

Essentials of Neurology

John N. Walton

fourth edition

ESSENTIALS OF NEUROLOGY

by

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PREFACE TO THE FOURTH EDITION

DEVELOPMENTS in neurology during the last four years, together with the comments and advice of those who read and reviewed the first three editions, have necessitated substantial changes in the text, although the general structure of the book remains the same. Each chapter has been carefully revised, some sections have been rewritten, and there have been numerous additions but since redundant and outdated material has been deleted the length of the book remains the same. New illustrations of gamma-encephalograms have been included, computerised transaxial tomography (the EMISCAN) is mentioned and especially extensive changes have been made in the chapters on asphasia and on neuromuscular and metabolic diseases. Numerous cross-references have also been included. The chapter on treatment has been revised extensively, particularly in the sections on epilepsy and Parkinsonism, bearing in mind advances in pharmacology which have occurred in recent years. The references at the end of each chapter have also been brought up to date but, as in previous editions, those given have been selected in order to bring to the attention of the reader other books which he may consult in order to widen his knowledge of neurology and related disciplines and in which he will find references to original sources of information. In a text-book of this size and scope, it is still my view that references to scientific papers would be inappropriate; it would be difficult to select a suitable short list which would cover adequately all of the topics which are discussed, while comprehensive lists of references to journals would be too weighty in a short commentary of this nature.

In the face of rising costs and in an attempt to keep the price of the book within limits which will not put it beyond the pocket of the average medical student, only one new plate has been added in this edition. In the second and third editions, Dr E. R. Bickerstaff kindly gave his permission for the reproduction of certain illustrations illustrating methods of examination of the skeletal muscles, previously published in his book *Neurological Examination in Clinical Practice*. In this fourth edition these illustrations have been replaced in Plate I by a new series of plates reproduced from AIDS TO THE EXAMINATION OF THE PERIPHERAL NERVOUS SYSTEM published in 1975 by Her Majesty's Stationery Office on behalf of the Medical Research Council. I am grateful to the

M.R.C. and to H.M.S.O. for permission to reproduce these illustrations. I also wish to thank Professor R. W. Gilliatt and Dr R. G. Willison of the National Hospital, Queen Square, where were responsible for the preparation of some of these illustrations in the Department of Medical Illustration of the Institute of Neurology, and Dr M. J. McArdle and Dr M. D. O'Brien who prepared others in the Department of Medical Illustration and Photography, Guy's Hospital Medical School. As in the third edition, I am glad to express my gratitude to Dr G. L. Gryspeerdt for the reproductions of radiographs and gamma-encephalograms, and to Dr D. D. Barwick and Miss B. P. Longley for the composite illustration of the electroencephalogram; photographic reproductions have been made in the Department of Photography, the University of Newcastle upon Tyne. As always, I am deeply indebted to my secretary, Miss Rosemary Allan, for her invaluable assistance in the preparation of this fourth edition, and to Mr Stephen Neal, Mr D. K. C. Dickens and the staff of Pitman Medical for all their help and co-operation.

JOHN N. WALTON

Newcastle upon Tyne
September 1974

PREFACE TO THE FIRST EDITION

ALTHOUGH there can be no absolute distinction between diseases of the nervous system and those which affect other organs or systems of the human body, by convention the clinical science of neurology embraces those many disorders which affect the functioning of the central and peripheral nervous system. This book has been written in order to help the undergraduate or postgraduate student to learn the principles of neurological diagnosis and treatment. It is hoped that it will also assist the practising physician in his management of patients suffering from this variety of illness.

The first ten chapters of the book are devoted to a consideration of the cardinal symptoms and signs of neurological disease, to the mechanism of their production and the various pathological changes which may produce these clinical manifestations. In this review of the principles of neurological diagnosis, brief mention is made of investigative methods, some simple and others highly specialised, but only in sufficient detail to indicate to the student or practitioner the indications for employing these methods, their failings and their dangers, and the information which they are likely to divulge. The ensuing chapters contain brief descriptions of specific syndromes of nervous disease, taking into account the general principles previously stressed. Exhaustive descriptions of pathological changes and of differential diagnosis are omitted and the reader will look in vain for lists and tables of diseases and syndromes. Nor will he find detailed analyses of the physiological mechanisms by which symptoms and signs are produced, since this work is based upon clinical methodology, and scientific premises are only mentioned when absolutely necessary for an understanding of clinical principles. The intention has been to make this a book which can be read by the student who wishes to obtain a composite picture of neurological illness, but can also be used for reference if need be. Each chapter is concluded with a list of references to other volumes in which more detailed information can be found and from which the reader can obtain further references to original sources of information, should he wish to consult them.

The book ends with a general review of therapeutic measures which are of value in the field of neurological medicine, but only those appropriate to general practice are considered fully, while more specialised techniques receive mention sufficient only to indicate which patients should be referred to a specialist for these measures to be undertaken.

In preparing this book, I am conscious of the debt I owe to those from whom I learned the principles of neurological diagnosis and management and I wish particularly to thank Professor F. J. Nattrass, Sir Charles Symonds, Dr E. A. Carmichael, Dr Raymond D. Adams and Dr H. G. Miller for the help and encouragement they have given me in the past. No textbook is written without reference to other volumes. I have obtained help particularly from *An Introduction to Clinical Neurology* by Sir Gordon Holmes, Sir Russell Brain's *Diseases of the Nervous System* and the chapters by Dr R. D. Adams in Harrison's *Principles of Internal Medicine*, and wish to express my indebtedness to the authors and publishers concerned. I must also thank the many authors and publishers who have given permission for the reproduction of stated illustrations. I am also grateful to Dr A. E. Clark-Kennedy for his helpful advice and to Dr Peter Nathan, Dr J. B. Foster and Dr David Poskanzer for their valuable criticisms of the manuscript. The work of preparing the typescript was performed by Miss Shirley Whillis and Miss Rosemary Allan, and many of the illustrations were prepared by Miss M. Mustart of the Department of Photography, King's College, Newcastle upon Tyne. I also wish to thank Mr D. K. C. Dickens and the staff of the Pitman Medical Publishing Company Ltd. for their enthusiastic and willing co-operation in the production of this volume.

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Newcastle upon Tyne
July 1959

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