

problems with presently available seizure classification systems. The problems with the classifications proposed by the ILAE represent a continuous debate over the years and these are well exposed in the chapter. The limits between generalized and focal epilepsy will alter in the future and continuous changes could be expected. Section three reviews clinical and physiopathological mechanisms of absence seizures. The section is good but there are many international reviews about this topic and it is not the dominant section of the book.

I strongly recommend the book but I would like to remark that the content is highly specialized and probably is more suited for physicians who continuously evaluate patients with epilepsy or interested people working in epilepsy programs.

*Jose F. Tellez Zenteno
Saskatoon, Saskatchewan*

ATLAS OF NEUROSURGICAL TECHNIQUES: BRAIN. 2006. By Laligam N. Sekhar, Richard G. Fessler. Published by Thieme. 1074 pages. Price C\$405.

This neurosurgical operative atlas is the first of a two-volume multi-authored treatise on cranial and spinal neurosurgery. Professors Sekhar and Fessler have assembled a stellar group of contributors to produce an atlas of unusual breadth and clarity. Topics in the volume on cranial surgery are grouped into sections on general microsurgical principles, aneurysms, arteriovenous malformations, tumors, cranial base lesions, surgery for epilepsy and functional disorders, craniocerebral trauma, hydrocephalus, infections, stereotactic radiosurgery, and endoscopy. All of the 91 chapters have been carefully edited and beautifully illustrated. The book is aesthetically appealing and maintains the high standards for which Thieme is known.

The chapters present contemporary techniques including intra-operative electrophysiological monitoring, sophisticated skull base approaches, endovascular therapy, endoscopy, minimally invasive surgery, and stereotactic approaches. Refreshingly, there are very few chapters that have been lifted or only slightly revised from earlier publications. Each chapter begins with an introduction, often including historical context, and progresses logically to indications, alternative approaches, anesthesia, positioning, anatomy, surgical techniques and nuances, and post-operative care. Case examples are appropriately selected and nicely illustrated. Complications and their avoidance are dealt with in practical and honest terms.

As the number of surgical texts and online publications is rapidly expanding, investment in these media should be based on quality, suitability, and value. At C \$405.00, Atlas of Neurosurgical Techniques: Brain is well worth the cost and will be a valued addition to the libraries of neurosurgical residents as well as experienced surgeons. It has been written by neurosurgical experts addressing the complex conditions and cutting edge techniques that represent the current state of the art.

*Gary Redekop
Vancouver, BC*

THE PHYSIOLOGICAL BASIS AND QUANTUM VERSIONS OF MEMORY AND CONSCIOUSNESS. 2006. By Arthur J. Hudson. Published by The Edwin Mellen Press, LTD. 220 pages. Price C\$130.

This book represents an easily read overview of central nervous system physiology as it relates to memory and consciousness written for the clinician in 13 chapters. The book is general in its concepts and well organized with good progression of the topics and references of all chapters relating back to the topic of memory and consciousness. It begins with a chapter on the evolution of the neural sciences with regard to achievements in the localization of the brain functions. The second chapter reviews the various neurons of the cerebral cortex including pyramidal cells and interneurons. The visual cortex is specifically addressed and the general cortical model reviewed. The third chapter reviews the properties of axons, dendrites and synaptic vesicles. There is specific discussion on gap junctions, glial cells and lipid rafts. The fourth chapter addresses resting and voltage-gated ion channels. Tables outlining the specific ion channels in neurons and normal ion concentrations are included. Channel subtypes are also discussed in some detail. Chapter five reviews excitatory neurotransmitters including the small molecules (acetylcholine, biogenic amines, amino acids and nucleotides), neuroactive peptides and gas molecules with a focus on glutamate receptors and gas molecules. The sixth chapter focuses on inhibitory neurotransmitters with discussion predominantly around GABA receptors. Chapter seven involves a review of the electrical behaviour of dendrites and includes discussion on the Rall Cable Theory, Hopfield-Brody Model and neural codes. The eighth chapter discusses axon targeting including neural development, Eph receptors and ligands, axonal growth and targeting and integrins. Chapter nine reviews protein signaling and networks and specifically discusses, G-proteins, second messengers (calcium, cAMP), protein complexes, Ras-MAPKs, CaM kinase II, protein-conducting channels and complex networks and network regulators. The tenth chapter discusses long-term potentiation and plasticity in neurons. Relationship to memory is discussed in some detail. Chapter eleven reviews the processing of memory. In particular the hippocampal formation, amygdala and prefrontal cortex are discussed. Basic mechanisms of memory and the consolidation and reconsolidation of memory are also reviewed. The twelfth section deals with the development of consciousness and discusses cortical/subcortical connections, sleep and wakefulness and memory as it is applied to consciousness. The final chapter discusses quantum brain models.

Overall, pages are small with fairly small print and there are several black and white illustrations. Information is generally concise and well written. Chapters end with concluding remarks and summaries.

*Lorie Hamiwka
Calgary, Alberta*

EXAMINATION OF PERIPHERAL NERVE INJURIES - AN ANATOMICAL APPROACH. 2006. By Stephen M. Russell. Published by Thieme. 178 pages. Price C\$60.

This pocketbook begins with the Foreword: "There are few things in medicine and surgery that give as much personal satisfaction as a well-done physical examination, which can localize a lesion and often identify its nature." This is absolutely true, as a