the chapters had been finalized. The editors have also wisely avoided too much analysis of the human work that has been marked as much by patchy reporting as by good science. Another few years should clarify the human work as the first controlled trials are carried out in Parkinson's disease.

These unavoidable limitations aside, this is a good book. It is certainly the clearest and most complete in this exciting area of neuroscientific research. It will be useful for anyone wanting to understand the basis for the great potential of neural grafting for many human diseases.

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BAILLIERE'S CLINICAL NEUROLOGY. 1993. Inflammatory Myopathies. Edited by F.L. Mastaglia. Published by Harcourt Brace & Co. Ltd. 744 pages. $C36.00.

This monograph on the inflammatory myopathies collects together a series of review articles by experts in the field. It is organized along fairly traditional lines beginning with an outline of the clinical problems noted in inflammatory myopathies and a discussion of the differential diagnoses with which they may be confused. This is followed by an outline of the pathological changes in the muscle. This includes light and electron microscopic findings and the histological demonstration of the immunological changes. A section on inclusion body myositis, which is fairly self contained and describes the clinical, pathological and etiologic aspects of the disease, completes the initial section.

The next part of the book deals with the possible etiologic factors in inflammatory myopathy and covers the immunogenetics, humoral and cellular mechanisms of disturbed immunity as it relates to the disease and the putative role of viruses. The book concludes with separate chapters on retroviruses, animal models and treatment.

All in all, this book is a nice review of the current thinking in inflammatory myopathies. The literature has been growing by leaps and bounds in recent years and it is helpful to find the summaries of this work assembled between two covers. The work reviewed is current and well referenced. The fact that polymyositis has not been "solved" either from the point of view of the etiology or the treatment, means that the competing theories have to be listed in order to give the reader a balanced picture. This sometimes makes the book a little difficult read as it turns into recitation of seemingly unconnected facets of the research. This is not the fault of the authors, but of the subject. The book will serve as a very useful reference manual for anyone interested in inflammatory myopathies and the state of the art in 1993.

Michael H. Brooke
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DISORDERS OF VOLUNTARY MUSCLE. 6th Edition. 1994. Edited by J.N. Walton, G. Karpati and D. Hilton-Jones. Published by Churchill Livingstone. 1171 pages. $C180.00.

The book by Walton which was originally published in 1964 under the title of *Disorders of Voluntary Muscle* has always been well regarded as a guide to the neuromuscular diseases. The present edition, assembled with the help of two additional editors, is the most ambitious edition yet. Over 40 contributors have provided chapters which cover all areas of normal and abnormal muscle behaviour and range from basic scientific aspects to clinical.

The reader is introduced to the topic in a series of chapters starting with the anatomy and physiology of the muscle cells and ending with muscle biochemistry. There are concise summaries of the cell biology of muscle with a good discussion of the molecules involved in muscle development and nerve muscle interaction as well as molecular genetics.

The second section on pathology includes chapters on light microscopy, which as the author says is a little uncomfortably dissociated from the chapter on muscle pathology. Ultrastructural changes make up a third chapter and the information is complete and up to date. The section closes with a chapter on the animal models of neuromuscular disease, an area which is increasingly important as molecular genetics develops.

The third and largest section addresses the clinical aspects and is divided conventionally into the dystrophies, myotonic disorders, inflammatory myopathies, metabolic disorders, myasthenia and diseases of childhood. Motor neuron diseases and peripheral nerve diseases are also included.

The final section is devoted to three sections on EMG and nerve conduction.

The previous editions of this book are well known to neuromuscular clinicians scientists and has always provided as useful source of information and references. The present edition is no exception. It is priced within the reach of the private individual's library and can be recommended as a worthwhile addition.

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PROGRESS IN PEDIATRIC NEUROLOGY II. 1994. Edited by J. Gordon Millichap. Published by PNB Publishers. 598 pages. $C75.00.

This second volume by J.G. Millichap includes abstracts and editorial comments which appeared in *Pediatric Neurology Briefs* from January, 1991 to December, 1993. The format is similar to a Yearbook with selected abstracts from articles covering a wide range of disorders relevant to pediatric neurology, chosen from close to 100 different journals. The layout is under 18 subject headings with the largest section devoted to epilepsy and related disorders and the shortest to CNS trauma. Each section begins with a useful summary of novel developments in the respective fields often supplemented by a valuable bibliography. The index, separate for subjects and authors, is user-friendly.

The particular strength of the book is being a rich source of valuable, recent publications relevant to child neurology, in a clearly distilled format. As might be expected in a volume of this nature, the chosen articles range in quality from good to excellent, and the quality of the editorial comments vary somewhat in their utility. Lacking are critical assessments of study design and report. Keeping these short comings in mind, this book undeniably will be useful to neurologists and other health professionals with a strong interest in pediatric neurology.

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CELLULAR AND MOLECULAR MECHANISMS UNDERLYING HIGHER NEURAL FUNCTIONS. 1994. Edited by A.I. Selverston and P. Ascher. Published by John Wiley and Sons, Inc. 328 pages. $C195.00.

This book, with an ambitious title, deals mainly with cellular and molecular mechanisms associated with learning and memory. It is the result of a Dahlem Workshop held in Berlin in early 1993. The conferees represent some of the most recognized workers in the fields of CNS plasticity, motor control, cellular electrophysiology, and molecular neurobiology. Most of the chapters are excellent up-to-date reviews (1993) of each author's area of expertise. The book is divided into three sections for discussion, each section followed by a comprehensive group report outlining the problems raised and suggesting future experimental approaches.

The first six chapters dealt with what is discussed in the group report of chapter 7; "Relating activity-dependent modifications of neuronal function to changes in neural systems and behavior". The different learning and memory paradigms used to investigate long-term memory were discussed. The validity of relating long-term potentiation (LTP) and long-term depression (LTD) to learning and memory was explored. Finally discussion and debate was presented based mainly on the preceding chapters about hippocampal LTP (R.G.M. Morris), cerebellar learning (M. Ito), the vestibulo-ocular reflex (S.G. Lisberger), and mature neocortical plasticity (W. Singer and A. Artola).

The next four chapters dealt with state-dependent cellular and ionic changes in defined local or small neural circuits. These include the brainstem-spinal cord network controlling locomotion in lamprey (S. Grillner et al.) and the mammalian thalamocortical system (D.A. McCormick). The group report discussed at length mechanisms for state-dependent changes and their applicability to neural systems in general.

Then LTP was revisited with reviews of its physiology (R.A. Nicoll et al.), second messenger influences (M.B. Kennedy), and accompanying synaptic morphological changes (W.T. Greenough et al.). The ensuing group report discussed in depth the recent controversies and concepts of LTP and LTD.

The last six chapters focussed on molecular mechanisms of neural plasticity. Topics included glutamate receptors (P.H. Seeburg), protein targeting and synaptic plasticity (R.B. Kelly), immediate-early genes (T. Curran and J.I. Morgan), phosphorylation of ion channels (W.A. Catterall), and presynaptic molecular machinery (T.C. Sudhof and R. Jahn). The detailed group report discussed molecular mechanisms considered important for nervous system plasticity.

This book is a treat for anyone interested in the fundamental mechanisms underlying higher neural functions such as learning and memory. The authors are world-class and the syntheses of their views in the presented group reports are timely, thorough and stimulating. Although the price is steep in Canadian dollars, this book is worthwhile for neuroscientists working in this complicated and rapidly expanding field.

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