

neuropsychology of basal ganglion disorders; the pharmacology of brain dopamine systems and implications for the cognitive pharmacotherapy of schizophrenia; neuropsychology of memory and amnesia with clinical and neuropsychological case studies; psychiatric manifestations of demonstrable brain disease and structural brain imaging in the psychoses; a neurobiological perspective of the behaviour disorders of epilepsy and chronic experimental epilepsy; a developmental neuropsychiatric perspective of early disorders and later schizophrenia; the hallucination as a disorder of brain and mind; and magnetic resonance spectroscopy in neuropsychiatry.

The introduction is written by D. Frank Benson who pays tribute to Dr. Lishman as the first professor of neuropsychiatry at the Institute of Psychiatry in London and who influenced the intellectual development of a generation of psychiatrists, neurologists and psychologists, many of whom were contributors to this book. The papers are well-written with numerous subheadings and they include a large reference literature.

The text provides an up-to-date and multidisciplinary overview of the study of the healthy brain and the physical causes of psychiatric and behavioural disorders. With some topics, a clinically-oriented chapter is followed by one which deals with the underlying basic science with attention to advances in structural and functional neuroimaging. The book is an excellent review of the current status of neuropsychiatry and is highly recommended for clinicians, for researchers and for students.

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**ADVANCES IN MULTIPLE SCLEROSIS CLINICAL RESEARCH AND THERAPY.** 1999. Edited by Sten Fredrikson and Hans Link. Published by Martin Dunitz. 232 pages. C \$184.60 approx.

Advances in Multiple Sclerosis Clinical Research and Therapy is edited by two well-known individuals in this field, Sten Fredrikson and Hans Link, both from the Karolinska Institute in Stockholm, Sweden. The textbook is multi-authored and brings together expertise from many individuals who have contributed widely to our understanding of the immunopathogenesis of MS and its management. The topics that are covered include: genetics, immunology, magnetic resonance imaging, therapy, and organization of MS care. The latter of these topics includes chapters on clinical practice guidelines, advances and new trends in MS rehabilitation, and several examples of how MS care and research is coordinated in either national or regional centres in several different countries. There is also a chapter dedicated to describing MS-COSTAR which is a database adapted for MS clinical research.

Several chapters are particularly well-written including those related to the genetics of MS (Dyment, DA; Steckley, JL; Ebers GC), Complement mediated mechanisms of injury (Scolding, NJ), diffusion magnetic resonance imaging (Clark, CA; Miller, DH), and several chapters related to the therapy of MS that encompass: a) emerging therapeutic options (Noseworthy, JH); b) gene therapy (Martino, G; Furlan, R; Poliani, PL; et al.) and c) the rationale for antiviral therapies (Andersen, O). Several chapters provide an introduction and give a cursory overview of areas of relevance to MS immunopathogenesis, but fall short of comprehensive review. This is exemplified in chapters related to the immunology of MS, both in relation to mechanisms of autoimmunity and effector

mechanisms in disease. Discussion of adhesion and homing, T cell mediated biology, chemokine receptors, matrix metalloproteinases, cytokine networks and the pathological heterogeneity of MS are distressingly absent. Two pages in the chapter on emerging therapeutic options in MS by John Noseworthy provide some insight into the pathogenic mechanisms underlying MS, however, these are not further developed in other chapters.

I found the chapters on MRI of relatively high quality, although a good deal of the discussion was repetitive. The chapter on diffusion magnetic resonance imaging in MS by Dr. David Miller and colleagues is particularly insightful. I was a bit surprised, however, that acknowledgement was not given in these chapters to the concept of multimodal MRI approaches currently being explored to improve correlation with pathological studies and disability rating scales.

The chapters discussing management approaches and rehabilitation have been inadequately addressed in many other textbooks related to MS and are a welcome addition; although, they appear somewhat out of context to the subject matter of the rest of the book. Unfortunately some of the chapters, particularly those related to immunotherapy, were out of date. In addition, many of the references in several chapters were also out of date and in one chapter the most recent reference dates to 1998. The text does give a reasonable overview of multifaceted aspects of MS research and care, but has a singular lack of focus.

The target audience for this book is difficult to deduce. It is, for instance, unlikely that the section on MS care and rehabilitation would appeal to individuals with a basic science orientation. It is equally unlikely, however, that those who are involved primarily with rehabilitative care would be drawn by the more scientifically focused chapters, particularly those that explore immunological, genetic, and MRI subject matter. The text did not seem focused enough for non-MS practitioners and it is not comprehensive enough for individuals working directly in this field. It is acknowledged that in textbook format it is difficult to provide an up-to-date review of subject matter related to a field that is as rapidly moving as research and therapy in MS. Although the editors of Advances in Multiple Sclerosis Clinical Research and Therapy have brought together several experts in the field to discuss their areas of expertise, the textbook, as a whole, falls somewhat short of its perceived target.

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**THE FACIAL NERVE-2ND EDITION.** 1999. Edited by Mark May, Barry Schaitkin. Published by Thieme. 877 pages. C\$298.50 approx.

Mark May's 2nd edition of the Facial Nerve is a fitting testament to the clinical career of the senior author who has spent the majority of his professional career (35 years) involved in the management and rehabilitation of patients with facial nerve disorders (by his own estimation over 3500 at the time of publication). A professor emeritus in otolaryngology at the University of Pittsburgh, May has long been known as a most personable and leading researcher in field of facial nerve dysfunction. Readers will surely find the text easy to comprehend. As it is somewhat of a testimonial it also provides us with a number of unique personal reflections on the effects of facial paralysis (both May and Schaitkin each developed Bell's palsy independently) on the individual.

As in the first edition, the book is divided into sections

concerning the applied basic science and the anatomy of the facial nerve, the clinical evaluation and management of patients with facial nerve paralysis, surgical procedures involving this structure and the rehabilitation for acute and longstanding facial paralysis. There is also a section concerning the related phenomenon of facial hyperkinesis.

Overall, the book is well-illustrated and comprehensively covers every disorder imaginable involving the facial nerve. As multiple authors, each experts in their own rights, have contributed chapters, it goes without saying that some duplication exists in the book from time to time. There are excellent chapters, however, on Bell's palsy, trauma to the facial nerve and skull base surgery where it involves the facial nerve. Worthy attempts have been made in the book to define the natural history and the role of surgery in the management of Bell's palsy. The last half of the book, which essentially deals with the acute and chronic management of facial paralysis, reads for the most part like a surgical atlas and describes essentially all the dynamic and static techniques that are available for facial rehabilitation.

In my opinion I suspect this book will be of primary interest to those who are involved in the surgical treatment and rehabilitation of patients with facial paralysis. Apart from the treatment of patients with Bell's palsy as such, I'm not necessarily sure the majority of neurologists or neurosurgeons (unless they are involved in acoustic neuroma or lateral skull base surgery) will find this book of sufficient interest.

For those otolaryngologists, facial plastic surgeons and physiatrists who have an interest in the facial nerve, this book would be well worth considering for one's library.

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**AMYOTROPHIC LATERAL SCLEROSIS, 1ST ED.** 2000. Edited by R. H. Brown Jr., V. Meininger and M. Swash. Published by Martin Dunitz. C\$116.25 approx.

It is interesting to witness the dramatic increase in research undertaken in recent years to understand the disorder amyotrophic lateral sclerosis (ALS). As recently as 20 years ago this disorder was studied by only a few investigators, and was relegated to relative obscurity with the view that it was untreatable and incomprehensible. Over the past several decades numerous insights in Neurobiology have occurred which have had both direct and indirect relevance to ALS, making ALS a relatively popular topic for research. These insights include the identification of gene mutations in patients with the familial form of ALS (FALS), such as the identification of mutations in the gene for Cu/Zn superoxide dismutase (SOD), the creation of animal models having features similar to ALS, and other findings about the cell biology of the motoneuron. Yet, even these insights have given rise to further questions, such as why do gene mutations which do not appear to affect the activity of SOD lead to ALS? What is the relation between the effect of the mutations found in the familial disease to those found in the much more usual sporadic form of ALS where no defects in SOD function or SOD gene function are found? If mutations in the gene for SOD occur in only 10-20% of patients with FALS what other genes are involved? What is the potential role of growth factors in the maintenance of neuromuscular function?

This multi-authored book, edited by Drs. Brown, Meininger and

Swash serves as an overview of many of the currently favoured pathophysiological mechanisms in ALS. The book is divided into six broad sections. These include clinical features, pathology, functional and physiological studies, pathogenesis, therapeutic approaches, as well as patient care. Chapters by many of the leading investigators in ALS research are represented, providing an update of research findings in their respective areas. As in any edited work there is variability in the quality of the various contributions. Although there is considerable discussion of clinical aspects of ALS diagnosis and treatment I think that this book would be primarily of interest to a physician or researcher involved in neuromuscular disease, rather than to a general neurologist. Even some of the clinical topics covered in the book may be regarded as relatively obscure for a general neurologist in North America; for example, the chapters on juvenile ALS or atypical forms of motoneuron disease in India. Nonetheless, these same chapters may be of considerable interest to the neuromuscular specialist who is puzzled by an unusual presentation of ALS.

The majority of the book deals with theory and data on the pathogenesis of ALS. These chapters function as reviews of selected topics in the pathogenesis of ALS. For instance, there are chapters on the role of oxidative stress, the role of mutant SOD, glutamate metabolism, etc. Unfortunately, many of the authors of these chapters are prolific writers of review papers. Thus, readers who are reasonably familiar with the ALS field may have the feeling of having seen a similar review paper on these topics previously. In spite of this concern, the book does have the merit of presenting up-to-date review papers under the same cover. As well, some of the chapters are very well-organized and interesting. For instance, the chapter of Drs. Bruijn and colleagues reviewing evidence from transgenic mouse on the role of neurofilament proteins and familial ALS-linked mutations in SOD. Also of note was a chapter on the genetics of ALS by Dr. Andersen and colleagues.

The editors of this book, Drs. Brown, Meininger and Swash are recognized experts in this area. Their expertise is complementary and permits an overview of the field. Thus, the book has an authority and a breadth which is often lacking in other works on ALS.

In summary, this book serves as a useful update into selected clinical and research aspects of ALS. It provides information on the state-of-the-art in ALS and will be a useful source for the neuromuscular physician as well as those seeking further information on ALS.

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**COLOR VISION: FROM GENES TO PERCEPTION.** 1999. Edited by K.R. Gegenfurtner and L.T. Sharpe (ed). Published by Cambridge University Press. 492 pages. C\$150.00 approx.

Like many highly specialised volumes, this collection of works is the product of a workshop, this one held in 1996. It aims to provide a wide view of the state of knowledge in colour vision research, ranging from the molecular to the cortical to the psychophysical level. Thus it is bound to contain fresh material for almost any reader, not excepting the professional colour scientist.

As a vision and eye movement researcher without a primary focus in colour, I found reading this work a highly informative experience. Naturally, in this DNA-mad era, the section with the greatest novelty value was that on the molecular developments. The