# Principles of INTERNAL MEDICINE

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# Principles of INTERNAL MEDICINE

EDITORS T. R. Harrison

Raymond D. Adams, Ivan L. Bennett, Jr., William H. Resnik, George W. Thorn, M. M. Wintrobe



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#### PRINCIPLES OF INTERNAL MEDICINE

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To all those who have taught us, and especially to our younger colleagues who continue to teach and inspire us

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# Preface

From the inception of this work, its basic idea has been that a medical text must remain abreast of medical teaching; this in turn depends on scientific progress in medicine. Our concern has been not only with content but particularly with concept; not with mere "what" but more especially with the "why" of disease—in short, with education rather than didacticism. Our experience as teachers of medicine at undergraduate, graduate, and postgraduate levels, in addition to our exciting but not always painless adventures as editors during almost two decades, have confirmed the conviction that *Principles of Internal Medicine* should recapitulate the life-long educational process of a physician.

A primary requisite in the educational process is the development of a high sense of responsibility toward patients and a sensitivity to the significance of illness. Part One, The Physician and the Patient, summarizes our views concerning the attitudes and obligations involved in this relationship.

Progress in internal medicine during the present century has been influenced largely by unraveling of the basic mechanisms of disease. Modern methods of teaching have incorporated this progress by introducing the student to manifestations and mechanisms before taking up specific diseases. In the present day, it is not sufficient for the physician to have memorized knowledge of the common causes of symptoms; he also needs an understanding of the mechanisms which produce them. Such an understanding, which involves a familiarity with the abnormalities of both structure and function, serves to narrow the gap between clinical medicine and the preclinical sciences. The etiologic and morphologic approaches to disease, appropriate as they were in the nineteenth century, are not sufficient in the twentieth. These considerations are responsible for our decision to devote a major portion of the book (Part Two) to Cardinal Manifestations of Disease.

The symptoms of which patients complain not only afford the initial clues to the nature of the disease process, but they offer the optimal means for the establishment of a proper relationship with the patient.

Furthermore, patients do not come to physicians bearing labels of their diseases. Rather, like Joseph,

they wear coats of many colors, each hue indicating a specific manifestation and the whole representing a sumptom complex or syndrome which may have multiple causes. The search for the underlying disease is greatly facilitated by the initial recognition of a clinical pattern. Thus the approach to disease through an understanding or appreciation of manifestations and syndromes becomes in large measure the consideration of those common manifestations of disease which the physician encounters daily. Furthermore, to cite an example, the recognition that a patient is suffering from a syndrome such as pericardial effusion with tamponade furnishes not only a guide to treatment but also leads to further diagnostic procedures which will aid the search for the specific causative disorder.

The discussion of syndromes offers the additional advantage that it becomes unnecessary in the description of a single disease to elaborate in detail on features which are common to others. Thereby it becomes possible to limit such discussions to those features which have a relatively high degree of specificity and to achieve a concise consideration of the most characteristic aspects of that particular disease. Diagnostic and therapeutic problems which are common to a number of disorders, such as the recognition of the underlying cause of the nephrotic symptom complex or the management of respiratory, renal, or cardiac failure, can often be considered best when these conditions are approached as syndromes rather than as diseases.

Part Three, Biologic Considerations, is concerned with certain broad principles of genetics, of electrophysiology, and of the regulation of the internal chemical environment. Comprehension of these concepts is essential for the physician who desires to bring to his patients the practical benefits of advances in the biologic sciences.

The Parts which follow have been prepared along more or less conventional lines and therefore need no explanation.

Since the study of medicine is a life-long process, this book has been planned for all students of internal medicine, whether they be undergraduates, young physicians receiving advanced training, busy practitioners, or preclinical or clinical teachers. However, each of these groups may prefer to use the volume in a somewhat different manner.

The first or second year medical student will find Part Two especially useful as a means of comprehending the relation of the basic sciences to clinical medicine. The preclinical teacher may find that this portion of the book aids in creating interest in these sciences, because the basic principles are presented in a clinical framework.

The third year medical student should read those areas in which are discussed the specific syndromes and diseases which apply to the patients he encounters. The emotional impact associated with the problems of an individual patient will thus tend to fix in his mind the significance of what he reads. At the same time he should study again those manifestations and mechanisms of disease which his patients present. The fourth year student should continue this process and also should begin to narrow the gaps in his knowledge by learning about those less common diseases which he has not yet personally encountered. Thus he will supplement his understanding of principles and his clinical experience by additional factual knowledge.

The clinical teacher, who emphasizes that his students must know what phenomena are likely to be present in a given disease but that they must also gain an understanding of the functional distortions which produce clinical phenomena, is far more likely to be successful than his colleague who teaches by rote rather than by reason. It is well to recall the statement of Plato, "Knowledge which is acquired under compulsion obtains no hold on the mind." In the educational process, the digestion of knowledge is even more important than its

ingestion.

The young physician who, already having considerable experience, wishes to use the book as an aid toward qualifying examinations, will find especially helpful a review of those early Parts (Two and Three), which deal with the common manifestations and the more important mechanisms of disease. In most instances, five or more years will have elapsed since his basic science courses were completed, and he will need to refresh his knowledge by reviewing the more recent advances in pathophysiology.

It is our hope that the volume will prove a helpful source of quick reference for all of these groups, and especially for the *practicing physician* when an unfamiliar manifestation or disorder is encountered or when specific information about a disease or a new therapeutic procedure is desired. We trust that the index, which we have personally prepared, will be an effective guide for rapid reference.

Extensive changes have been made in the fourth edition. Most of it has been completely rewritten. The areas devoted to renal, pulmonary, gastrointestinal, and muscular and cutaneous disorders have been expanded. A chapter on Ocular Mani-

festations of Disease has been introduced. The previously long chapters on cardiac disease have been subdivided into shorter ones to make their contents more readily accessible. A short chapter on Principles of Physical Signs Referable to the Heart has been added. Introductory discussions, explaining the arrangement and indicating the common problems, have been inserted at the beginning of the several sections dealing with diseases of the various organ systems.

A deliberate attempt has been made to avoid long bibliographies. Rather, the references are limited to reviews and monographs which contain comprehensive bibliographies, together with an occasional reference to older works of unusual historical significance and, at times, a recent publication presenting important new information.

It is hoped that, as the result of the increasing availability of this textbook in different countries and in multiple languages, faculties of medicine outside of North America will have an opportunity to become familiar with the method of teaching internal medicine used on this continent, thereby permitting them to appropriate those techniques which seem good while retaining those methods of their own which have proved especially effective in their own environments.

Once again, we wish to express appreciation to our authors for their willingness to modify their chapters in response to editorial suggestions. We continue to be indebted to numerous colleagues and friends for invaluable criticisms. Among them are: Drs. Samuel P. Asper, F. Robert Fekety, John Eager Howard and Richard Ross of Baltimore; Drs. John Balint and Walter Frommeyer of Birmingham; Drs. Stanley Cobb, Mandel E. Cohen, A. Price Heusner, Erich Lindemann and Roe E. Wells of Boston; Dr. H. M. Spiro of New Haven; Dr. Clark Millikan of Rochester, Minnesota; and Drs. Jerome E. Cohn, Edwin Englert, Hans H. Hecht, John A. Linfoot, Charles A. Nugent, Gerald T. Perkoff, Attilio D. Renzetti and John R. Ward of Salt Lake City.

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