Part 3 deals with prevention in reference to patients with normal and abnormal lungs, before and after operation. Physical therapy and the use of humidification and aerosol therapy are discussed at some length.

Part 4 discusses therapy through maintenance of the airway by intubation and tracheostomy. Emergency resuscitation and oxygen therapy with management during prolonged ventilation are given special consideration.

Part 5 copes with special problems such as chest injuries, intracranial lesions, myasthenia gravis, acute poisoning and other entities deserving special consideration. Respiratory management in thoracic and cardiac surgery warrants a chapter but pump management is not discussed in detail. The final chapter is on the special problems of obesity in relation to respiratory care.

This text contains a wealth of information that many will find difficult to read and absorb. More will find application in their hospitals difficult or almost impossible. One remembers the chilling information in the Foreword that "the Respiratory Unit at the Massachusetts General Hospital costs the patient $150 a day." It is hoped that with more experience, procedures can be simplified and costs reduced to a practical level. It has been done before and likely can be done again. This reviewer is old enough to remember the heyday of pneumococcal typing and the corresponding complexities of treatment, fortunately all superceded by simpler and improved methods giving better results. It is hoped that the technique of respiratory care will soon undergo a parallel change in the direction of simplification, with reduction in cost, and improvement in the incidence of prevention and the results of therapy.

R. M. Tovell, M.D.

Überlebens-und Wiederbelebungszeit von Gehirn, Herz, Leber, Niere nach Ischaemie und Anoxie. (Functional and Structure Survival Time of Brain, Heart, Liver and Kidney after Ischemia and Anoxia). By Prof. Dr. Max Schneider, Director of the Institute for Normal and Pathologic Physiology of the University of Köln. Paper. 14 D.M. ($3.50). Pp. 29, with 7 illustrations. Westdeutscher Verlag. Köln & Opladen, 1965.

After careful definition of the terminology, the author of this short monograph summarizes the results of his observations on the tolerance of various organs to ischemia and anoxia. He differentiates between "Überlebenszeit," *i.e.*, the time between the total interruption of blood supply to, and the cessation of all functional activity of an organ, and "Wiederbelebungszeit," *i.e.*, the maximal duration of interruption of blood flow to an organ that is compatible with survival and restitution of function. On the basis of his own animal experiments, he points out that the limiting factor for the survival of the whole organism is the inability of the heart to function adequately to satisfy the circulatory requirements of the brain after more than three to four minutes of arrest. The survival time of the brain at 37° C. is eight to ten minutes, that of the liver three to four and that of the kidneys three hours. Cell damage occurs, to about the same extent, within a few minutes in all organs tested. The great difference in the survival time of the brain on one hand and that of the liver and kidneys on the other is due to the greater regenerating capacity of the latter organs. The author states that lowering the body temperature to 15° to 17° C., because of the marked decrease of the metabolic rate and the utilization of energy-rich phosphates, increases survival time by a factor of 6. He also points out that the aggregation of thrombocytes associated with ischemia and hypoxia, after the restoration of circulation, will interfere with the microcirculation and thereby decrease the chances for survival. The reading of this little volume should be profitable for anesthesiologists who participate in surgical procedures involving the temporary interruption of the blood supply to the whole organism or to isolated organs.

Francis F. Foldes, M.D.

Coagulation and Transfusion in Clinical Medicine. By Shirley A. Johnson, Ph.D., Associate Professor of Physiology, Marquette University, School of Medicine; and Tibor J. Greenwalt, M.D., Professor of Medicine, Marquette University School of Medicine; Medical Director, Milwaukee Blood Center, Milwaukee. Cloth. $9.50. Pp. 203, with 9 figures and 16 tables. Little, Brown and Company, Boston, 1965.

This book is intended to present, in a brief and interpretable form, the complex mechanism of blood coagulation and management of disorders thereof. This reviewer is not qualified to judge the accuracy or completeness of this presentation. It is my impression, however, that this book serves as a useful source of information for anesthesiologists. We have long been bypassed by current, and perhaps not so current, findings and by complexities of nomenclature and classifications which characterize this area of medical knowledge. Those of us who find ourselves inadequately informed and rather completely confused by the present situation, will find this book a source of information as to type of abnormality with which we may be dealing and its background and management. For those who wish more detailed information, an extensive bibliography is included.

This book is well organized, beginning with the