down and lost five chapters. This, however, is the result of tighter editing and combining material. It includes 9 chapters on general principles of Neurological Intensive Care with important emphasis on the link between the brain and other vital organs. The second part is entirely on specific problems in the Neurological Intensive Care Units and discusses the main disorders. The text has been rewritten, but large portions and tables have remained while appropriately acknowledging the original authors in the edited versions. This allows the book to undergo a transition from an edited book to an authored book improving coherence. As noted in the preface, "these changes allow an authoritative voice regarding the main themes." I believe this has always been the major strength of this book. The text is very readable, and the material is excellent. Personal views of the authors are mixed with hard solid data. Although "trialists" would disagree, I believe a personal view on many of the practical problems that are seen in the Intensive Care Unit is very useful for practitioners and fellows in neurointensive care. However, in several areas, the stated opinions are not more than one to two sentences (sometimes as an add-on in parenthesis) in areas that I would have a craving for a more comprehensive discussion. The book could be improved in the fifth edition. I do not know if it was a conscientious decision to be so plain, but I would have liked more illustrations and neuroimaging examples. A chapter on spinal cord injuries and fractures without any imaging is not easy to comprehend and less didactic. This also applies to the chapter on ischemic stroke that has no images or charts. Interpretation of CT scan and MRI scan in the acute neurologic setting remains part of the practice and certainly interpretation of changes that could explain deterioration. In other chapters, figures and tables have become clearly outdated and should be replaced. Some chapters would need some more work to get to the desired level. Nonetheless, the book content is comprehensive, tightly edited, error free, and is up to date. It is very easy to read and just a genuine pleasure to dive into. For me, it is a book that has a special place in my personal library and it should be for budding neurointensivists. There has been a flurry of neurological intensive care books over the last three years indicating healthy state of field and that is good. This book with its brevity and brilliance remains an indispensable text.

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EEG IN CHILDHOOD EPILEPSY. 2003. By Professor Hermann Doose. Published by John Libbey Eurotext. 414 pages. C$150 approx.

This textbook on pediatric EEG adds a unique perspective with respect to the genetic influences on EEG and childhood seizure disorders. Professor Doose has amassed considerable expertise in this area by documenting EEG changes over time in his patients with epilepsy and by obtaining EEG studies on their family members.

In the initial chapters, the focus is on the normal EEG and its variants, including brief discussions on the genetic influences on normal EEG background. Chapter 3 outlines various epilepsy-related, genetic EEG traits, including 4-7 Hz theta in wakefulness, parieto-occipital 3-4 Hz rhythm, generalized spike and wave and photoparoxysmal response, the age when these are seen and their relationship to epilepsy. Clear illustrations of these traits are provided and the importance of the interaction of these genetically inherited "EEG risk factors" with various exogenous influences in the pathogenesis of epilepsy is emphasized. While the Appendix summarizes findings in the EEG of healthy children, noting the frequency of specific "genetic" EEG findings at certain ages, this book does not provide a detailed description of the development of a normal EEG in children.

The latter chapters focus on EEG features seen in specific epileptic syndromes in infancy and childhood, again providing numerous examples of the evolution of EEG changes over time in each of these conditions. Although a genetic predisposition to seizures is well-accepted in specific syndromes including febrile seizures, the idiopathic generalized epilepsies and the benign partial epilepsies of childhood, the author notes a greater rate of genetically determined EEG signs of increased seizure liability even in children with a history of symptomatic neonatal seizures, underlying the importance of genetic susceptibility in all seizure types. Several practical and useful clinical "pearls" to differentiate commonly confused epileptic syndromes and EEG discharges are discussed. For example, the author notes several helpful features to differentiate benign from non-benign focal sharp waves, and Lennox-Gastaut from pseudo-Lennox syndrome or myoclonic astatic epilepsy. The chapters on the benign focal epilepsies of childhood emphasize Doose's work on "hereditary impairment of brain maturation" and the varied clinical picture seen with these EEG changes. The section on epileptic encephalopathies visibly indicates the variability and evolution of EEG changes over time in these conditions.

This book provides an adequate number of clear illustrations of EEG features to supplement the descriptions in the text. Although the language is, at times, a bit awkward, and the montages unusual (as many of the recordings were older), these factors do not detract appreciably from this book's readability. It will be an extremely useful addition to the library of any pediatric epileptologist.

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NEUROGENETICS: METHODS AND PROTOCOLS. METHODS IN MOLECULAR BIOLOGY. VOLUME 217. 2003. Edited by Nicholas T. Potter. Published by The Humana Press. 390 pages. C$197.00

Neurogenetics is one of the newer volumes in the *Methods in Molecular Biology* series of books. This series focuses primarily on detailing specific protocols on a wide range of topics related to biology. This particular volumes' main thrust is to "highlight many of the contemporary methodological approaches utilized for the characterization of neurologically relevant gene mutations and their protein products". This volume covers a wide range of topics that are broadly divided into six sections: quantitative PCR, trinucleotide repeat detection, sequence-based mutation detection, molecular detection of imprinted genes, fluorescence in situ hybridization, and *in vitro* expression systems and studies of protein expression and function. There are 60 authors from around the world that contributed to the 32 separate chapters for this volume. Each has extensive experience with the particular protocol they are highlighting in their respective chapter.

Each chapter begins with a short discussion of the clinical disease that is being used as an example to highlight a particular protocol. The authors discuss the difficulties that have arisen in trying to explore the genetics of a specific disease and why they are using a specific technique. This is followed by some background knowledge about the

basic principles of the technique being discussed in the chapter. Two very detailed sections follow that list the materials needed to perform the technique and then an in-depth step by step methods section. These two sections form the bulk of the information for each of the chapters and give the reader all the information necessary to perform the experiments. The final section in most chapters is a "notes" section where the authors provide helpful hints as well as pitfalls that they personally ran into in trying to perform the experiments. This information ranges from why they choose to batch certain multiplex PCR reactions to emphasizing the importance of labelling reactions tubes properly.

These chapters cover a wide variety of neurologic conditions emphasizing current techniques being used to explore them. For example: semiquantitative PCR for the detection of exon rearrangement in the parkin gene in Parkinson's disease; denaturing high-performance liquid chromatography (DHPLC) to identify MECP2 mutations in Rett syndrome; and fluorescence in situ hybridization (FISH) to study genomic rearrangements in Charcot-Marie-Tooth disease. Seven chapters are dedicated to detail techniques used for studying trinucleotide repeat diseases and include "RED", "RAPID" and "DIRECT". The advantages and disadvantages of each technique are discussed and why one might choose one over the other. Classic techniques like "SSCP" and Southern blots are discussed in some of the chapters and why they are still commonly used.

This book is primarily aimed at researchers and clinical laboratory diagnosticians who are interested in learning new techniques. It gives them all the necessary information required to actually perform the experiments with a brief overview of a condition that is being studied. The editor suggests that clinicians with an interest in disease diagnosis would also find this useful. I think that, because the bulk of the chapters are dedicated to details about the materials and methods, most clinicians would be better served looking up the techniques in a molecular genetic review type textbook.

David A. Grimes
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PAIN, CURRENT UNDERSTANDING, EMERGING THERAPIES, AND NOVEL APPROACHES TO DRUG DISCOVERY. 2003. Edited by Chas Bountra, Rajesh Munglani, William K. Schmidt. Published by Marcel Dekker, Inc., New York, Basel. 968 pages. C$302 approx.

This book deserves high recommendation. Three editors, and over 140 contributors, have combined to produce a definitive volume concerning pain: its basic and clinical aspects, new approaches to drug discovery and new and emerging therapies.

The editors have successfully addressed several important questions and issues.

What is the latest thinking in terms of pathological mechanisms underlying acute and chronic pain? What is the role of the immune system or peripheral nervous system in maintaining chronic pain? If one dampens or attenuates these peripheral changes, will they also reverse cerebral pathological changes, resulting in chronic pain?

As the editors state, there is a hungry quest for treating intractable pain, spurred on by the pharmaceutical industry and clinicians. What analgesics are currently available or in development? How do we hunt for new drugs and where are the next generation of pharmaceutical agents likely to emerge?

These are formidable and important questions, and the authors have provided cogent, frank and thought-provoking answers.

This book deserves to be purchased, perused and studied, and then revisited five to ten years from now. I particularly recommend the sections on opioids, cannabinoids, vallinoids, and new local anaesthetic analgesics.

Finally, Peter Goadsby's chapter on headache, which discusses the trigeminovascular system and the basic neurobiology of migraine should be read by researchers, clinicians and patients alike.

J. Gary Ashby
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SPINAL STABILIZATION PROCEDURES, DIAGNOSTIC AND THERAPEUTIC ASPECTS OF INTERVERTEBRAL FUSION CAGES, ARTIFICIAL DISCS AND MOBILE IMPLANTS. 2002. Edited by Denis L Kaech & J Randy Jinkins. Published by Elsevier Science. 408 Pages. C$180 approx.

This book provides an elegant overview of the current trend away from traditional spinal stabilization by arthrodesis with autograft/allograft/instrumented/noninstrumented constructs towards fusion with intervertebral fusion cages, and arthroplasty and/or dynamic posterior stabilization techniques as alternatives to arthrodesis.

The first part is introductory and begins with a good, albeit superficial, overview of the pathophysiology of degenerative spinal instability. Accompanying diagrams that illustrate the evolution of instability are not sophisticated but adequate. Subsequent chapters describe the clinicoradiographic evaluation of degenerative instability including axial loaded CT, cine-axial loaded CT and dynamic-kinetic MRI. The representative radiographs that accompanied these chapters are not convincing. There is a thorough description of sagittal lumbar spinal balance, cage design parameters and their impact on spinal stability; and, an excellent discussion with illustrations of static and dynamic testing and stability testing of various implant constructs. The controversial issues of indications and contraindications for the use of intervertebral cages are addressed only superficially. A more in depth discussion with more references would have improved this section.

The next two sections cover lumbar cages and cervical cages with descriptions of the rationale and design parameters of various cages as well as details pertaining to technique, pitfalls, results and complications. The cervical cages section concludes with a review of the difficulties and criteria for arthrodesis following cage insertion.

Part IV describes the partial and complete lumbar and cervical prosthetic disc implants with the largest clinical experience. These chapters include informative detail about the design of each of the implants by those who actually conceived and developed them as well as clinical results.

Part V includes two short chapters that describe two posterior dynamic intersegmental restabilization technologies. Each chapter could benefit from more discussion about the biomechanical rationale and evidence in support of this approach to restabilization.

The last part of the book contains an excellent overview of the current trend towards a stepwise progressive intervention approach to spinal restabilization, starting with conservative treatment such as physical reconditioning, and concluding with intervertebral arthrodesis if satisfactory clinical results are not achieved by these earlier less invasive interventions.

The editors emphasize intervertebral arthrodesis with implants as opposed to traditional arthrodesis with autograft/allograft/