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Book Review Editor

**Diseases of the Nervous System: Clinical Neuroscience and Therapeutic Principles (3rd Edition)**

Edited by Arthur K. Asbury, Guy M. McKhann, W. Ian McDonald, Peter J. Goadsby, and Justin C. McArthur. Cambridge University Press, 2002, 2194 pages, ISBN 0-52179-351-3

Reviewed by Gayatri Devi, M.D.

This colossal reference tips the scales at over 16 pounds, with two volumes of nearly 2,200 pages of densely packed information. More than 220 distinguished contributors from 14 countries and six continents collaborated on this encyclopedic treatise of neurology. The editors state that their purpose is *"not to focus on incidence, natural history, phenomenology... (but) on mechanisms of neurological disease and the principles that form the basis for management and therapeutics."* In fact, they admirably achieve this goal, providing a forum for elegant explanations of the pathophysiologic underpinnings of many brain disorders, with but a few regrettable oversights. The writing is uniformly lucid, complemented by exhaustive tables summarizing the latest neuroscientific data. There are vibrant color plate illustrations in the middle of both volumes.

The introductory chapters are de-

voted to strong overviews, including discussions on genetics, neuroprotection, promotion of neurological recovery, and imaging of the working brain using various modalities from single photon emission tomography (SPECT) to evoked potentials and magnetic resonance (MR) spectroscopy.

Disorders of higher cognitive function follow, with sections on the various dementias, language disorders, and a few chapters covering nearly all Axis 1 psychiatric disorders. Stanley Prusiner discusses neurodegenerative disorders with an understandable emphasis on prion diseases, research on which led to his recent Nobel Prize in Medicine. There is an admirable chapter by Anthony Damasio on consciousness and its disorders. Other equally distinguished authors cover dementias, neglect, memory, and related dysfunctions. In eight pages, a dense chapter ambitiously attempts to cover the genetics, neuropharmacology, neuroanatomy, and treatment of depression, bipolar disorder, and other mood disorders. Predictably, the author is unable to provide more than a cursory overview. There are also chapters on autism, schizophrenia, and drug dependence.

The section on motor control includes wonderful early chapters on the neuromechanics of motor control and apraxias, before moving to Parkinson's and other extrapyramidal syndromes.

In this section, there is some overlap with earlier chapters on neurodegenerative diseases and a useful discussion of Tourette's. Disorders of the special senses follow, and there is a segment on spinal cord injury and repair. The section on diseases of the vertebral column does not mention chordomas, which is unusual

given the generally extensive tables. The chapters on cervical and lower back pain offer some of the most clinically useful discussions on the subject that this reviewer has seen. Aside from the inexplicable inclusion of eating disorders in a section on disorders of body function, there is a welcome discussion on the mechanisms of swallowing, visual perception, and anal continence. Superb discussion of the pathophysiology and management of all types of pain, including headache, conclude the first volume.

Volume 2 begins with detailed chapters on neuromuscular disorders and epilepsy, which are all beneficial. The cerebrovascular chapters include a great section on the behavioral manifestations of stroke, although there could have been more on the management of vascular malformation. While providing an excellent basic science review, the chapter on adult neoplasms offers limited discussion on types of tumors and treatment. The section on brain tumors in children and other chapters in this volume are presented in a more traditional fashion. The chapters on neurological immune mechanisms, sarcoid, host responses in infections, and Patricia Coyle's review of Lyme disease are outstanding.

While the editors should be commended for their inclusion of psychiatric conditions, such as mood disorders, fostering a more unified mind and brain approach, the cursory treatment of these disorders is unsatisfactory. Thus fostering a more unified approach to the mind and brain. The book contains some unnecessary repetitiveness. For instance, two chapters dealing with drug use and prion diseases and two sections on neurodegeneration could

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have been omitted, possibly leaving room for a chapter on neurology critical care, including coma management.

Regardless of these relatively minor deficiencies, this reference tome

is truly worth considerable weight in knowledge. It is a must-have reference book for neuroscientists, neurologists, neuropsychiatrists, and all others wishing to study brain diseases.

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