Book Reviews

This report of the meeting of the German Society for Neurosurgery in 1968 deals particularly with the recognition of cerebral death, methodological advances, such as microsurgery, and the pathology and diagnosis of brain tumors. E. S.

Published on the occasion of the 3rd European Neurosurgical Congress and introduced by its President S. OBRADOR and its Secretary G. DIERSSEN, this book provides a splendid survey of the development of surgery and neurosurgery in Spain since prehistoric times. Every student of the history of medicine will find the reading of this volume rewarding. E. S.

In recent years the diagnosis and understanding of neuromuscular diseases has been greatly aided. This volume offers a logical approach to the differential diagnosis of neuromuscular diseases of infancy and childhood based on anatomical and physiological concepts. Newer techniques such as serum enzyme studies, muscle biopsy, electromyography and nerve conduction studies are clearly explained. The book will be of value to pediatric neurologists. E. S.

This symposium deals with origin and axonal transport of adrenergic nerve granules, the mechanism of transmitter release, chemical sympathectomy with 6-hydroxydopamine and effects of drugs on uptake and release of catecholamines from the hypothalamus by drugs and electrical stimulation. E. S.

This text offers a brief outline of the author's methods in teaching relaxation and respiration. It is claimed that these exercises are of value in the treatment of vegetative dystonias, sleep disturbances, circulatory, respiratory disorders, speech disturbances and neuroses. E. S.
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This volume offers an excellent survey of the pathology of epilepsy, the various types of epilepsy and their treatment, forensic aspects and the side effects of the various antiepileptic medicaments. E. S.


This volume deals with disturbances of development, involution, effects of hormonal and metabolic disorders and diseases of the macro- and microscopic structure of the bones, injuries and the reactive healing processes. E. S.


The author activates single motor axons in the human with threshold stimuli applied to the median or ulnar nerve; the corresponding motor unit potentials are recorded from the thenar or hypothenar eminence. With supraliminal long-duration rectangular pulses a repetitive discharge of the nerve fibers is observed. After single activation the relative refractory period lasts 2-5 msec, the supernormal period 15-60 msec and a late subnormality terminates at about 100 msec. E. S.


The 5th International Symposium on Neurosecretion dealt with neurosecretion in invertebrates, adrenergic neurons, mechanisms of release of neurohypophyseal materials, hypothalamic control of the anterior pituitary and various other problems of neurosecretion, e.g., relationships between the hypothalamo-neuro-hypophyseal system and CSF. E. S.


The 21 biographies compiled in this volume are mostly written by disciples or friends of these men. This guarantees accuracy as well as a personal touch. A study of this volume will provide an excellent survey of the development of neurology and psychiatry in the 19th and 20th centuries. E. S.
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In the introductory chapters, structure and function of the muscle spindles in the limbs are reviewed. Since spindles are absent in the tongue of the cat, the author and Combs have studied the lingual spindle system in rhesus monkeys, finding the basic behavior of individual tongue and limb spindles analogous, but preferential frequency changes of discharges in one or more directions of stretch. Lingual spindle primary afferents branch off from the 12th nerve and enter the CNS over the cervical roots. The afferents are incorporated into the dorsal columns; they project bilaterally to the hypoglossal nuclei and contralaterally to the cerebral sensory-motor cortex, while a cerebellar projection seems to be absent. In the final chapters, the possible role of lingual receptors in controlling speech motor patterns is discussed.

E. S.


The application of electroencephalography has been considerably expanded by the introduction of the technique of recording average evoked potentials (AEP). The problems related to this technique were discussed in this symposium, e.g., the relationship of brain activity to scalp recordings, cross-modality comparisons of AEP, the contingent negative variation (shift of the baseline potential with conditional expectancy), the effect of psychological variables and diagnostic uses. A study of these papers may serve as an excellent introduction into this new field.

E. S.


This monograph meets a demand for a survey of the various types of diffuse cerebral sclerosis. The metachromatic leukodystrophy is caused by a defect of the enzyme sulfatase, Krabbe's leukodystrophy by a defect of sulfotransferase. Among the sudanophil leukodystrophies, the combination with atrophy of adrenals is of special interest. It is hypothesized that one deals with a disturbance of cholesterol metabolism. Edema plays an important role in spongious leukodystrophy and Alexander's disease. This book should be of great interest to neurologists, pediatricians, neuropathologists and neurochemists.

E. S.


This symposium held at the 58th Annual Meeting of the American Psycho-pathological Association reviews CNS biology as it may pertain to the behavior of
the mentally ill. It is attempted to obtain objective assessments of psychopathological behavior using biological methods. Electrophysiological studies (EEG variability, evoked potentials, subcortical stimulation), immunological, biochemical biometric, cytogenetic studies and sleep research are reviewed. Although important data are presented, it is wisely recognized by the editors that the available knowledge is useful for practical application within a limited range only.

This monograph summarizes the author's classical studies dealing with adaptation and inhibition in the activity of sense organs and covering a period from 1927 to the present time. Particularly the phenomenon of so-called lateral inhibition discovered by MACH for vision in 1866 is being analyzed. It is shown that one deals with a phenomenon common to all sense organs; BÉKÉSY considers it as the consequence of lateral connections of sensory nerve fibers. Of particular importance are the author's acoustic experiments for which he was awarded the Nobel prize in 1961.

E. S.

An integrated system for performing open stereotaxic operations with bipolar temperature-controlled heat lesions and for closed intracranial radiosurgery is described; the latter method uses high-energy gamma rays. The radiosurgical procedure has been used for the treatment of small deep-seated tumors, such as cranio-pharyngiomas. It is still too early to evaluate this method of treatment of intra cranial tumors but the first experiences appear promising.

E. S.

This symposium celebrated the 30th anniversary of a department for tumor research and experimental pathology founded originally in Berlin-Buch and continued in Köln. The usefulness of the co-operation between neurosurgeons (TONNIS and his group) and pathologists (SPATZ, ZÜLCH and associates) is vividly demonstrated. Electron microscopic, histochemical and biochemical studies (the latter regarding lipids, N-acetylneuraminic acid) are of particular interest. Among the psychophysiological studies, the finding of an increase in a-activity on illumination during hypnotically-induced blindness is outstanding.

E. SPIEGEL, Philadelphia
Book Reviews
During the past 35 years the author has made personal follow-up studies of approximately 20,000 epileptic patients most of whom are children. His purposes are to acquaint the practicing physician with the various therapeutic regimens which are currently available and to supply him with information which he can utilize in the management of his own seizure patients. This involves not only treatment of the seizure itself but also realistic understanding of epilepsy and all of the problems which are associated with this disorder. His personal experience is apparent on every page and his own understanding of complicated problems in management is clearly evident. All physicians who are responsible for children with convulsive disorders should be familiar with this text.

H. W. BARD, Philadelphia

35 internationally known neurosurgeons and pharmacologists, biochemists and molecular biologists have contributed to this volume. It deals with methods for the preparation and experimental study of brain tumors (BT) their intermediary metabolism, the effects of drugs and physical agents, radiation, brain scanning on their metabolism, the interrelationship between BT and surrounding tissue and the molecular biology of BT. A review of the advances in virology, immunology and biochemical genetics may help in the future management of intracranial malignancy. Researchers as well as clinicians will study this highly readable and excellently prepared volume with great benefit.

M. SPIEGEL-ADOLF, Philadelphia

In introductory chapters the author reviews the historical development of the physiology of the labyrinth and the pathophysiology of the vestibulofugal and vestibulopetal projections. The main part of the monograph is devoted to the author's EEG and electroneystagmographic observations on caloric stimulation in 50 normal persons and 62 epileptics. In both groups there appears a desynchronization of the EEG due to activation of the ascending reticular system, followed by a period of resynchronization. During the latter period, there developed in about one third of the epileptics specific epileptic or unspecific EEG anomalies. In 2 cases also clinical signs of seizures were seen. True labyrinthine reflex epilepsy in which attacks are elicited by labyrinthine stimuli only or chiefly, are very rare. In half of the epileptics the reactive vertigo was sent probably due to an increase of the threshold of cortical labyrinthine centers, particularly in patients treated with hydantoin derivatives.

E. SPIEGEL
Book Reviews


‘Pain’ in this book does not mean pathogenic pain but what the author calls ‘learned pain’, that is, ‘a pain governed and reinforced by factors different from the stimulus’. Conveyed by the ‘not so autonomie’ sympathetic system, it could and should be contolled by the cognitive centers. Blocking techniques may in fact be less useful than a strengthening of the cognitive controls, with prayer acting as the most effective therapy. This we are taught by mysticism, East and West. The book consists of two parts: ‘Sensory Experience and Religious Teaching’ and ‘Sensory Experience and Pain’. Their respective mottoes stress the interdependence of neurophysiology and religion. H. Adolf, Philadelphia


The author deals with the special type of pituitary adenomas that invade the cavernous sinus. 14 cases of this type are minutely described. The author is inclined to consider these tumors as malignant although metastases were not proven. E. S.


In this 11th Sherrington Lecture delivered at the University of Liverpool, Granit discusses tonic and phasic motoneurons, compares antidromic and transmembrane stimulation and outlines in detail the mechanism of recurrent inhibition and the Renshaw cells. He emphasizes the biological adaptations by which the motor neuron responds to the challenge of serving as main executive for all commands leading to motor action. A close study of this lecture is a must for everybody interested in motor innervation. E. S.