

DISEASES OF THE NERVOUS SYSTEM

W. RUSSELL BRAIN

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BY

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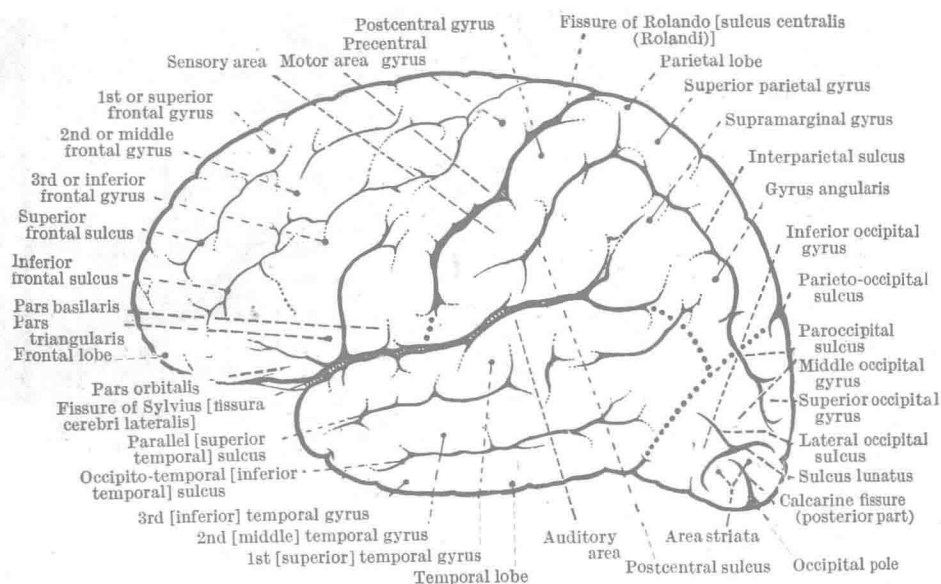
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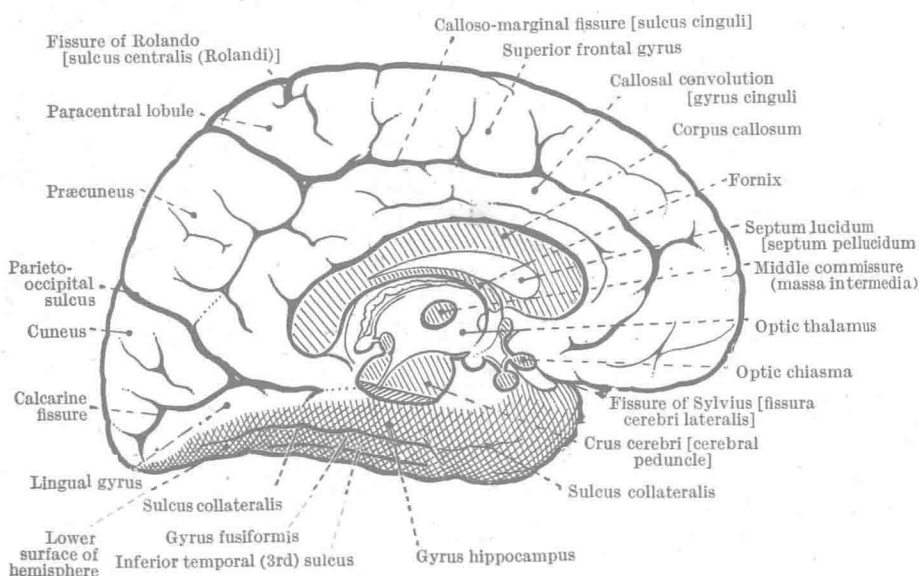
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DISEASES OF THE
NERVOUS SYSTEM



LEFT CEREBRAL HEMISPHERE—EXTERNAL (LATERAL) ASPECT



LEFT CEREBRAL HEMISPHERE—INTERNAL (MEDIAL) ASPECT
(Pauchet and Dupret: *Pocket Atlas of Anatomy*)

PREFACE TO THE THIRD EDITION

OWING to the war seven years have passed since the last edition of this book was published. Modern war always increases medical knowledge, and the last war came at a time when rapid progress was already being made in certain spheres, e.g. chemotherapy and electro-encephalography. More than the usual amount of revision has therefore been necessary.

The war has thrown new light upon the nature of peripheral nerve injuries and placed their classification and treatment upon a sounder basis. Conditions prevailing in prisoner-of-war camps have, unhappily, provided the opportunity of studying deficiency diseases on a larger scale than ever before, and I have devoted a separate chapter in this edition to the nutritional disorders of the nervous system. Penicillin has revolutionized the treatment and prognosis of some forms of meningitis and is finding a place in the treatment of neurosyphilis. Herniated lumbar intervertebral disk now occupies most of the space formerly devoted to sciatic neuritis, and under the heading 'brachialgia' I have given some consideration to the pathogenesis of the clinical pictures hitherto covered by the term 'brachial neuritis'. Recent work has clarified the syndromes arising out of the relationship of the brachial plexus to a cervical rib or a normal or abnormal first rib, which may be comprehensively termed 'the costo-clavicular syndromes'.

I have grouped together in one section the neurological manifestations of the lipoidoses, and added new sections on equine encephalitis, the nervous complications of epidemic hepatitis, myelopathy, spinal radiculitis, and platybasia. I have expanded and rewritten the section on aphasia and added a short one on disorders of the body image. The last two chapters of the last edition are now amalgamated, with the title 'Psychological Aspects of Neurology'. In this there are two new sections, one on the status of psychogenic symptoms and psychotherapy, and the other on psychometric tests.

This edition contains additional illustrations, including some typical electro-encephalograms. I am grateful to Professor Seddon for allowing me to draw upon his valuable experience in the treatment of peripheral nerve injuries, and to Dr. Guttmann for a similar kindness in respect of his work on traumatic paraplegia.

W. RUSSELL BRAIN

January, 1947

PREFACE TO THE SECOND EDITION

THE important additions to knowledge which have been made in many fields of neurology since the first edition of this book was published have necessitated an extensive revision. Its general plan, however, remains the same. The enormous development of medical psychology makes it impossible to consider in detail the aetiology and treatment of the neuroses in a text-book of neurology. In dealing with the neuroses, therefore, I have considered them mainly in relation to neurological diagnosis. I have added a new chapter on 'The Psychological Manifestations of Organic Nervous Disease'. Although the treatment of this important subject is necessarily condensed I hope that this chapter will prove useful to students, since the subject is usually omitted from neurological text-books and receives only indirect consideration in text-books of psychiatry. Diseases attributed to neurotropic viruses are now grouped together, as also are those which have come to be known as the demyelinating diseases.

Recent advances which receive discussion include electroencephalography, the role of vitamin deficiency in nervous disease, newly discovered neurotropic viruses, and the progress which has been made in our knowledge of the chemistry of muscle and of humoral factors in the transmission of nerve impulses at the myoneural junction. I have also added sections on a number of new topics in order to make the book more complete. To make room for new material without unduly enlarging the book I have omitted sections dealing with endocrine and trophic disorders which are not strictly neurological.

A number of new illustrations have been included. Pathological illustrations of the commoner nervous diseases have kindly been provided by Dr. Dorothy S. Russell and most of the X-ray illustrations by Dr. Montagu Jupe. To them and to the many friendly critics, both at home and abroad, who have offered helpful suggestions, I am most grateful.

W. RUSSELL BRAIN

March, 1940

PREFACE TO THE FIRST EDITION

THE last twenty years have witnessed a remarkable development in neurology. Investigation of the effects of war injuries of the spinal cord has greatly increased our knowledge of reflex action in man. The appearance of encephalitis lethargica and the multiplication of forms of acute disseminated encephalitis have added a new field to clinical neurology and brought it into relationship with the new branch of bacteriology which studies the filterable viruses. The discovery of important metabolic centres in the hypothalamus has enhanced the importance of neurology to general medicine. Advances in the technique of neurological surgery have aroused fresh interest in the symptoms and in the pathology of intracranial tumours. Other developments, scarcely less important, have occurred.

Much of this new knowledge is physiological, and in one respect I have departed from the traditional arrangement of a text-book of nervous diseases. Neurology is more dependent than many other branches of medicine upon anatomy and physiology. These subjects, the essential basis of neurological diagnosis, are usually dismissed in a few introductory pages, with the result that much clinical neurology is apt to be both unintelligible and uninteresting to the student. In the first part of this book, as an introduction to the subject, I have discussed—at greater length than usual—the application of anatomy and physiology to the interpretation of the physical signs of nervous disease. Elsewhere will be found sections dealing with anatomy and physiology as introductions to clinical sections. In planning the clinical sections I have used what seemed the most practical, if not always the most logical, arrangement, for there is no entirely satisfactory way of arranging subjects, many of which might be placed in more than one group.

Limitations of space restrict the number of references which it is possible to quote. I have, therefore, chosen only those of special interest and those which form the best introduction to a subject, or are themselves useful sources of references. To the many other writers upon whose work I have freely drawn I express my indebtedness. I am indebted also to a number of my colleagues for the loan of illustrations.

Finally, I welcome this opportunity of expressing my gratitude to my colleagues at the London Hospital for their teaching,

encouragement, and help, especially to Dr. Charles Miller, Professor Arthur Ellis, and Dr. George Riddoch, under whom I had the privilege of working on the Medical Unit, and to Mr. Hugh Cairns, Dr. Dorothy Russell, and Dr. S. Phillips Bedson.

W. RUSSELL BRAIN

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