JAMES W. LONG, M.D.

THE ESSENTIAL GUIDE TO PRESCRIPTION DRUGS

THIRD EDITION

JAMES W. LONG, M.D.

THE ESSENTIAL GUIDE TO PRESCRIPTION DRUGS

THIRD EDITION

HARPER & ROW, PUBLISHERS, New York
Cambridge, Philadelphia, San Francisco, London
Mexico City, São Paulo, Sydney

for Alice
who understood so well
and helped so much

Library of Congress Cataloging in Publication Data

Long, James W
The essential guide to prescription drugs.
Includes bibliographical references and index.
1. Drugs. I. Title.
RM300.L64 615'.1 76-5141
ISBN 0-06-012674-4
ISBN 0-06-090715-0 pbk.
ISBN 0-88902-700-5 pbk. in Canada

82 83 84 85 86 10 9 8 7 6 5 4 3 2 1

Acknowledgments

Many individuals in diverse professional settings have contributed in a variety of ways to the creation of this book. I wish to acknowledge with particular gratitude the helpful suggestions and tangible assistance provided by the following individuals:

Graeme S. Avery, Editor-in-Chief, Australasian Drug Information Services, ADIS Press Australasia Pty Limited, Auckland, New Zealand.

Jacob A. Brody, M.D., Associate Director for Epidemiology, Demography, and Biometry Program, National Institute on Aging, National Institutes of Health, Bethesda, Maryland.

James A. Donahue, Jr., Group Vice-President, Health Care Services, IMS America Ltd., Ambler, Pennsylvania.

S. B. Gusberg, M.D., D.Sc., Professor and Chairman, Department of Obstetrics and Gynecology, Mount Sinai School of Medicine, New York, New York.

S. Mitchell Harman, M.D., Ph.D., National Institute on Aging, Gerontology Research Center, Baltimore City Hospitals, Baltimore, Maryland.

J. Donald Harper, President, The Proprietary Association of Canada, Ottawa, Ontario, Canada.

Robert P. Heaney, M.D., Vice-President for Health Sciences, Creighton University, Omaha, Nebraska.

Barbara S. Hulka, M.D., M.P.H., Professor, Department of Epidemiology, The School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

Nelson S. Irey, M.D., Chief, Division of Tissue Reactions to Drugs, Armed Forces Institute of Pathology, Washington, D.C.

Hershel Jick, M.D., Boston University Medical Center, Boston Collaborative Drug Surveillance Program, Waltham, Massachusetts.

Don Harper Mills, M.D., J.D., Clinical Professor of Pathology, University of Southern California School of Medicine, Los Angeles, California.

Lloyd G. Millstein, Ph.D., Deputy Director, Division of Drug Advertising and Labeling, Bureau of Drugs, Food and Drug Administration, Rockville, Maryland.*

Stanley R. Mohler, M.D., Professor and Vice-Chairman, Department of Community Medicine, and Director, Aerospace Medicine, Wright State University School of Medicine, Dayton, Ohio.

Gabriel G. Nahas, M.D., Ph.D., Professor of Anesthesiology, Department of Anesthesiology, College of Physicians and Surgeons of Columbia University, New York, New York.

Gerald N. Rotenberg, B.Sc.Phrm., F.A.C.A., Pharmaceutical Consultant, Drug Data Services, Thornhill, Ontario, Canada.

Isaac Schiff, M.D., Assistant Professor of Obstetrics and Gynecology, Boston Hospital for Women, Harvard Medical School, Boston, Massachusetts.

Thomas H. Shepard, M.D., Professor of Pediatrics, Head, Central Laboratory for Human Embryology, Department of Pediatrics, University of Washington School of Medicine, Seattle, Washington.

John E. Steinhaus, M.D., Ph.D., Chairman, Department of Anesthesiology, Emory University School of Medicine, Atlanta, Georgia.

Christopher Tietze, M.D., Senior Fellow, The Population Council, New York, New York.

Catherine Urbaitis, R.N., Staff Nurse, Norwell Knoll Long-Term Care Facility, Norwell, Massachusetts.

Wulf H. Utian, M.D., Ph.D., F.R.C.O.G., F.A.C.O.G., F.I.C.S., Director of Obstetrics and Gynecology, Mount Sinai Hospital of Cleveland; Associate Professor, Department of Reproductive Biology, Case Western Reserve University, Cleveland, Ohio.

Professor Owen L. Wade, M.A., M.D., F.R.C.P., (London) Hon. F.R.C.P.I., Department of Therapeutics and Clinical Pharmacology, The Medical School, The University of Birmingham, Birmingham, England.

Leonard A. Wisneski, M.D., Associate Clinical Professor of Medicine, Department of Medicine, George Washington University, Washington, D.C.

The helpful cooperation of many pharmaceutical manufacturers is greatly appreciated. In response to numerous inquiries they provided

*Dr. Millstein served exclusively as an editorial consultant in a private capacity for the compilation of information provided in the Pregnancy Category of the Drug Profiles. The information presented does not necessarily represent the official position of the Food and Drug Administration and does not have the endorsement of that agency.

much detailed and hard-to-find information needed to complete the Drug Profiles in Section Two.

In addition, I wish to express my sincere thanks to Eleanor M. Anderson and Mildred C. Sherman for typing this difficult and exacting manuscript. Their exceptional skills and dedication were indispensable to the preparation of the book.

Finally, I acknowledge with special gratitude and appreciation the masterful stewardship of Ann Harris, my editor at Harper & Row. It was she who perceived the timeliness and need for this unorthodox book and provided the constructive guidance, the painstaking attention to detail, and the diplomacy so essential to its development.

Author's Note

The information in this book has been derived from a wide variety of authoritative publications of drug information, as well as from appropriate unpublished data. Obviously no claim can be made that the information presented for any one drug includes *all* known side-effects, adverse effects, or interactions possibly related to the use of that drug. While diligent care has been taken to ensure the accuracy of the book's contents at the time it went to press, the continued accuracy, currency, and completeness of the information presented is dependent on changing observations and developments in the field.

Information has been obtained only from professional sources widely accepted as reliable. However, there is controversy even among experts about the interpretation of certain drug actions, the nature of the relationship between drug use and certain adverse effects, and the precautions to be observed in the use of certain drugs. Where appropriate, the reader is alerted to areas of special uncertainty, disagreement, or concern.

More than 1450 brand names are given for generic drugs marketed in the United States and Canada. Canadian readers are advised that some categories of information may include statements that are at variance with those contained in official drug product monographs issued by the Canadian Government. Differences may be found in categories dealing with prescription requirement, drug schedule classification, intended therapeutic effects, recognized contraindications, precautions in use, adverse reactions, and others. Canadian readers are advised to consult official Canadian sources of drug information to supplement the information contained in this book.

Commonly used and recognized brand names of drug products included in the Index, Profiles, and Tables appear for purposes of identification; the listings are not to be interpreted as endorsements of the

brands named. In many instances, the number of available brands of a generic drug was too great to allow a complete listing of all brand names. The omission of a particular brand name does not indicate that the unnamed product is in any way unsatisfactory or inferior to those listed. In the category in each Profile that lists possible interactions with other drugs, the inclusion of any brand names following the generic name of the interactant is for purposes of illustration only. It is not intended to mean that the particular brand(s) named have interactions which are different from other brands of the same generic drug. Readers are reminded that the generic drug, and *all* brand names under which it is marketed, are to be considered as possible interactants.

Preface to the Third Edition

The enthusiastic acceptance of this *Guide* by both the general public and the community of health care practitioners (physicians, pharmacists, and nurses) has confirmed the continuing need for practical and accessible sources of drug information which both groups can share in meeting their mutual responsibilities.

The principle of providing drug information for patients is now generally accepted, and numerous activities in this direction are being brought to fruition by governmental agencies at the federal level, by professional societies, and by a broad spectrum of lay organizations. The public now recognizes the need for individual responsibility and involvement in using our complex health care system to obtain the greatest benefits possible. The well-informed patient (or family) can contribute substantially to improving medical decision-making and the management of therapy.

No longer do health professionals ask: "Should the patient be told?" Now we are concerned with *what* and *how* to tell the patient—the prudent selection and presentation of information that can best enhance the quality of medical care. Accordingly, this revision has been enlarged to include new Profiles of drugs of major importance. The newly added drugs include some recently introduced ones as well as some old familiar ones. A newer drug was selected if it appeared to represent a significant innovation in therapy and had attained wide acceptance and use—with attendant need for information by the user. Older drugs were chosen for a variety of reasons: requests from readers for inclusion of a particular drug, the emergence of a new indication for use, or the more recent inclusion of a drug in the "Top 200" prescribed in the United States.

Several new categories of useful information have been provided for each drug. A new feature of importance is offered to supplement the

Drug Profile of Estrogen: Considerations in the Use of Estrogens for Treating the Menopausal Syndrome. In each instance, these newly added categories have been prepared in collaboration with selected editorial consultants who possess special expertise in the relevant fields.

To preserve the reasonable size of the *Guide,* it has been necessary to delete some Drug Profiles included in earlier editions. These represent drugs that, for various reasons, are now prescribed less frequently than before, and drugs that have been withdrawn from the market.

The body of knowledge about drugs continues to grow with bewildering speed and is overwhelming in volume. To remain useful, a compendium must attempt to provide information that is relevant and current. Thus, new facets of appropriate information concerning adverse drug effects and drug interactions have been incorporated throughout the text to further improve the reader's understanding—so fundamental to using drugs safely and effectively.

A completely revised index provides access to the Drug Profiles through a combined listing of brand and generic drug names. In addition, the index identifies the individual components of all combination drugs which are usually marketed under a brand name or names.

Further refinements have been made in response to comments and suggestions from interested readers. However, the format and style used in the first edition—originally adopted for their clarity, conciseness, and accessibility of information—have been well received and thus have not been modified. We believe that the *Guide* will continue to serve as a useful and usable source of drug information.

Preface to the First Edition

This book is the outgrowth of three recurring observations. First, many people request—and need—more information about the drugs prescribed for them than they have been given. Second, many patients encounter unexpected, and sometimes unrecognized, difficulties that are related to the drugs they are taking. Third, there is no single comprehensive source of drug information written for the patient.

Before the introduction of sulfa drugs in 1936, the number of available prescription drugs was relatively small. Most of them had been in general use for a long time, and their actions were comparatively simple and reasonably well understood. It took the physician little time and effort to give his patients all the information considered necessary for them to use their medicines with safety.

But as new and more powerful drugs were developed, it was discovered that the full range of effects a drug could have on the body was not always immediately apparent or predictable. We now know that most drugs require wide use for many years before *all* their possible effects can be recognized. New drugs reach the market regularly in this country and abroad. Many of them possess greater potency or more complex actions than those they replace. The abundance of prescription drugs now available has therefore generated an enormous volume of new drug information. Some of this information both the physician and the patient must know if a drug is to be used wisely.

Every prescription drug marketed in the United States today is accompanied by a package insert—the official literature which the manufacturer is required by law to provide as guidance *for the physician.* This package insert is enclosed in each drug package purchased by the pharmacist from the manufacturer. The pharmacist may or may not pass it along to the physician, but it is never given to the patient; neither the information nor the language used in the insert is designed for the layman.

Yet the package inserts of approximately 60 percent of the most commonly prescribed drugs contain necessary information about possible adverse effects of a serious nature. The package inserts of another 25 percent describe significant but less serious adverse effects. The patient's need to be informed—as well as the recognition of his right to be informed—grows greater all the time.

Though copious drug information is available to the health professions, it has been recognized for many years that only a small portion of it reaches the public. There are understandable reasons for this. The busy physician finds it difficult to devote the time he or she would require to keep fully informed on all aspects of drug therapy. The same constraints of time limit the amount of information the physician can convey to each patient who must be treated. It is also unrealistic to expect that the patient can retain all the significant information he or she needs for the proper use of certain modern drugs. The frequent prescribing of two or more drugs simultaneously makes the problem even more difficult to manage. Often the patient is understandably preoccupied by concerns about his illness, his future, or his absence from work, and he may not comprehend fully the details or the importance of the physician's instructions. He may hesitate to ask for clarification of technically complicated, confusing, or incomplete directions out of embarrassment or reluctance to infringe on a busy doctor's time. Frequently, therefore, whether as a result of misunderstanding or the lack of adequate information, the patient may use the drug improperly or abandon it altogether.

But if the goals of drug treatment are to be achieved, adequate information and its proper use by all concerned are indispensable. We have now reached the point where the use of prescription drugs must become a *shared* responsibility, a collaboration between physician and patient.

There is precedent for this. An early model for such joint participation followed the introduction in the 1920s of insulin in the treatment of diabetes. In the management of this disease it is imperative that the physician have a thorough knowledge of the drug he or she selects (there are now many forms of insulin) *and* that the patient understand the detailed instructions which he or she must follow if the drug is to be used correctly. Here the medical professions and interested lay organizations have collaborated admirably in the creation of teaching aids (pamphlets, books, films) designed to inform the diabetic patient as fully as possible.

Unfortunately, this principle of educating the patient to recognize and accept his rightful share of responsibility has not been applied to drug therapy in general. Although most illnesses requiring drug treatment do not include the sudden and dramatic events seen with diabe-

tes, the principle of informed responsibility on the part of the patient is no less valid in their management.

New drugs, and the problems they create, have outdistanced our nascent realization that some drug information is as essential to the patient as it is to the physician. It is now obvious that the traditionally paternalistic and uninformative attitudes of some physicians have no place in the context of today's powerful and complex drugs. At the same time, the patient has become increasingly aware of how dangerous it can be to continue in the passive role of unquestioning drug consumer.

The mutual but distinct responsibilities of patient and physician follow an obvious and logical pattern. There are three key points in the physician-patient relationship at which dual responsibility for the exchange of information is of vital importance to the patient's welfare. The first is when the patient, experiencing an illness which he feels he cannot evaluate properly or treat without professional help, consults the physician. Using information provided by the patient, as well as his or her own findings on examination, the physician makes a diagnosis and establishes the goals of treatment. Then he considers the advisability of using drugs in the treatment plan. If he decides that treatment should include drug therapy, he selects the most appropriate drug(s) to use. This is the second point of dual responsibility: Both physician and patient should play a part in the selection of the most appropriate drug. The physician's knowledge and judgment can be fully utilized only if the patient has provided the information he or she possesses that is essential to that proper choice, either by volunteering it or in responding to the physician's questions. In this way, physician and patient together determine that the chosen drug will not be one to which the patient is known to be allergic, or one that will interact unfavorably with a drug already being taken, or one that the patient cannot tolerate because of an unusual sensitivity, reduced kidney function, or one of many other possible conditions.

Having selected the correct drug, physician and patient undertake a third exercise of dual responsibility: the proper use of the drug. Acting in his own behalf, the patient makes certain that he knows the name of the drug, the correct dosage schedule, and any precautions he should observe while taking it. A patient complies with a doctor's instructions far better when he is sufficiently informed to recognize and interpret anticipated drug effects and to know when he should consult the doctor about the possible need to modify therapy. Satisfaction in treatment is greatest when patient and physician keep each other fully informed throughout the course of therapy.

This book is meant to be a source of basic information about the most commonly used drugs—the equivalent of a "patient package insert"—presented in an accessible form for you and your family. It is *not* a

do-it-yourself manual that can substitute for the professional judgment and direction of the physician. It will not tell you what drug to take, in what dosage, or for how long. It will tell you the kind of information you should share with your physician as he determines the drugs you are to take and the kind of information you should report to him while you are taking them. Properly used, this book will provide you with enough information to enable you to obtain the greatest benefit, with the least risk, from the drugs you are taking.

Contents

SECTION ONE

1

DRUG ACTIONS AND REACTIONS IN PERSPECTIVE

2

THE PATIENT'S GUIDELINES FOR SAFE DRUG USE

3

HOW TO USE THIS BOOK