

sepsis, cardiac arrest, metabolic disorders, thrombotic and hemorrhagic disorders, vasculitis, pregnancy, aortic and cardiac surgery, environmental illness (heat and cold exposure, electrical injuries, near drowning), trauma and organ transplantation. The last, rather short section deals with outcome and decision-making, including withdrawal of care.

Wijdicks is, at times, dogmatic in his statements and I disagree with his assessment of the role of electrophysiological testing. Some differences exist between the Canadian and American approaches to brain death, e.g., the central role of etiology in Canada and the compulsory use of the CT head scan in the US. Space limitations require that some explanations and elaboration have to be sacrificed or curtailed.

Overall, it is a brilliantly thorough, useful and well-balanced monograph. I strongly recommend the book to all neurologists, including those in training, who see patients in emergency rooms and intensive care units. Intensives and emergency room physicians would also find it a helpful reference.

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**ADVANCES IN RESEARCH ON NEURODEGENERATION. VOLUME 7.** 2000. Edited by Y. Mizuno, D.B. Calne, R. Horowski, W. Poewe, P. Riederer and M.B.H. Youdim. Published by Springer-Verlag/Wien. 214 pages. C\$139.65 approx.

This book was published as the proceedings of the Seventh International Winter Conference on Neurodegeneration and Neuroinflammation held in January 2000 in Japan. Recent advances in the field have identified mechanisms common to both pathological processes such as the involvement of inflammatory changes, microglia, cytokines and apoptosis. These new developments provide a better understanding of pathological events and might provide key opportunities for the development of new therapies that could be applied to a wide range of diseases which involve similar mechanisms. In this aspect, the book presents a comprehensive review of the recent findings in this fascinating field of research. The book is comprised of seventeen chapters covering a wide range of topics from the genetics of Parkinson's disease to the mechanisms of tissue injury in multiple sclerosis and potential therapeutic modalities. While several chapters particularly emphasize the molecular aspects of neurodegeneration such as the involvement of caspases in cell death or the role of cytokines in autoimmune disorders and neuroinflammation, others deal with physiological aspects. Of particular note, the paper by Foley and Riederer proposes a revision of the model of human basal ganglia organization based on recent biochemical findings. Five of the articles deal with the various aspects of Parkinson's disease ranging from the genetic perspective to potential gene therapy using adeno-associated virus vectors thus providing an excellent overview of the ongoing research on this disorder. Most chapters are well-illustrated and well-documented with extensive references. Overall, this book represents a good introduction to the ongoing research on neuroinflammation and neurodegeneration as it captures the sense of intense research in these rapidly evolving fields.

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**MIGRAINE: MANIFESTATIONS, PATHOGENESIS AND MANAGEMENT.** Second Edition. 2002. Contemporary Neurology Series, Vol. 65. By Robert A Davidoff. Published by Oxford. 511 pages. C\$156.00 approx.

Authors of headache books are usually researchers or clinicians with a special interest in headache and most also sufferer from the disorder. Dr. Davidoff is particularly well-qualified to write about migraine as he is a basic neuroscientist, neurophysiologist and an academic neurologist who treats headache patients. Furthermore, he claims a special interest from the fact that not only has he himself been a life-long migraineur but he comes from and lives with a family of migraineurs.

This is the second edition of Dr. Davidoff's monograph on headache. It is comprised of 26 chapters compared with 12 in the first edition. In addition to sections on epidemiology, clinical manifestations, investigations and management, there are excellent special sections on pathophysiology, and pathophysiology is emphasized throughout the book. Each chapter is well-referenced and the author has taken pains to include the most current literature as well as pivotal studies from the past.

What makes this book different from most headache monographs is the great pains that the author has taken to expose the physiology that underlies the basis for the migrainous condition. Some readers may find certain chapters to be excessively detailed but they reflect the author's viewpoint as a scientist with apparent insatiable curiosity. Nevertheless, I profited from the lucid description of channelopathies, of genetics and of biochemical and neurophysiology that one might not expect to find in a volume devoted to headache. Other chapters give detailed exposés of cerebral circulation and of related neurotransmitters. A chapter on female endocrine physiology provides an unusually detailed background for the better understanding of mechanisms underlying headache associated with fluctuations in the menstrual cycle.

Much of the additional new information in this volume focuses on newer understanding of serotonin mechanisms and the triptans. There is a very balanced and useful discussion of the role of serotonin, serotonin receptors and the medications that act on these receptors. While there is a detailed review of the role of triptans in therapy, Dr. Davidoff does not commit the common mistake of slavish devotion to advocating triptans as the only treatment for acute attacks. The review of prophylactic therapies is well-researched and there is a realistic appraisal of the limited benefit of most prophylactic medications available to date.

Throughout this monograph the author emphasizes that in spite of a vast amount of data gleaned from research and clinical observations most of our knowledge on headache mechanisms is still theoretic, circumstantial, and not founded on evidence-based medicine.

Lastly, despite an emphasis on scientific study, the sufferings of the migraineur are never far out of mind and only one who really suffers from the disorder himself could describe the suffering without being unnecessarily maudlin. Sections on the approach to the patient with headache are excellent.

Who should read this book? I would not think that many busy practitioners would turn to this 511-page volume, although they might find practical, if tedious, answers to many of their questions. Neurologists, especially those with a bent for wishing detailed explanations for clinical phenomena will find it a very worthwhile