
The ability to proficiently relate structure to function is a goal I have heard more than one instructor of neuroanatomy urge students to strive for during their studies of the human nervous system. This compact but comprehensive summary of neuroanatomy and neurophysiology is an excellent aid to medical students and other students of medical neuroscience who are aspiring to this goal. It is clearly and concisely written, making it easily readable in its entirety. Many exceptional illustrations complement and enhance the text, and the thirty chapters are well organized into seven sections.

The first section of Basic Principles contains a chapter new to this edition on the physiology of nerve cells. This chapter outlines the cellular processes involved in neuronal communication which are the basis for a functioning nervous system. It is a worthwhile and important addition.

The subsequent four sections proceed through descriptions of the peripheral nervous system and the major anatomic subdivisions of the central nervous system. A significant portion of these sections is devoted to discussing the function of anatomic structures either directly or through frequent considerations of the functional consequences of anatomic lesions. Some chapters deal with functional systems separately, for example, "Hearing," and scattered throughout all these sections are summary paragraphs (for example, "functional characterization of thalamic nuclei") which help clarify a large amount of anatomic information by emphasizing functional components. The chapter on chemical neuroanatomy which is at the end of these four sections is also particularly good with useful summary illustrations.

The sixth section contains a chapter which is new to this edition addressing the blood supply to the brain. The important functional consequences of vascular lesions in the nervous system merit the inclusion of this chapter.

The last section contains the third new chapter in this edition on the clinical approach to patients with neurologic disease. This chapter will be most helpful as a guide and summary for medical students learning about the neurologic exam.

I would like to include in this review two suggestions for improvement. The posterior circulation is discussed in one of the early chapters with the brain stem, and the anterior circulation is discussed in a separate chapter much later. This separation based on functional considerations is consistent with the theme of this book. However, in this case I think it would be more helpful and clear if this material were discussed completely in one chapter. The second suggestion relates to the last chapter on neurologic diagnostic tests. While this book was not written to describe procedures used for neurologic diagnosis, this chapter is included in the text. It gives a very superficial overview of neurologic diagnostic tests; a more complete and detailed chapter would be helpful for students or housestaff who are directly involved in neurologic diagnosis.

In summary, the authors have been successful in maintaining a short, readable, comprehensive text on the structure and function of the human nervous system. In addition, their target audience of both beginning and advanced students or house officers seeking a concise text to read for the first time or to use for review and reference is appropriate. In addition to neurology, neurosurgery, psychiatry, and physical medicine and rehabilitation house officers, I would like to add pathology residents to the authors' list of those who will find this book an extremely helpful review.

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