with many illustrations and outlines. No bibliography or references are included because no new or controversial material is presented, and the book sticks to the outline form which it intends to be. It is a paper-backed publication and the binding breaks down easily.

This French book could serve as a quick reference and or refresher for persons concerned with resuscitation, be they anesthesiologists, nurse anesthetists, emergency room residents, intensive care nurses, etc., provided they can read French.

Germain L. Houle, M.D.
Paul R. Rumske, M.D.


The author, consultant anesthetist to the Royal Infirmary and Baguley Hospital, Manchester, England, states in the preface that the book has been written to provide a handy and elementary reference for junior resident anesthesiologists called upon to provide emergency long-term artificial ventilation of the lungs. The first two chapters are devoted to the problem of the airway, descriptions of the cuirass and Drinker type respirators, and simple intermittent positive pressure methods with bag and mask or bellows. One chapter is devoted to characteristics of intermittent positive pressure respirators. It is regrettable that this valuable contribution comprising the author’s method of classification consists of only five pages. Next follows a description of respirators in common use, but these are all of British manufacture. The factors of resistance to inflation are discussed very briefly, and a short but helpful chapter is devoted to current methods of biochemical control of ventilation. There follows useful information on fluid balance, feeding the patient in long-term respirator therapy, prevention of infection, the use of sedatives, care of the eyes, and care of the bladder and bowels. A final chapter is devoted to brief discussions of the various disease states where long-term intermittent positive pressure therapy is commonly employed. Each chapter has a short list of recent pertinent references. There is also an index. This book, written by a distinguished clinician, contains information useful to any anesthesiologist desiring to expand service to patients needing long-term respiratory therapy.

Richard Forrester, M.D.

Fluids and Electrolytes in Practice. Third Edition. By Harry Statland, M.D., Associate Clinical Professor of Medicine, University of Kansas School of Medicine, with four contributors. Cloth, $8.50. Pp. 329, with 58 figures and 16 tables. J. B. Lippincott Co., Philadelphia and Montreal, 1963.

The continuing trend toward participation of anesthesiologists in total care of surgical patients and the complexity of modern surgical procedures make it necessary for anesthesiologists to be cogni