

plates are well worth reviewing, particularly for surgical house staff and medical students.

This second edition of *Management of Diabetic Foot Problems* accomplishes the desired results of the editors to produce a book which provides comprehensive and practical clinical coverage and stresses the team approach in diagnosis and treatment. The addition of several new chapters and revisions of others have been instrumental in improving the scope of this work. This book will be useful for vascular surgeons and a valuable reference for primary care physicians and surgical house staff.

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Stroke therapy

Marc Fisher, Boston, 1995, Butterworth-Heinemann, 490 pages, \$90.

This is an excellent review of the current knowledge base pertaining to the management of patients with stroke. The book is comprehensive, extensively referenced, well-edited, and attractively packaged. The illustrations, a number in color, are of high quality. The 19 chapters are well-organized and arranged. There are very few typographic errors. A memorable one though, is a reference to a trial of hemodilution therapy and might even have been a plant (page 334).

Stroke therapy, however, is almost a misnomer. It is apparent in reading this nearly 500 page review, that there is in fact, unfortunately, very little direct treatment at present for a irreversibly ischemic or even dying brain. The book does discuss the many initiatives that may have promise, such as acute thrombolysis, cytoprotection, enhancing collateral flow in the ischemic penumbra, aggressive supportive care, and rehabilitation. The book is really a broader review of the causes and pathophysiologic mechanism of stroke and its prevention. It covers in detail diagnostic techniques and includes chapters on intracranial and subarachnoid hemorrhage.

There is some overlap between chapters at times with a different viewpoint. There are some issues presented, rather dogmatically, with which many readers would disagree, for example, that duplex scanning will not replace standard carotid angiography before carotid surgery (page 250), or that some have recommended angiography be ordered only by certain specialists such as vascular or cardiac surgeons after neurologic consultation (page 224). The book suffers somewhat from a lack of surgical perspective and input. The chapter on surgical therapy to prevent stroke is written by a neurologist, though it is reasonably well-balanced. In another chapter however, sadly, the legendary Owen Wangensteen is referred to as Wagensteen three times in a paragraph devoted to his gastric cooling experiments. I will allow the curious to discover how this relates to a book on stroke (page 149). There is an overly detailed and quite peripheral chapter dedicated to a general

description of clinical trials which seems out of place, but is a good review. Although this is a single-topic text, it is nonetheless a major area of medicine, and is covered comprehensively. It is quite current as texts go, and contains a remarkable amount of information, presented by unquestioned authorities. Vascular surgeons will gain much from reading this book, as will neurologists, neurosurgeons, and internists. The references alone will make it a valuable resource, and many chapters have 150 to 200 or more. At its price, it is a relative bargain.

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Cell physiology: Source book

Nicholas Sperlakis, San Diego, 1995, Academic Press, 738 pages, \$99.

The volume *Cell Physiology: Source Book*, edited by Nicholas Sperlakis, is meant to focus on physiologic and biophysical principles as they apply to the cell, not the whole organism or even organ systems. The intended audience is primarily advanced undergraduate and graduate students. The editor perceives a void not covered by currently available medical physiology or cell biology texts, which "generally treat cell physiology in a superficial and incomplete manner." The book focuses on the explanation of cellular processes through classic biophysical and chemical terms. I think the book generally fulfills its stated objective, although perhaps with at least one significant omission.

The book is organized into seven sections covering basic biophysical principles, transport physiology, membrane excitability, ion channels, synaptic transmission, contractile systems, and bioluminescence/photosynthesis. As can be surmised from its topical organization, the book is heavily oriented around membrane physiology. A major weakness of the book is its failure to cover the biophysical aspects of intranuclear processes, such as DNA folding and nucleic acid/protein interactions that occur during DNA replication or transcription. I thought the treatment of protein structure and function was quite good, especially the emphasis on how the primary amino acid sequence predicted secondary and tertiary conformation and function. I wish a similar treatment of nucleic acid structure and function had been included.

Each contributor (there are 49) was asked to begin each chapter with a fairly elementary treatment of the topic and progress toward more sophisticated and complicated concepts at the end. This pattern was followed somewhat inconsistently, in my opinion. Furthermore, some chapters assumed familiarity with concepts covered in other chapters—a problem that detracts from the book's usefulness as a reference source. Those of us who are more biologically-minded are not immediately conversant with the definitions and meanings of the frequently used physical constants and terms. A table in the appendix listing these terms and their definitions would have been helpful.

Most contributors were careful to cite foundational studies that form the underpinning of scientific investigation in their area. Thus the references appropriately contain many citations from the 1960s or earlier. Other citations are as recent as 1993, indicating that the volume is acceptably current when judged by textbook standards.

In summary, the book occupies a rather narrow niche and is likely to be appreciated most by the basic scientists carrying on cell-based research who, like the editor, have recognized the same inadequacies in their texts on medical physiology and cell biology. The \$99 price may dissuade people from purchasing the book for personal use if it is not likely to be a first-line reference. The book should be obtained by libraries of institutions where basic science research is performed.

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The vascular smooth muscle cell: Molecular and biological responses to the extracellular matrix

Stephen M. Schwartz and Robert P. Mecham, San Diego, 1996, Academic Press, 410 pages, \$95.

This year is considered the twentieth anniversary of the smooth muscle cell as dated from the advent of the smooth muscle cell culture. Little information was initially forthcoming in the area of smooth muscle cell culture because it was quickly discovered that cultured smooth muscle cells phenotypically modulate and lose their contractile appearance and function. In the past 20 years, however, there has been tremendous focus on understanding the structure and function of the smooth muscle cell because there is a general belief that a greater proportion of vascular disease is dependent on smooth muscle than endothelial cell function. A comprehensive review of current knowledge of the structure and function of the smooth muscle cell as it relates to vascular disease is the focus of *The vascular smooth muscle cell: Molecular and biological responses to the extracellular matrix*.

This book consists of focused, in-depth reviews that provide both the clinical and basic science researcher with current information regarding vascular smooth muscle cell pathophysiology, written by authorities in the field of smooth muscle and vascular biology. The chapters are well integrated, with each chapter often referring the reader to other chapters of the book for either a better understanding or another point of view. In addition to the longer review-type chapters, there are four "overviews" ("Development of the smooth muscle cell," "Molecular identity of smooth muscle cells," "Molecular controls of smooth muscle hypertrophy and hyperplasia," and "Smooth muscle cell function from the clinical perspective"). These overviews provide both insight into the importance of the subsequent chapters as well as suggested readings. The chapters that follow describe the most current understanding of smooth muscle cell function and structure as related to vascular

disease. These reviews are not intended to provide basic understanding of processes such as smooth muscle contraction, but rather up-to-date information on the place of the smooth muscle cell in vascular biology and pathology.

The opening chapter, an overview written by Gordon and Julie Campbell, describes phenotypic modulation of smooth muscle cells and its importance to neointimal formation. This topic is further addressed in two subsequent chapters ("Vascular smooth muscle-specific gene expression" and "Smooth muscle cell and fibroblast biological features: similarities and differences"). Several in-depth chapters follow on developmental vascular biology, including topics such as expression of cytoskeletal and contractile proteins, structural organization, and extracellular matrix linkages. Smooth muscle cell proliferation and its relevance to vascular disease is discussed in four separate chapters ("Pharmacology of smooth muscle cell proliferation," "Smooth muscle cell proliferation in hypertension," "Regulation of arterial smooth muscle growth," and "Relevance of smooth muscle replication and development to vascular disease") and in one overview ("Molecular controls of smooth muscle hypertrophy and hyperplasia"). Regulation of smooth muscle contractility, the main function of this cell type, is only discussed in one chapter that emphasizes gene expression of myosin heavy chains. This limited discussion may be because the topic is so large that it would detract from the more central theme of vascular pathology or because there are many other well-written books on the subject (e.g., *Biochemistry of smooth muscle contraction*, edited by Michael Båràny, Academic Press, 1996). However, an insightful review of the organization of the smooth muscle cytoskeleton and contractile apparatus is given in the chapter "Architecture of the smooth muscle cell" by J. Victor Small and Alison J. North.

This book is a must for anyone involved in vascular or smooth muscle cell biology.

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Ethical issues in drug testing, approval, and pricing: The clot-dissolving drugs

Baruch A. Brody, New York, 1995, Oxford University Press, 268 pages, \$25.

The book *Ethical issues in drug testing, approval, and pricing: The clot-dissolving drugs* by Baruch A. Brody is a 268-page text that outlines the development, approval process, and marketing of the thrombolytic agents streptokinase, urokinase, recombinant tissue plasminogen activator, and a variety of other experimental activators. The drugs are discussed primarily in the context of their use in the setting of acute myocardial infarction; little information exists on peripheral arterial and venous thrombosis. There is a strong bent on moral and ethical concerns throughout the text, both from the standpoint of the conduct of studies directed at gaining regulatory agency approval for clinical use of the agents, as well as with