The Central Nervous System

Per Brodal
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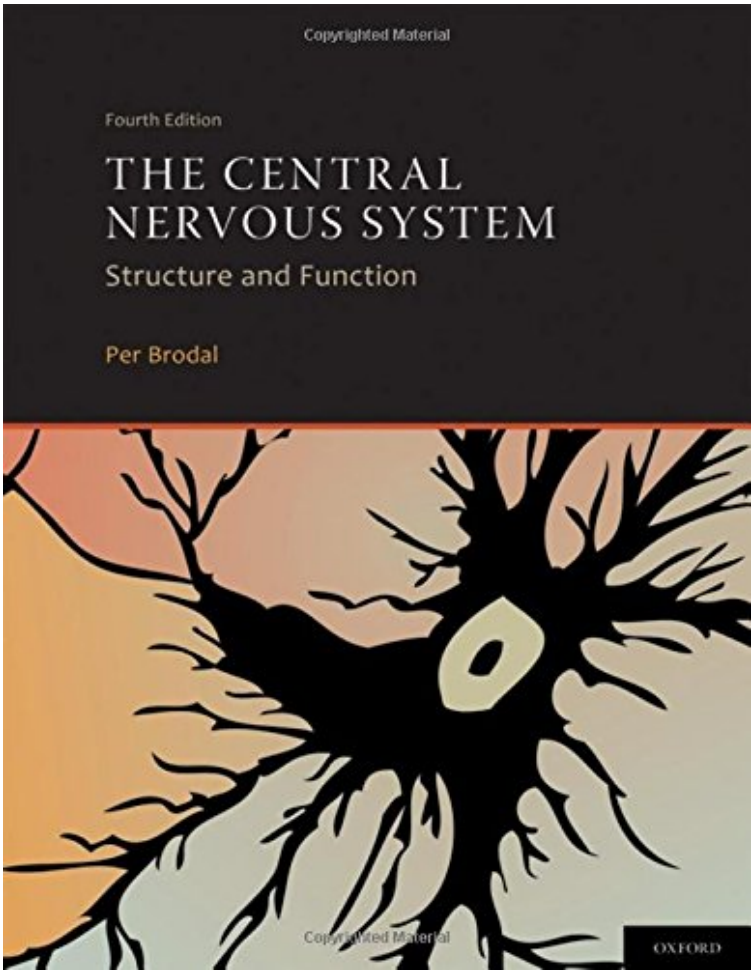

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Per Brodal : The Central Nervous System before purchasing it in order to gage whether or not it would be worth my time, and all praised The Central Nervous System:

2 of 2 people found the following review helpful. Great introduction for the Central Nervous SystemBy Lizbeth Gracida SiscarThe Central Nervous System, Structure and Functionby Per Brodal, Oxford University Press, 2010 The Central Nervous System compiles the principles of brain structures in a basic, clear, and concrete way. While making the text easy to read and easy to understand, the author does not compromise content. In this fourth edition, the book covers a wide range of explanations of neurobiology, including psychological and clinical research and the structure of the peripheral pathways. One of the main goals of the book is to generate knowledge by being more intelligible rather than to overload the reader with descriptive facts that would require more memorization. The book divides its 34 chapters in 8 sections. Each part has an overview that contains general information about what is to come; since the beginning engages the reader explaining from a general point of view the principles of the nervous system (i.e. the

neuron and their processes). Then, it takes the lector by hand to the next's chapters, including the description of synaptic function and also development of structural and functional features that differentiate cells. The book provides an explanation of the different pathways formed in the nervous system and describes rewiring process of structure and function in plasticity. Throughout the chapters, the brain structures are related with associated diseases. That provides clarity, helping the reader to make clinical relationships with different brain structures and behavior. It covers aging, the basic properties of sensory receptors (including pain and clinical disturbances of the somatosensory system). For the sake of completeness the next chapters cover the hypothalamus, cranial nerves, the autonomic nervous system and the cerebral cortex. The photos, images and drawings presented in the book are descriptive and clear; they are very helpful supporting the information that is presented in text. This volume is a basic resource for professionals interesting in the nervous system; for neuroscience students, psychiatrist as well as clinicians. The text can be used as a tool for studying and understanding the basic principles of the nervous system. It surprises me the amount of subjects that the book covers; all subjects are explained in a friendly way that even professionals with not medical background can understand and get involved with. One of my favorite characteristics of the book is that there seems to be a flow between chapters that makes information more clear and precise from the beginning to the end. This work is an excellent resource for learning the marvels of the central nervous system and for preparing the reader with the principles needed for further studies. It seeds solid concepts and fosters curiosity.Lizbeth Gracida SiscarSchool of Behavioral and Brain SciencesUniversity of Texas at Dallas,Richardson, Texas, U.S.A,2 of 2 people found the following review helpful. Easy Read (even for the beginner neuroscientist)By JulieBook Review of: "The Central Nervous System: Structure and Function"Edited by: Per Brodal, MD, PhDPublished by Oxford University Press (2010)Per Brodal's, The Central Nervous System, provides a detailed account of the functional properties, anatomical structures, and biological composition encompassed within the central nervous system and its' subsequent systems. This book is a fourth and subsequent edition to the original, created by Alf Brodal. The book begins with a thorough description of the most basic part of the nervous system; the neuron. This is necessary to do, as the following sections are built upon the function and anatomy of the neuron. The second section then describes the development of these structures, in both the prenatal and postnatal developmental stages, as well as describing the adverse affects damage and aging may have upon them. By offering a comprehensive description of nerve fibers, axons, synapses, structures, development, and overall pathway signaling, the building blocks have been laid to introduce sections III and IV. Section III, sensory systems, describes the auditory, visual, vestibular, olfactory, and gustatory systems. Section IV, motor systems, describes descending pathways, pyramidal and extrapyramidal pathways, the basal ganglia, the cerebellum, and saccadic movements. Each system is not only described in terms of the anatomical structures to which they supply information and relay messages, but in terms of the molecular biology occurring within those ion channels and synapse gaps to make each system function adequately. The fifth section places emphasis upon the brain stem, more specifically the medulla, pons, and mesencephalon, and the roles of the twelve cranial nerves. Each cranial nerve is described in concise, meticulous detail; never failing to mention the disorders that may occur when a nerve is damaged. The visceral organs, vessels, and glands are also examined in terms of their purpose within the peripheral and central parts of visceral neurons, otherwise known as the Autonomic Nervous System. The sympathetic and parasympathetic divisions of this system are also observed independent and dependent of one another, as they are antagonistic of one another. The newest division, the enteric system, and the maintenance of bodily homeostasis through the endocrine system are also inspected. The final two sections serve to describe the cerebral cortex; the allocortex including the limbic structures and subcortical nuclei is investigated first, followed by the structure, connections, and cortical associations within the neocortex. This book provides clear, yet concise descriptions of anatomical structures and functional properties of the central nervous system. However, something that is quite unique to this book is the molecular biology and psychobiology included in each chapter. This effect may be noted throughout the book, but I would like to bring attention to the section specifically devoted to pain. Pain is often described in terms of clinical neurology, but few tend to give a comprehensive breakdown of the substances that make pain happen. The description of such nociceptors and their effects upon blood vessels, mast cells, and the dorsal ganglion cells, is something noteworthy about this book that has been lost in other literature. Another noteworthy asset is the brain-behavior connections which are made throughout the reading. Applicable demonstrations are offered throughout the text so any reader may be capable of processing the information better. In regards to the visual system, the reader may actually see images and test themselves on perceived light intensity to better understand how their behaviors mirror examples given. These applicable examples, combined with the overall layout of each chapter, make this book one of a kind--allowing any reader to understand, and even enjoy, the vast marvels of the human brain. School of Behavioral and Brain Sciences University of Texas at Dallas, Richardson, Texas, U.S.A.1 of 1 people found the following review helpful. Excellent Introductory Neuroscience TextBy Lovegroove"The Central Nervous System, Structure and Function"by Per BrodalOxford University Press, New York, 2010"The Central Nervous System" offers extensive coverage of the structure and function of the CNS from a cellular level to a systems level. This is the fourth edition of the book and it is geared toward clinical neuroscience students. It serves to integrate material across all fields of neurobiology and facilitate a fundamental understanding of neuroanatomy.Brodal begins with a basic treatment of

cellular structures and functions, followed by a discussion of the parts of the nervous system. He then moves on to development, plasticity and aging. As the book progresses, Brodal methodically discusses the sensory systems, motor systems, cranial nerves, autonomic nervous system and limbic structures. Finally, he wraps up with a discussion of the cerebral cortex. Sections and boxes are frequent and clearly marked, allowing readers to easily select passages of interest. Brodal is always sure to relate topics to clinical applications and pathologies, providing students with a better understanding of functional mechanisms.The book is laudable for its concise, easy to understand prose. Unlike many works in this field, it trims the unnecessary fat to give the reader exactly what is necessary and important. Brodal writes clear and thorough descriptions of neuroanatomical structures and functions. The text is adorned with a plethora of colorful and clear diagrams that help to elucidate his explanations. In addition, Brodal encourages a critical investigation of the material rather than simply presenting isolated facts for memorization. Furthermore, Brodal is quick to point out a lack of information about a topic or the limitations of certain methods rather than to fill space with idle speculations or oversimplified explanations.Considering its singular author, the scope and breadth of knowledge in this book is mystifying. If the book can be said to be lacking in any way, it would be in the depth of coverage of each topic. Often a section will only discuss a region or concept superficially before moving on, leaving the reader wanting more. However, this is to be expected of a non-specialist book of this nature, and is not necessarily a drawback. Rather than overwhelm the reader with a massive amount of detail on the subject, Brodal provides an excellent introduction to all things concerning the CNS in one very accessible text. Although certain books like "Principles of Neural Science" by Kandel et al. may contain a more in-depth treatment of many of these topics, Brodal's The Central Nervous System is far more readable. He continually transforms the exceedingly complex mechanisms of the brain into lucid digestible facts.Therefore, The Central Nervous System is the perfect reference work for beginning graduate students or advanced undergraduates in neuroscience.

The Central Nervous System: Structure and Function, Fourth Edition continues the tradition of one of the most respected textbooks in clinical neuroscience by providing medical students the knowledge and understanding of neuroscience as a basis for clinical thinking. While remaining concise and easy to read, the text encourages reflection and critical thinking of established facts and scientific conjecture and will be of interest to medical, graduate, and undergraduate students alike.Prof Per Brodal provides clear descriptions of brain structures and relates them to their functional properties by incorporating data from molecular biology to clinical neurology. The numerous full color line drawings - based on the author's long experience of teaching undergraduate students and new to this edition - make it easier to understand complex structural and functional relationships. Thoroughly revised, this fourth edition goes further in integrating material from all fields of the neurosciences. Now divided into 8 Sections with a total of 34 Chapters, each chapter is introduced by a brief overview of what the student can expect to learn. New material has been incorporated in all chapters while maintaining the scope and coverage that has established The Central Nervous System: Structure and Function as the preeminent neuroscience textbook.

"Overall, as a basic text for learning or reviewing neuroanatomy, I enjoyed reading The Central Nervous System. It is a very worthwhile addition to the library of students and established clinicians and researchers, as its presentation of many aspects of neuroscience are up to date, authoritative and very helpful for ready access." --JINS"Here, the dynamic and concise presentation of both the structure and the function of the central nervous system at different levels (molecular, cellular, and systems), with special emphasis on how the different components are connected and interact, manages to captivate the reader . . . I recommend this book to all medical students, and also to more advanced clinicians . . ." --Journal of Neurology, Neurosurgery, and PsychiatryFrom reviews of previous editions..".presents a balanced view based on key background information. An excellent book."--Anthony J. Castro in Choice"The third edition of Per Brodal's book is beautifully produced and continues the traditions of excellence . . . The book is clearly and concisely written and manages not to lose the reader in anatomical detail, while explaining physiological mechanisms . . . refreshingly easy to read and I would recommend it as an informative text for medical students . . ." --Bill Winlow in Physiology News..".Per Brodal has risen to the challenge of explaining an increasingly complex topic by a synthesis of style and format that immediately engages even the first time reader, and facilitates understanding...This text belongs in the curriculum of students beginning studies in the health science disciplines. The author has been faithful to the Brodal tradition of bridging the gap between basic and clinical neurosciences by relating structure at all levels of the nervous system (molecular, cellular, systems) to its function."--R.J. Riopelle in Journal of Neurological Sciences"Brodal has done a remarkable job of presenting a diverse spectrum of topics... The consistent prose of a single author, highlighted blocks of text for clinical examples, and just the right amount of pictures and figures scattered throughout the book enhances its effectiveness in presenting a large volume of facts in a limited space... I agree that this book is ideal for a medical student."--Gregory Youngnam Chang, Archives of Neurology"The book is very easy to read...A suitable refresher course for all students of neuroscience."--Michael N. Hart in Journal of Neuropathology and Experimental Neurology"The book is well structured and is an essential guide for those who seek a greater understanding in areas of neuroanatomy and nauroscience."--Physiotherapy"Overall, as a basic text for

learning or reviewing neuroanatomy, I enjoyed reading The Central Nervous System. It is a very worthwhile addition to the library of students and established clinicians and researchers, as its presentation of many aspects of neuroscience are up to date, authoritative and very helpful for ready access." --JINSFrom reviews of previous editions..".presents a balanced view based on key background information. An excellent book."--Anthony J. Castro in Choice"The third edition of Per Brodal's book is beautifully produced and continues the traditions of excellence . . . The book is clearly and concisely written and manages not to lose the reader in anatomical detail, while explaining physiological mechanisms . . . refreshingly easy to read and I would recommend it as an informative text for medical students . . ." --Bill Winlow in Physiology News..".Per Brodal has risen to the challenge of explaining an increasingly complex topic by a synthesis of style and --Bill Winlow in Physiology Newseven the first time reader, and facilitates understanding...This text belongs in the curriculum of students beginning studies in the health science disciplines. The author has been faithful to the Brodal tradition of bridging the gap between basic and clinical neurosciences by relating structure at all levels of the nervous system (molecular, cellular, systems) to its function."--R.J. Riopelle in Journal of Neurological Sciences"Brodal has done a remarkable job of presenting a diverse spectrum of topics... The consistent prose of a single author, highlighted blocks of text for clinical examples, and just the right amount of pictures and figures scattered throughout the book enhances its effectiveness in presenting a large volume of facts in a limited space... I agree that this book is ideal for a medical student."--Gregory Youngnam Chang, Archives of Neurology"The book is very easy to read...A suitable refresher course for all students of neuroscience."--Michael N. Hart in Journal of Neuropathology and Experimental Neurology"Primarily for use by undergraduate students of medicine, physiotherapy and psychology. It is easy to read and the text is successfully written to generate and maintain interest, an objective assisted to great measure by some excellent line diagrams and photomicrographs...Not only a first-class text, it is also excellent value for the money."--Peter Usherwood in Times Higher Education Supplement"This reviewer strongly recommends the book...as [one of the two] best of the current books available for learning neuroanatomy."--Choice"The interest in this book resides in the [author's] constant effort to try and establish the link between recent scientific advancements and clinical practice. This goal is largely accomplished...thanks to clear English writing and numerous carefully done illustrations...The logical approach of this book will suit neophytes in neurology who will be able to better understand a symptom. The more learned will also find it interesting."--S. Timsit in Revue de neurologie"Here, the dynamic and concise presentation of both the structure and the function of the central nervous system at different levels (molecular, cellular, and systems), with special emphasis on how the different components are connected and interact, manages to captivate the reader . . . I recommend this book to all medical students, and also to more advanced clinicians . . ." --Journal of Neurology, Neurosurgery, and Psychiatry"Very nicely written...and in many ways ideal for the needs of medical students."--Prof. Lawrence Kruger, UCLA"An excellent general text for use in the education of medical students in neuroscience. Complete overview without an excess of detail."--Prof. Patrick M. Dougherty, Johns Hopkins University School of Medicine"This is a completely new version of Alf Brodal's popular book of the same name which ran to four editions between 1949 and 1982...It is modern in its approach and achieves its effect without burying the reader in anatomical detail or by cutting the corners of accuracy in the interests of abbreviation...[It] retains the clarity of presentation and the simple, easy-to-read style of its predecessors...[It] has much of the flavor of the earlier versions by Brodal pere, particularly the succinct clinical annotations which are a valuable feature."--Edward G. Jones in Trends in Neuroscience"The book is well structured and is an essential guide for those who seek a greater understanding in areas of neuroanatomy and nauroscience."--Physiotherapy..".the fourth edition updates areas of neuroscience where the understanding of function has changed...The illustrations, images, and clinical correlations are right on target and are what differentiates this book from its competitors. This is an excellent resource that is a must have for all medical libraries that serve any students interested in the neurosciences."--Doody's, a five-star review, highest rating!About the AuthorPer Brodal, MD, PhDDepartment of AnatomyInstitute of Basic Medical ScienceUniversity of OsloOslo, NorwayPer Brodal is professor of Anatomy and former Dean of Education at the Institute of Basic Medical Sciences at the University of Oslo. Dr. Brodal has been working on experimental neuroanatomy for 30 years, and has broad experience in teaching at the undergraduate and graduate levels. During recent years Dr. Brodal has headed planning and implementation of curricular reforms at the University of Oslo.