surgeons, and 20% neurosurgeons. The preponderance of information is orthopaedic but the book covers the overlap between neurosurgery of the spine and orthopaedics as their fields merge and techniques increase in complexity and number.

It contains a vast amount of information, 90% of which has been revised and updated. Finding what you want can be difficult. Greater coordination between authors would help to eliminate much duplication.

Neck fusion (anterior and posterior) and lumbar intertransverse fusion are each fully described in two separate chapters. Cervical myelopathy is discussed in two chapters and information about the fate of osteophytes is contradictory.

In the chapter on lumbar disc disease is a table labelled "Epidemiology of risk factors for low back pain". If "risk factors" are causes for back pain then it cannot be agreed that physical fitness causes back pain nor do any of the seven items headed "Psychosocial". If the author does not differentiate between back pain and "Complaints of back pain" he should say so, otherwise this table is a malingers' charter and will swell the growth of "Problem back clinics". On page 678 there is a frightening account of the effects of failed surgery between 1940 and 1944 largely due to avoidable errors, e.g. wrong levels, too many levels, and litigation. Chapter 48 has the comment "It has been clearly demonstrated that patients with profound emotional disturbance, or involved in litigation, do not derive observable benefit from additional surgery". One should seriously question the remark in chapter 15 that "If back pain persists beyond three to six months it has become the disease and does not simply imply ongoing tissue damage".

In the United Kingdom we are under considerable threat of litigation for use of Iophendylate (Myodil or Pantopaque) after the mid 1970s. It was surprising to see this substance mentioned by two authors without appropriate warning. Some chapters are rather heavily laden with "Illustrative cases". Some have a follow up of only eight months.

Ten pages on congenital anomalies of the odontoid and sixteen pages of Klippel-Feil are generous. There is no need in this book to tell surgeons to remove sponges before closing the wound, nor to show an illustration of a closed wound. The value of magnetic imaging and other scanning techniques are well demonstrated and described.

Winter and Lonstein give a masterly survey of scoliosis giving the prevalence, diagnosis and description of the surgical techniques now available. They do not mention the lordotic element associated with all or virtually all idiopathic scoliosis.

This is a reference book of great importance to orthopaedic and neurosurgeons.

CR BERKIN

Epilepsy Surgery. Edited by HANS OTTO LÜDERS (Pp 854; Price: \$162.50) 1992. New York, Raven Press. ISBN 0 88167 821 X.

This book has been produced in conjunction with the 2nd International Cleveland Clinic Epilepsy Symposium held in June 1990. However, the topics were assigned, and most

of the text was written before the meeting was held.

It is the first major work to deal with all aspects of the surgical treatment of epilepsy since a similar publication from the Palm Desert Epilepsy Symposium, also by Raven Press, in 1987. There are 17 sections dealing with different aspects of this wide and complicated topic. Each section has chapters by knowledgeable and distinguished authors drawn from the active centres of epilepsy surgery all over the world.

As well as chapters dealing with the important but common topics of epileptic syndromes, neurophysiological evaluation, brain imaging and so forth, there are also chapters dealing with conceptual and ethical considerations, economic aspects and scholarly historical essays. Review chapters covering growing areas in research, for example neuronal grafts, are also included.

Dr Lüders is to be congratulated on the composition of this book and on the high standard he has exacted from the individual contributors. The book itself is robust and well produced with excellent illustrations. It is undoubtedly the best reference book for the surgical treatment of epilepsy currently available, and at a very reasonable price.

C POLKEY

Principles of Drug Therapy in Neurology (Contemporary Neurology Series). Edited by MV JOHNSTON, RL MACDONALD and ANNE B YOUNG (Pp 358; Price: not indicated). Philadelphia, FA Davis Co. 1992. ISBN 0-8036-5031-0.

The charge of therapeutic nihilism was levelled at Neurology in the days when the popular image of a neurologist was a man obsessed with the minutiae of physical examination and the diagnosis of esoteric and untreatable diseases. Nowadays, with advances in treatment of epilepsy, Parkinson's disease, migraine etc., and the growing involvement of neurologists in the management of stroke and in rehabilitation, the lunch-time banter from colleagues has moderated. Neurology must now be near the top of the Norrington table of therapeutic options.

This textbook of Neuropharmacology emphasises the scientific basis of drug use and its relationship to disease processes. It begins with a lengthy chapter on Fundamentals of drug therapy followed by chapters on Movement disorders, Seizure disorders and Epilepsy, Stroke and Hypoxic-ischaemic disorders, Immune-mediated disorders, Psychiatric disorders, Cognitive disorders, Pain, and Acute drug intoxication. Each chapter deals with the clinical manifestations, the neurochemical and anatomical pathology, and the approach to therapy.

The account is comprehensive, clearly explained, and with a proper emphasis on practical applications, but the balance is sometimes uneven. The chapter on psychiatry could have been omitted, and that on cognitive disorders could have been pruned, as it deals largely with the theoretical aspects of Alzheimer's disease that can be found elsewhere and the approach to therapy is speculative. The chapter on epilepsy devotes

four pages to the effects of anticonvulsant drugs on sodium and calcium channels and nearly four pages to enhancement of GABA-ergic inhibition, whilst dealing with the clinical use of anticonvulsant drugs for chronic therapy in just over six pages. In the same chapter there are some differences between USA and UK current practice in the management of status epilepticus. For first line treatment, the authors prefer Lorazepam to Diazepam (and no mention is made of Diazemuls). There is a preference for Phenytoin as second line treatment if Diazepam and Phenytoin fail, and Chlormethiazole is not mentioned.

These criticisms should not detract from the overall value of a useful, up-to-date, beautifully produced book. It will be of value to established neurologists and to those in training, and is a book to buy and use - not simply to consult in a library. There is as yet (unfortunately) no British equivalent. The Butterworth series should repair this deficiency.

E NIEMAN

Headache and Depression: Serotonin Pathways as a Common Clue. Edited by G NAPPI, G BONO, G SANDRINI, E MARTIGNONI and G MICIELI (Pp 329; Price: \$162.50). 1992. New York, Raven Press, ISBN 0-88167-861-9.

This book has the smell of a conference about it. Yet nowhere is this stated; in fact on the back of the title page the publishers state "The material contained in this volume was submitted as previously unpublished material, except in the instances in which credit has been given to the source from which some of the illustrative material was derived." However, the cat is let out of the bag on p.109 where the contributors begin their chapter with "As this Conference on Headache and Depression demonstrates..." Only then did "Selected Communications" on p vii in the Contents make sense. I find this disquieting and feel greater frankness is expected from the publishers and editors. In my assessment 11 chapters are reviews and 20 contain varying amounts of original material.

The book is divided into 6 sections. The first on neurochemistry of 5-HT pathways contains a succinct review of 5HT receptor pathways recognised at the time, and under "The Future" mentions 5-HT₄ with recent studies dated 1988. Another excellent contribution deals with 5-HT receptor subtypes in human superficial temporal, middle meningeal and pial arteries.

The second section deals with chronic headaches and mood disorders.

The next two sections are devoted to periodicity of affective and headache disorders: the first includes an excellent review of the evidence for hypothalamic involvement in cluster headache by Ekblom and colleagues; the second takes menstrually related complaints as a model of periodicity and contains a considerable amount of data on mood, headache and pharmacological aspects of the premenstrual syndrome.

A section on drugs affecting the serotonergic system has 3 drug trials and 3 reviews and, finally, Selected Communications contain an interesting follow-up study

of 20 pinealectomised patients of whom 16 developed migraine or a cluster headache-like syndrome.

All conferences are patchy and most is learned from discussion after the presentations and outside the conference hall. This one is no exception.

JN BLAU

Mitochondrial Encephalomyopathies (Progress in Neuropathology, Vol. 7). Edited by TAKESHI SATO AND SLAVATORE DIMAURO (Pp 258; Price \$100.00). 1991. New York, Raven Press. ISBN 0-88167-824-4.

This book contains the proceedings of the International Symposium held in Tokyo in 1990 as a satellite to the XIth International Congress on Neuropathology. It covers the biochemical, molecular and clinical aspects of a group of diseases increasingly being recognised as important causes of neurological illness. It is therefore a timely addition to the field.

The major strength is that it presents in certain chapters essential details about the basic science of mitochondria (chapters by Clayton, Schatz and Attardi *et al*) which are important if we are to understand these diseases. Another important chapter describes the problems with the clinical classification of these disorders. Other valuable chapters include those describing the mitochondrial DNA defects and the treatment of patients with ubiquinone.

Weaknesses of the book are firstly that the field of mitochondrial encephalopathies is moving so fast that certain parts of the book are now partly out of date. An additional problem is the inclusion of three chapters detailing the finding of the same mutation in the same disease.

Overall, I think this text is a valuable contribution to the field. I think that clinical neurologists or research scientists will find much to interest them and to initiate them to the increasing but complicated world of mitochondrial encephalomyopathies.

DM TURNBULL

Clinical Efficacy and Outcome in the Diagnosis and Treatment of Low Back Pain (Bristol-Myers Squibb/Zimmer Orthopaedic Symposium Series). Edited by JAMES N WEINSTEIN (Pp 293; Price: \$120.00). 1992. New York, Raven Press. ISBN 0-88167-841-4.

This multi-author book forms a record of the proceedings of the 6th Annual Bristol-Myers Squibb/Zimmer Orthopaedic Research Symposium. The first stimulating chapter should be required reading for any one who has to treat back pain. Although it is written from the American perspective, where rates for both medical and surgical intervention are higher than anywhere else in the world, it forms a powerful plea for audit both locally and more widely.

Chapters on clinical decision analysis form a useful introduction to a subject that is likely to become much more topical in the United Kingdom where the recent Purchaser/Provider divide places even greater emphasis on "best buy" management. A review of the

efficacy of non-operative care looks at the literature for the period 1966-1990 and found few studies which met the minimal criteria for internal validity. The conclusion reached was that the advice "Go to bed, take two aspirin and don't call us in the morning!" was at least no worse than any other form of management. Three good chapters on MRI and CT are careful to distinguish between the undoubted effectiveness of the two modalities in demonstrating pathology and the cost effectiveness of these sophisticated investigations.

Quantitative functional muscle testing is critically evaluated with the conclusion that present methods are subject to tremendous variability and of unproven safety: Clinicians are advised to rely on more clinical diagnostic tests. Those chapters discussing the role for surgery in lumbar disc herniation emphasise the importance of the American Academy of Orthopaedic Surgeons' criteria for intervention and stress that these are met by only a very small proportion of those who initially present. Whilst in this group the initial results are shown to be better than for those conservatively managed, that difference has disappeared by 7 years.

The second half of the book deals with spinal pedicle fixation and with various forms of artificial disc—the latter happily dismissed by the final Author as "... bordering on the question of Medical Ethics to even propose such a solution."

As with all volumes from this Publisher, the book is handsomely produced and each chapter is copiously referenced. I found it a most stimulating text and would strongly commend it to any one involved in the treatment of back pain.

AE BOOTH

Brain and Bannister's Clinical Neurology. 7th Edition. Revised by SIR ROGER BANNISTER (Pp 622; Price: £50.00). Oxford University Press. 1992. ISBN 019 261989 6.

Sir Roger Bannister has assembled the best illustrations and best diagrams of any textbook of Neurology. Even so, a 600 page hard-back volume presents problems in marketing, despite being the 7th edition of an established tome. The new compromise title is a misnomer and fails to explain the nature of the opus. A much better book is striving to get out. Notwithstanding my respect for my former chief, this is no longer Brain's easy reader; all credit is due to the present author, and he has devoted more industry and thought to its contents than can be claimed for the majority of rapidly produced textbooks of Neurology that have appeared on the scene. Bannister's strengths pervade the book. He has never lost an essentially neurophysiological approach to clinical neurology and has taken the greatest care to upgrade the text with respect to advances in genetics, basic sciences and investigative techniques. These are presented with a commonsense approach. Thus, he differentiates primary immunological disease, the results of cell destruction, and epiphenomena.

The contents are selective rather than comprehensive, perhaps with Membership or N. American Board exams in mind, but they are occasionally too abbreviated. The explanation of neurological examination and his-

tory taking, though simplified, is inadequate for the non-neurologist. One remnant of Lord Brain's schema remains, a final chapter on psychological factors in neurology. The chapter is introduced with an unusual burst of humour, worthy of repetition:—

"The brain and mind constitute a unity, and we may leave to the philosophers, who have separated them in thought, the task of putting them together again."

This book will not sit idle on my shelf. I expect to find it useful when preparing talks to ensure that nothing essential is omitted, and I will give full regard to the diagrams and classifications into which Bannister has put so much preparation.

EMR CRITCHLEY

Excitatory Amino Acid Antagonists Frontiers in Pharmacology & Therapeutics Series. Edited by BRIAN S MELDRUM (Pp 350; Price: £55.00). Oxford, Blackwell Scientific Publications. 1991. ISBN 0 632 02737 1.

This is an excellent introduction to the topic of excitatory amino-acid antagonists. Acronyms have proliferated in this field—NMDA, EAA, DHE, AMPA—what can they possibly mean? Are we going to have to learn about them? This book goes a good way to explaining their meaning and significance. Brian Meldrum has edited the first book devoted specifically to Excitatory Amino-Acid Antagonists (EAA Antagonists). He has invited experts in key fields to contribute, thus the book is well co-ordinated and without repetition. It moves from a historical introduction to excitatory amino-acid pathways, then on to receptor sub-types, specific antagonists of the different EAAs and the behavioural effects of N Methyl D Aspartate (NMDA). The last third of the book is devoted to clinical applications, most particularly in the therapy of epilepsy and stroke.

The future applications of EAA Antagonists are enormous. Clinical trials of non-competitive NMDA antagonists in epilepsy are likely to proceed shortly. The value of EAA antagonists in stroke is likely to prove more difficult to demonstrate. Pre-clinical data suggests that EAA antagonists are potentially therapeutic in preventing brain damage from cerebral ischaemia. A starting point may well be using these agents in predictable cerebral ischaemia, for instance following open heart surgery or neurosurgery for aneurysm. The therapeutic time-window following stroke is difficult to forecast, and there is an inability to select an outcome measure with clinical meaning. Chronic degenerative disorders such as Huntington's disease, could respond to EAA antagonists if the final mechanism for neuronal destruction is activation of NMDA receptors. Parkinson's and Alzheimer's diseases are possible candidates for drug trials. Motor neurone disease is probably the best disorder of this group to proceed with trials, as there is substantial evidence of abnormalities in the metabolism of EAA. Pre-clinical studies are promising; provided there are not unacceptable side effects neurologists can expect several new drugs in their armamentarium. These are exciting times for the Neuroscience. Dr Meldrum has edited an excellent and timely review of an important new area of research. It proved to be a difficult read for