
This one-author work by an anaesthesiologist of considerable experience weaves together widely separated strands concerning anaesthesia and anesthetic agents and the liver in sickness and in health. Professor Strumin's evaluation of halothane hepatitis provides the reader with a well-tempered summary of the current state of knowledge in this area.

The book is divided into two parts. Part one, basic principles, deals with the anatomy and physiology of the liver and hepatic blood flow, the biochemical basis of liver function tests, and the pharmacologic aspects of liver function concerned with drug metabolism and drug reactions. This ambitious undertaking in such a short space tends at times to be somewhat superficial. In consolation, the reader is afforded numerous well-selected references for further study.

The second half of the book, practical considerations, deals with matters of more immediate importance to the anaesthesiologist. These include viral hepatitis, evaluation and anaesthesia of the jaundiced patient, the patient with hepatocellular disease, and the patient with acute hepatic failure, and an analysis of the problems and causes of postoperative hepatic dysfunction, including those that may be caused by anesthetic agents. Throughout, this section maintains a pleasant balance of well-referenced basic information, interpretation and clinical application.

This short, readable and informative book should be useful to all levels from the neophyte to the experienced anaesthesiologist. Beginning students of anesthetic agents and the liver may find the early section appealing, while those for more sophisticated requirements, the last section would be of greater value.

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R. D. Bradley's book in general is well written, succinct, and covers the reader to think in physiologic terms regarding patients with sick cardiopulmonary circulations.

His three chapters are, in a sense, unique, and indeed consider both the left and the right atrial filling pressures, which few people do in an intensive care situation. His comments on those people with left ventricular failure, both from low output and from pulmonary congestion, are entirely appropriate. The major omission that I see is the lack of comment on the effects of high pulmonary capillary pressures on pulmonary compliance and oxygen transport. A small section linking these phenomena would be most helpful. This is particularly true for patients still under the effect of anesthesia who are having myriad blood-gas determinations and many changes in ventilation, while few efforts are being made to reduce left atrial filling pressure or capillary wedge pressure.

This book will be useful to those who are involved in intensive care. It should also be worthwhile to nephrologists, who frequently deal with the overexpanded volume but have little awareness that the right and left atrial filling pressures are not equal.

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This British paperback was written in order to bring together a body of technical information about medical gases that previously had been dispersed in a voluminous literature and was consequently not readily available. In this aim, it succeeds reasonably well. The physical principles applicable to gases, their properties, technical specifications, modes of manufacture and storage and handling of medical gases are all covered. Overall, the text is quite readable, concise, and informative, and most of the line drawings are helpful. In some sections, however, this is not the case. The descriptions of some apparatus, e.g., gas regulators, are rather confusing and are not helped by poor diagrams, while the photographs of apparatus are useless. This, however, is curbing, as information about these matters is easily available in anaesthesia textbooks.

As the book is written primarily for the British market, most of the specifications and technical publications quoted are British, but in all the areas of importance, European and United States specifications are also quoted. The amount and depth of information given are somewhat more than needed by anaesthesiologists, but the book is quite useful reading for both residents and staff, and particularly for candidates for the British Primary F.F.A.

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The appearance of a new book on monitoring for the anaesthesiologist is particularly appropriate at this time. Since the publication of Dornette's monograph, we have seen several major innovations pass from the research laboratory into routine clinical use. Among these are thermodilution measurement of cardiac output, fetal monitoring, doppler detection of air embolism, and some applications of microcomputers. Until now, no single source book has dealt with these and other advances from the point of view of the clinician. The present volume admirably fills this need.

The first ten chapters of the book focus on clinical areas of particular concern. Included are depth of anesthesia, body chemistry during anesthesia, respiratory function, the cardiovascular system, neuromuscular blockade, obstetric anesthesia, neuropsychiatric anesthesia, occupational exposure to inhalational anesthetics, recovery room care, and surgical intensive care. The remaining four chapters consider electrical safety, desired specifications for equipment, computers, and finally, an identification of factors that will impede or enhance the progress of future monitoring in anesthesia.

The book was written primarily for the clinician, so that physical and electronic principles are deliberately oversimplified for readability, and except for a few minor factual errors, it is technically sound. Coverage of the more common monitoring techniques is comprehensive, and includes such things as historical development, indi-
cations for use, risks, benefits, limitations, costs and alternatives. Lesser-known techniques, while not covered in as much detail, are adequately referenced.

Several of the authors give the reader unusual insights into the reasons why certain monitoring devices have evolved into their current form. An example of this is the discussion of the use of gain and zero adjustments on modern pressure-monitoring transducer/amplifier combinations. Such information is not readily found in other textbooks, papers, or manufacturers' manuals.

We mention only a few of the many high points in this book. The chapter concerning body chemistry is directed to anyone considering setting up an analysis laboratory structured for caring for the acutely ill. Respiratory function monitoring is interestingly divided into essential, special, and advanced monitoring. Patient assignment is based on pre-existing pulmonary dysfunction and estimation of further dysfunction that may result in the operating room. A similar classification is also given for postoperative monitoring. Tables are provided in the latter instance for the ten major physiologic systems. Measurements and frequencies of application that define the levels of monitoring are listed. The discussion of neurosurgical anesthesia describes the use of some of the more recently developed monitoring techniques included in the text. The chapter on computers should be particularly helpful for those seeking to become familiar with their potential for anesthesia. In this chapter, explanation is simple, a glossary is included, and numerous applications in anesthesia are given.

The book is easily read, highly informative, and dedicated to practical application. It is ideal for the beginning anesthesiologist, of value to the bioengineer or other basic scientist, and even offers new information or approaches for the more seasoned anesthesiologist.

In summary, this book is a "must" for the libraries of practitioners of cardiac or neurosurgical anesthesia or intensive care medicine. It should be consulted by anyone planning to select and purchase monitoring equipment.

Rapid technical advances are already making parts of the book obsolete. One can only hope that the editors will produce revised editions from time-to-time, and that this excellent monograph will evolve into the standard textbook on the subject.

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Physiology and Pathobiology of Axons. Edited by S. G. Waxman.

This beautifully illustrated book presents most of the numerous advances in our understanding of normal and diseased axonal structure and function that have occurred during the past decade. The 25 papers by 34 authors convincingly show that axons are not simple all-or-none cables linking receptor and effector ends of the neuron, but are complex regions responsible for important types of information processing, especially at branch points and terminal arborizations.

The first half of the book contains excellent papers about normal axons, including the normal structures of peripheral and central axons as shown by electron microscopy and freeze-fracture techniques; axonal conduction properties and mechanisms; structural and functional specialization at initial segments and nodes of Ranvier; normal variations in axonal morphology; activity-dependent variations in conduction properties; differential transmission at axon branches; and after-effects as a coding mechanism. These papers clearly show that axons have a complex function, and this wealth of new data about normal axons will help bring interpretation of axonal disease closer to subcellular and molecular levels.

The second half of the book considers the axonal abnormalities caused by neurotoxins, defective axonal transport, or Wallerian degeneration; the demyelinating disorders of immunologic, virologic, genetic, nutritional, toxic, or traumatic origin; abnormal sensation following peripheral-nerve injury, regeneration, neuroma formation or Jeproy neuropathy; spinal cord regeneration and axonal sprouting; axonal regulation of Schwann cell differentiation and myelin thickness. Perhaps the most interesting contribution of these papers is to remind us that precise study of abnormal or diseased axons can provide unusual insight into normal structure and function; the papers on neurotoxins, neuromas, and myelin disorders are especially interesting in this regard.

Almost all the chapters are well written, with cogent summaries, extensive up-to-date bibliographies, and numerous excellent diagrams and micrographs. The only disappointment was the occasionally inaccurate chapter on axonal transport, but this is not a serious problem, and the book will be very useful to a large number of neuroscientists, especially to those interested in mechanisms of anesthesia, neurophysiology and neuropathology.

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Laryngeal Biomechanics. By B. R. Fink and Robert J. Demarest.

The reader may wonder what more could be said about laryngeal biomechanics, since Dr. Fink has already elucidated the principles of laryngeal folding, mechanical coupling, elastic recoil, and other nonmuscular influences on laryngeal behavior in previous publications. In addition, he has brought these principles together in a recent volume, The Human Larynx; A Functional Study. What is new in the present volume, and what makes this book useful to the student of laryngeal function, is its illustrations by the coauthor, R. J. Demarest. Using line drawings, tone drawings, and photographs, Demarest has illustrated the principles of laryngeal biomechanics in terms of springs, levers, couplings, and other mechanical devices that clarify the various nonmuscular forces acting upon the vocal folds, aryepiglottic folds, epiglottis and other laryngeal components. Together with the text, these illustrations clarify laryngeal biomechanical principles better than any other work currently available, to the best of this reviewer's knowledge.

The list of references lacks certain key reports, but most of these can be found in Fink's previous publication, The Human Larynx.

In addition to its obvious appeal to the laryngologist, the book should be of particular interest and use to singing teachers and voice therapists.