

ARTHRITIS

and Allied Conditions

JOSEPH LEE HOLLANDER

DANIEL J. McCARTY, JR.

ARTHRITIS *and Allied Conditions*

A TEXTBOOK OF RHEUMATOLOGY

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Eighth Edition

902 Illustrations on 606 Figures



LEA & FEBIGER

Philadelphia

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First Edition, 1940
Second Edition, 1941
Third Edition, 1944
Fourth Edition, 1949
Fifth Edition, 1953
Sixth Edition, 1960
Seventh Edition, 1966
Eighth Edition, 1972
Reprinted, March, 1974

Published in Great Britain by Henry Kimpton Publishers, London

Library of Congress Catalog Card Number: 72-79349

PRINTED IN THE UNITED STATES OF AMERICA

ISBN 0-8121-0392-0

Foreword

THE opportunity offered to me by Joseph Lee Hollander to write a foreword for the eighth edition of *Arthritis and Allied Conditions* came as a great pleasure because I deem it a privilege to add a word of comment to such an excellent book. It has had an impressive history since it first appeared thirty-two years ago. The subject of this book, arthritis and allied conditions, comprises a collection of disorders which has commanded a large part of my professional life. These disorders continue to pose a challenge which has generated interest in the fields of clinical care, investigation and research. Studying the several editions of this book gives an insight into the history of the rheumatic diseases of the period. Each successive edition has shown an increase in the number of subjects covered and the number of writers, each an authority, who have written on their subjects.

When Dr. Bernard I. Comroe published the first edition in 1940, the book was immediately recognized as an outstanding treatise on arthritis and rheumatic diseases. He published two more successful revisions before his untimely death in 1945. It was a monumental task for one man.

After Dr. Comroe's death, Dr. Hollander assumed the responsibility of editorship. He organized a group of distinguished collaborators who completely reorganized and largely rewrote the book for the fourth edition in 1949. Interest in this field is still growing, more and more attention is devoted to its problems, more

money is spent on research, investigation and patient care, and a broader comprehension of the problem has been attained as is proven by the fact that the number of chapters, the number of subject headings and the number of authors continue to increase in successive editions. The subjects have been chosen with judgment, the writers have been selected with discrimination, their contributions have been made compatible and have been properly coordinated into a unified presentation by careful editing. Dr. Hollander thus has been able to control the size of the book and keep it within bounds. The book has achieved a preeminent place in medicine, a place which it promises to hold. What Dr. Comroe started Dr. Hollander has continued with great success.

This book has been written by the leading authorities on the subject who are living today. Many of the giants in the field have left their marks on previous editions, although they themselves have passed away. Their presence and their words will be missed, but their messages have been continued by younger men who are filling their places.

Inasmuch as the first edition of this book was published in 1940, *Arthritis and Allied Conditions* in its various stages has been available during the professional life of every doctor living today who has an interest in these problems; and probably everyone interested in these problems has profited from studying it. The book has been kept up-to-date; it has covered the

subject; it has been adequate to such an extent that few competitors have survived. The editors, the authors and the publish-

ers are to be congratulated on their success.

ROBERT M. STECHER, M.D.

Shortly after the above Foreword had been set in type, the Editors were saddened to learn that Robert M. Stecher, M.D., had died on March 13, 1972. A fine friend and able colleague has been lost. The Editors felt his last message as it appears above would be most fitting to introduce this volume as he had introduced the Seventh Edition with a previous version.

"Bob" Stecher has done much for Rheumatology throughout the many years of his career. He was one of the great pioneers of American Rheumatology. He was the first to introduce genetics into the field in his classic research on Heberden's nodes. It was his foresight and instigation which led to the establishment of the first American journal of Rheumatology *Arthritis and Rheumatism*. He was an organizing member of the American Rheumatism Association and served as President 1947-48. His enthusiasm and leadership increased the membership and stature of the Ligue Internationale contre le Rhumatisme, and he served as its President from 1953 to 1957. He was beloved and revered by rheumatologists all over the World.

Perhaps the best way to express our loss is to paraphrase his own words above by saying: "His presence and his words will be missed, but his message will be continued by younger men who will try to fill his place."

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In Memoriam

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Preface

MORE than thirty-two years have passed since Bernard I. Comroe, M.D., wrote and published the first edition of this textbook in 1940. The increasing popularity of *Arthritis and Allied Conditions* throughout the years has confirmed the wisdom of his effort to organize and present the current knowledge of Rheumatology. This subspecialty of Medicine was in its infancy when this book was first written. Empiricism was the basis for most of its contents. Although Dr. Comroe wrote the book alone, he acknowledged to the present editor that much of it was based on the *Rheumatism Reviews*. This series of comprehensive, authoritative and critical reviews of the American and English literature was organized and written by Philip S. Hench, M.D., with the active collaboration of Walter Bauer, M.D., and others. The first Review, covering the literature of rheumatism and arthritis for 1932 and 1933, appeared in the *Annals of Internal Medicine* in 1935. Subsequent Reviews have since appeared there until 1964. They have been invaluable in the preparation of subsequent editions of this textbook as well.

Dr. Comroe's untimely death in 1945 after the appearance of the third edition of this book might have meant the termination of this effort, except that Dr. O. H. Perry Pepper convinced the present editor it should be carried on. The awesome assignment was accepted with many misgivings, but the carrying forward of this project of a departed friend has yielded a lasting satisfaction.

Interest and research in the field of Rheumatology have expanded almost explosively since 1948 when the nucleus of the present group of collaborators first took over the task of preparing the fourth edition. Even at this time the present editor found that the only way to achieve an authoritative and up-to-date text was to have the sections rewritten simultaneously by a *group* of rheumatologists. The widespread acceptance of *Arthritis and Allied Conditions* all over the world has been convincing evidence that this step was justified. Not only does this convey great honor upon the collaborators, but also it puts upon them a much increased responsibility for keeping the volume authoritative and up-to-date. The steadily increasing complexity of Rheumatology has necessitated the invitation of more contributors to report on newer fields and on changes in older fields of Rheumatology. Each contributing editor is intimately associated with his subject and reviews not only what has appeared in the literature, but has added recent developments from reports at medical meetings, from conversations and correspondence with others in the same line of research, and from his own as yet unpublished experience and research those points which he feels will stand the critical test of time. This would appear the only way the textbook can keep pace with the rapid developments in a field as expanding as Rheumatology.

In planning this eighth edition the effort has been to obtain an outstanding

competent contributor on each subject, not necessarily chosen for the neutrality of his point of view. A review of the list of contributors on the following pages will reveal their responsibilities and attainments which should attest the background and experience necessary for formulation of authoritative opinions. The editor takes full responsibility for the choice of contributors. The number of the contributors who are deans, chairmen of departments of medicine, and professors of medicine in their respective medical schools would appear to reflect the increasing importance of Rheumatology as a subspecialty of Internal Medicine. Many of the leaders in the field of Rheumatology, of the American Rheumatism Association, of The Arthritis Foundation, and of the National Institute of Arthritis and Metabolic Diseases, as well as editors of the *Rheumatism Reviews*, the *Bulletin on Rheumatic Diseases* and *Arthritis and Rheumatism* are contributing editors to this volume.

Review of the literature has been aided not only by the continued use of the *Rheumatism Reviews*, as mentioned earlier, but also by the *Bulletin on Rheumatic Diseases*, the American Rheumatism Association journal: *Arthritis and Rheumatism*, the British journal: *Annals of the Rheumatic Diseases*, the *Index of Rheumatology*, *Arthritis and Rheumatic Diseases Abstracts*, and *Excerpta Medica-Arthritis and Rheumatism* in which much of the newer material has been presented or reviewed. When the small trickles of new information in widely scattered journals are compiled and placed in perspective as in this volume, the combined impact often provides a new concept of the diseases studied.

Entirely new chapters, 12 in number, have been added because of new developments in the field. These are: The Acute Inflammatory Response, Pathogenetic Mechanisms in Rheumatoid Arthritis, Extra-articular Manifestations of Rheumatoid Disease, Cytotoxic Drug Therapy in Rheumatic Diseases, Synovectomy in

Rheumatoid Arthritis, Intermittent and Periodic Arthritic Syndromes, Enteropathic Arthritis, Sjögren's Syndrome and Connective Tissue Diseases with Other Immunologic Disorders, Relapsing Polychondritis, Polymyalgia Rheumatica, Principles of Diagnosis and Treatment of Infectious Arthritis, and Heritable and Developmental Disorders of Connective Tissue and Bone.

Entirely rewritten chapters, 18 in number, are: Organization of an Arthritis Center, Radiology in the Rheumatic Diseases, Endocrinology of the Rheumatic Diseases, Salicylate Therapy for Rheumatoid Arthritis, Corticosteroid and Corticotropin Therapy of Rheumatoid Arthritis, Ankylosing Spondylitis, Polymyositis and Dermatomyositis, Progressive Systemic Sclerosis (Scleroderma) and Calcinosis, Symptoms and Laboratory Findings in Osteoarthritis, Treatment of Osteoarthritis, Hemochromatosis, Ochronosis and Wilson's Disease, Gonococcal Arthritis, Reiter's Syndrome, Tuberculous Arthritis, Unusual Features and Special Types of Infectious Arthritis, Sarcoidosis, Arthritis with Hematologic Disorders, Storage Diseases and Dysproteinemias and Traumatic Arthritis.

Thirty-one more of the 82 chapters have been extensively revised and partly rewritten, and every chapter has been carefully reviewed to be certain newer facts and concepts are included. *More than 200 new illustrations* have been added or substituted, and many new tables and summaries have been inserted because of the tremendous growth and complexity of Rheumatology. This eighth edition of *Arthritis* is virtually a new book.

Because of the tremendous segment of medical knowledge bearing on Rheumatology, the editor again is indebted to 10 Section Editors, each with particular knowledge and experience, who have checked the accuracy, completeness, compatibility and coherence of the material in each section. Not only multiple authors but multiple editors have been necessitated by the growth of this field.

A list of former collaborators who have died appears on page vi. They have been sorely missed, but younger men and women have filled the gap. Other former contributors, who have resigned because of health or other pressures, are: Nathan R. Abrams, M.D., Eörs Bajusz, Ph.D., Victor G. Balboni, M.D., Roger L. Black, M.D., Denys K. Ford, M.D., Rosaline R. Joseph, M.D., Ronald W. Lamont-Havers, M.D., John Lansbury, M.D., Bernard M. Norcross, M.D., and Hans Selye, M.D. Their contributions to previous editions were great, and the editor is grateful to them for their help.

While this volume presents a comprehensive view of Rheumatology, it is not written only for the rheumatologist, but also as a source of information for researchers, internists, orthopedic surgeons, and particularly graduate students of medicine. The editors have kept in mind the fact that many physicians use this volume as a reference and have, therefore, continued the extensive bibliographies and "box summaries" for those with too limited time for reading an entire chapter. In those subjects discussed too briefly for the needs of a particular reader, adequate source references are given for obtaining further details.

In this age of increasing permissiveness it is consistent that the Editors have allowed more latitude to the contributors than formerly. Limitation of assignments of space have been relaxed somewhat for those whose contributions were longer than assigned but seemed to deserve the extra space. In chapters dealing with a *group* of topics, e.g. Chapters 30, 45, 47 and 61, bibliographies have been divided to list references separately for each subject. Titles of papers referred to are still not listed in order to conserve space. Certain redundancies in

subject matter have been permitted so that the reader does not constantly have to cope with references to other chapters while reading. Roentgenograms are often referred to as *x rays* in this volume, but *x-ray* treatment, etc., remains hyphenated. Some contributors have preferred the original spelling of *anulus* rather than the usual *annulus*. The Editor, who has mellowed with age, also tires more readily.

The collaborators have worked many hours in the preparation of this edition, hours stolen from leisure with families and recompensed by little more than personal satisfaction. Although most of the 224 new illustrations presented in this edition come from the contributors' own files, some are borrowed from friends to whom the editors make grateful acknowledgment. The editors are grateful to the authors and publishers of many recent articles and monographs for permission to reproduce material. The publishers of this volume have been most cooperative and helpful.

The present editor, after organizing and assembling 5 editions of this textbook, has decided to pass on the responsibility to a younger man for subsequent editions. *Dr. Daniel J. McCarty, Jr.*, who has distinguished himself in Rheumatology in many ways since he first trained in this field with the present editor 12 years ago, has been persuaded to accept editorship of *Arthritis and Allied Conditions*. He has been of tremendous help in the planning and execution of this edition as Associate Editor. His extensive experience as former editor of *Arthritis and Rheumatism* has fitted him admirably for the job ahead.

J.L.H.

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