This book is thus of interest to all who are concerned with mechanisms of memory, both from a fundamental research and from a clinical point of view. In spite of a wealth of detailed experimental and methodological discussion, it is entirely comprehensible to the non-specialist reader.

JD SINDEN

Cranial Nerves: A Systems Approach. By David W Garrison. (Pp 139; \$20.75.) Illinois: Charles C Thomas, 1986.

This small volume is dedicated "to the concept of efficient, accurate and functional educational processes" and attempts to replace the traditional approach of "memorising long lists and pieces of information" about individual nerves by a discussion of cranial nerve anatomy and function on a systems basis. The introduction provides an elementary overview of basic neurological terms (such as axon, afferent and efferent) and a brief summary of the anatomy and function of each cranial nerve. The remainder of the volume is divided into short tersely written chapters on motor innervation, sensory innervation, visceral sensory innervation, motor nuclei, sensory nuclei, etc. and is supplemented by abundant simple line drawings, tables and aspects. While the systems approach advocated in this book may be of value as an introduction to the cranial nerves for undergraduates in all branches of medicine, the presentation of the text appears to offer no great advantage over the traditional approach and appears merely an alternative way of compiling unending lists. The low price of the book would naturally attract medical undergraduates, but the oversimplified and sometimes confusing line drawings are of limited value to clinicians requiring a detailed working knowledge of cranial nerve anatomy.

DAVID JEFFERSON

Clinical Neurophysiology in Peripheral Neuropathies. (*Restorative Neurology Vol 3.*) Edited by PJ Delwaide and A Gorio. (Pp 173; \$130.00.) Amsterdam: Elsevier Biomedical Press, 1985.

This slim volume includes contributions from one of the sessions of a meeting on Restorative Neurology held in Venice in 1983. Its title is somewhat misleading since part of its contents relates to animal work and includes neuropathological and biochemical studies. It straddles uneasily the

vast field of neurobiology concerned with peripheral nerve responses to injury and the mechanisms of repair and regeneration, and the use of physiological techniques as a clinical tool in human disease. Some contributors have assumed a fairly sophisticated readership while others adopt a tone more appropriate for medical students.

There are considerable areas of overlap even though the chapters are rather short, and it is a pity that its distinguished contributors (who include Arrigo, Burke, Desmedt, Millesi and Ochoa) were clearly asked to give a brief over-view rather than to deal with restricted areas in rather more detail. This means that although it contains some interesting material the book does not really succeed either as a definitive text or as a well-focused synopsis of new ideas.

DL MCLELLAN

Manual of Neurologic Therapeutics. Edited by Martin A Samuels. (Pp 424; £15.90.) USA: Little Brown Inc; UK: Churchill Livingstone, 1986.

The author appears, in this text, to aim at providing a vade mecum, a small volume to carry and dip into to refresh one's memory as needed. Certainly it provides no new information for the experienced neurologist.

The book is provided with an adequate index, an essential for this type of volume. For the amount of information it contains it is cheap. Unfortunately, in some places the differences in neurological practice on either side of the Atlantic are all too evident. For example few neurologists in the UK would adopt the policy "Most patients who suffer their first seizure should be hospitalised for the initial evaluation". Similarly, I doubt whether most English neurologists would necessarily perform angiography "once a presumptive diagnosis of ischaemic infarction had been made."

G HARWOOD

Microsurgical Anastomoses for Cerebral Ischemia. Edited by Hajime Handa, Haruhiko Kikuchi and Yasuhiro Yonekawa. (Pp 393; £87.75.) New York: Igaku-Shoin; UK: Williams and Wilkins, 1985.

This is a beautifully printed and produced book containing the papers presented at the Sixth International Symposium on Microvascular Anastomoses for Cerebral Ischemia, held in September 1982, in Kyoto. It is

particularly unfortunate for all those concerned with the publication that it has taken so long for the book to appear because in the interim, the multi-centre trial on the efficacy of extracranial intracranial anastomoses has been published indicating that the operations are of no value in patients with degenerative cerebrovascular disease. As one might expect from a Japanese publication, there is an interesting section on moyo moyo disease. Blood flow studies seem to indicate that there is an improvement in flow after anastomoses in moyo moyo patients. Whether this proves to be of clinical value remains to be seen.

It seems unlikely that this publication will have wide appeal now. If it had been published two years ago it would have sold very well.

DJ THOMAS

Evoked Potential Primer: Visual, Auditory, and Somatosensory Evoked Potentials in Clinical Diagnosis. By Rainer Spehlmann. (Pp 400; £62.00.) Sevenoaks: The Butterworth Group, 1985.

It is with sadness that one reads of the death of the author of this book as it went to press. Sadness because this is a useful book and one which would have appeared in several subsequent and updated editions. The book was written for those who want to learn how to record and interpret evoked potentials and for those who are not directly involved in evoked potentials but who wish to become familiar with the methods and diagnostic abilities of the tests. It is for the latter group that the book has most to offer.

There are five sections; technical, visual, auditory and somatosensory evoked potentials and event and other potentials. Each has a substantial list of references to original work totalling 1560 in all and constituting a most valuable part of the book. However the novice might have hoped to be directed to established and authoritative works for his further reading especially to some of the excellent texts dealing with technical matters. Most of the technical limitations and pitfalls are described but with a brevity which will induce some learning but no understanding. The short section on how EPs are generated is the least satisfactory part of the book.

The clinical sections have the virtue of setting down in one short space the findings in all diseases so far studied with references to the original work. Some critical assessment of the publications is included and

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occasional comments on the clinical usefulness.

The figures are clear and fully explained by their legends so as to be independent of the text. They are mostly culled from original publications but some were specially produced. The layout is excellent; each chapter has a summary and up to four levels of numbered headings and subheadings. Each section lists the contents in detail. The index is valuable and gives reminder of other headings under which the reader may find something useful. The book is therefore ideally suited for quick reference.

EM SEDGWICK

Central Cardiovascular Control: Basic and Clinical Aspects. Current Topics in Neuroendocrinology. Vol 3. Edited by D Canten and D Pfaff. (Pp 192; \$35.00.) Heidelberg: Springer-Verlag, 1983.

The central regulation of blood pressure and cardiac function have attracted intensive research both in animals and man over the past decade and these advances are ably reviewed in this small volume of articles. Though authorities such as Guyton conventionally attribute only the short term control of circulation to the autonomic nervous system, principally by means of baroreceptors, this book pays as much attention to the long term adjustment to the demands of the body by means of centrally mediated changes of sympathetic tone and changes in the renal circulation which are equally important in regulating blood pressure.

The earlier chapters review the neurophysiology, neurochemistry and immunohistochemistry of the central baroreflex pathways. The descending pathways and transmitters involved determined from animal experiments are as yet uncertain. In man, with all the problems caused by the erect posture, the regulating mechanisms can be expected to differ substantially. The infusion of pressor drugs like phenylphrine has shown the relationship between the change in blood pressure and reflex inhibition of the heart. However, changes in systemic resistance were not revealed in man until the elegant use of neck pressure to "unload" the carotid (but not aortic) baroreceptors, coupled with lower body negative pressure which can be used to stimulate the cardiopulmonary receptors. Newer techniques also include microneuronography to record directly the activity in muscle sympathetic nerves, as well as plasma catecholamine studies measuring the overspill of

noradrenaline from sympathetic endings. These methods have shown the relative separation of the control of different parts of the splanchnic and muscular contributions to the peripheral resistance. The conclusion for man is that though the carotid baroreceptor input may be the major influence on heart rate, unloading the cardiopulmonary receptors initiates splanchnic and forearm vasoconstriction, the latter being reduced by simultaneous activation of the carotid baroreceptors (by neck suction).

In this volume there is much evidence from animal studies but its main usefulness to the cardiologist or neurologist interested in the circulation lies in its authoritative review of much complex physiology. Experiments in man have brought closer, but not yet solved the enigma of the central triggering factors in hypertension. Changes in membrane permeability, changes in central transmitter systems, or the influence of an antinatriuretic hormone are the currently favoured possibilities but further experiments, at the present rate of progress, can be expected to yield more definitive conclusions about the cause of hypertension over the next decade.

R BANNISTER

Spinal Cord Monitoring. Edited by J Schramm and SJ Jones. (Pp 335; DM168.00.) Berlin: Springer-Verlag, 1985.

The increasing sophistication of spinal and vertebral column surgery has created a demand for intra-operative monitoring of spinal cord function. Spinal monitoring may signal impending damage to the spinal cord, thereby providing the surgeon with some warning of that most feared, but fortunately rare complication of this surgery, paraplegia. Not surprisingly, much of the initial work in this field was developed by the surgeons themselves. More recently neurophysiological techniques have been applied to the challenge of providing a dynamic assessment of spinal cord function.

This volume, containing contributions from the second international symposium on spinal monitoring held in Erlangen in October 1984, reflects the interest generated in this area. It comprises 39 papers on topics organised into sections on physiology, pharmacology, traumatic cord lesions, monitoring cortical evoked potentials, monitoring spinal evoked potentials and atraumatic cord lesions. Within these sections are to be found discussions on topics ranging from the use of epidural spinal

evoked potentials to observations on sensory evoked potential changes in experimental injury and disease of the spinal cord. The latter includes scoliosis, trauma, cervical spondylosis with myelopathy, and vascular lesions of the spinal cord. Spinal monitoring in aortic surgery is also discussed. Novel techniques are mentioned, including descending lumbosacral cord potentials elicited by upper limb stimulation (thought to reflect descending propriospinal activity), and a method for lateral column assessment using a peripheral autonomic surface potential. Only one chapter is devoted to the technique of electrical stimulation of the motor cortex and monitoring of the descending motor potential. This method will almost certainly provide the foundations for future developments in monitoring techniques, to complement the existing sensory evoked potentials.

Most of the contributions are brief and inevitably in a volume of this sort with over 100 authors listed, there is considerable repetition. These reservations aside, the volume provides a wide range of personal and practical experience (rather than a comprehensive review) and will be of interest to those involved in this expanding field.

B THOMPSON

A Neurobiologic View of Speech Production and the Dysarthrias. By Ronald Netsell. (Pp 180; £19.00.) London: Taylor & Francis Ltd, 1986.

This account relates largely to the physiological mechanisms of the motor control of speech production in health and disease. There is special attention paid to the acquisition of this fine motor skill and some attention, particularly in chapter 6, which is written with a clinician, JC Rosenbeck, to the pathophysiology and treatment of the dysarthrias. Each chapter is re-printed from various multi-author review editions published during the last five years as "state of the art" reviews. There is thus a tendency firstly for much of the material, especially that relating to general concepts of motor control, to be repeated in each chapter, and secondly for the text to hover in generalisations about, for example, levels in the nervous system, corollary discharges and neuro-transmitters, rather than develop a clear cut progression of ideas as one advances through the book.

Chapter 4, "Speech motor control: theoretical issues with a clinical impact", may be read as more or less representative of