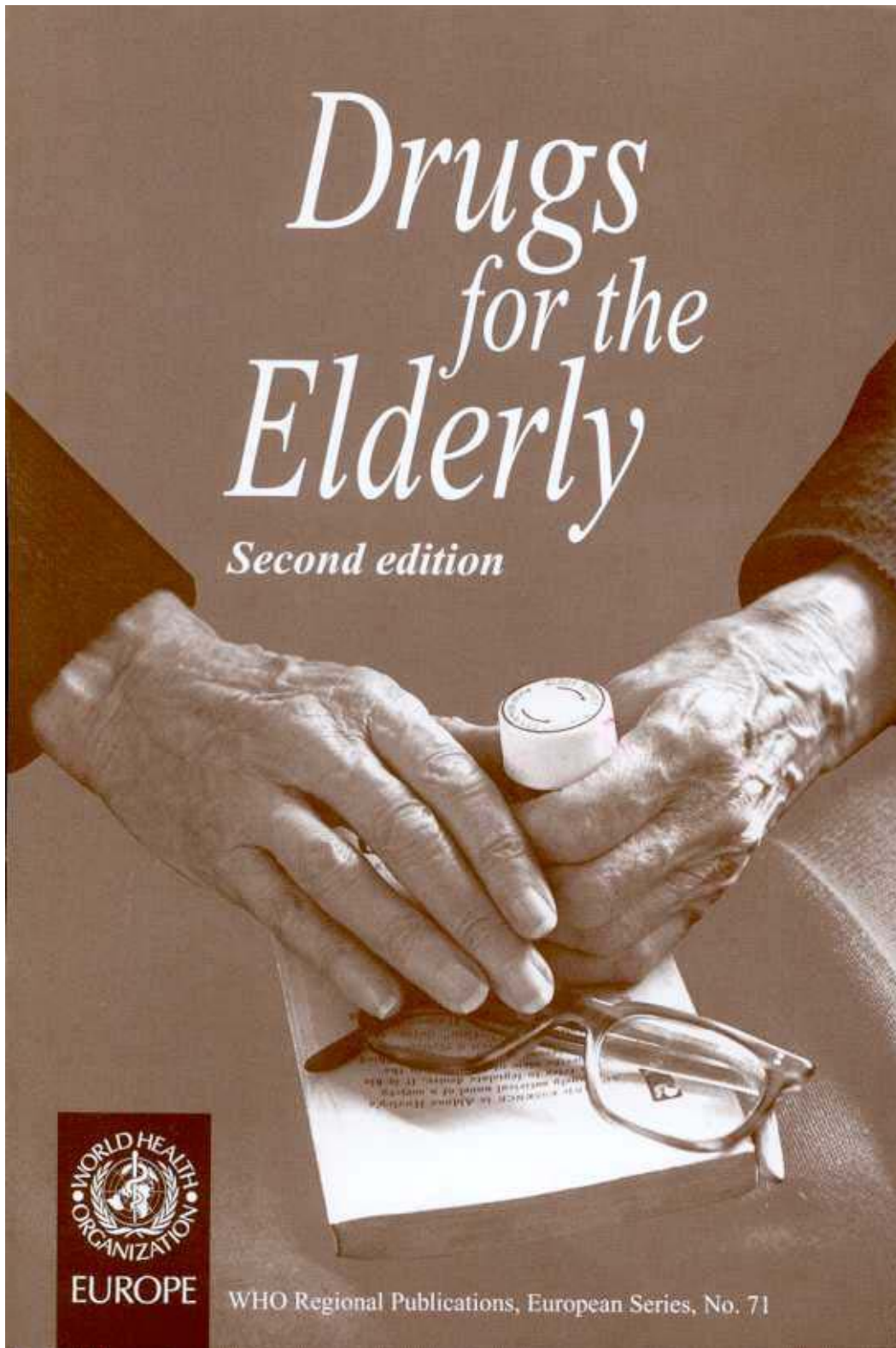


# Drugs for the Elderly

*Second edition*



WHO Regional Publications, European Series, No. 71

The World Health Organization is a specialized agency of the United Nations with primary responsibility for international health matters and public health. Through this Organization, which was created in 1948, the health professions of over 180 countries exchange their knowledge and experience with the aim of making possible the attainment by all citizens of the world of a level of health that will permit them to lead a socially and economically productive life.

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World Health Organization  
Regional Office for Europe  
Copenhagen



# Drugs for the elderly

## Second edition

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*WHO Regional Office for Europe*

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## Foreword

*In 1984 the World Health Organization (WHO) "parliament", the World Health Assembly, discussed ways of promoting rational use of drugs. There was concern about the high proportion of health budgets spent on drugs in many countries. Such excessive expenditure, in times of economic constraint, limits the funds available for improving primary health care and for ensuring adequate health care to the whole population, young and old alike. Patterns of drug prescribing for the elderly, as reported by a WHO Technical Group, show that half of the total drug consumption is by people aged 60 years and over in those countries where the proportion of this age group is very high (about 20%). The same Group made a review of drug consumption and found that the mean number of drugs being prescribed at any one time was 3.2 per individual in the community in Canada, 4.6 per patient in hospital in Scotland and 8 per person in long-term care in an institution in the United States. While many of these drugs help improve the survival and quality of life of elderly people, the WHO Group pointed out that one fifth of patients entering the geriatric department of a general hospital have symptoms that are attributable to the effect of prescribed drugs. The aim of this book is therefore to promote drug use in the elderly that is efficacious and safe.*

*One way to ensure the appropriate use of prescription drugs is through the training of health personnel. It is hoped therefore that this book will find its way on to the library shelves of medical, pharmacy and nursing schools around the world. This global dissemination of information is a task entrusted to WHO in a World Health Assembly resolution on the rational use of drugs (WHA37.33), which requests the Director-General "to continue to develop activities at national, regional and global levels aiming at the improvement of... prescription practices and the provision of unbiased and complete information about drugs to the*

*health profession and the public". This task was subsequently reiterated in WHA resolutions WHA47.13 and WHA49.14.*

*WHO set about obtaining unbiased and complete information for the first edition of this book, which was published by the Regional Office in 1985. Contributions were written by experts, and these were then reviewed by an international editorial board. The present edition is an update of this work, with additional authoritative information from the recent international scientific literature. Relevant sources of this additional information are mentioned in an annex to the book. I should like to thank both the original contributors and the reviewers for undertaking this task, as requested by the WHO Member States.*

J.E. Asvall  
*WHO Regional Director  
for Europe*

## Introduction to the first edition

The purpose of this monograph is to describe the principles of drug treatment in old age and the best therapeutic practice for the elderly. It is not a textbook of geriatric medicine, in which far more is involved than drugs.

In the treatment of elderly people, many variations are necessary from "standard" recognized therapy. This is due both to aging itself and to common age-related diseases. Without a proper appreciation and knowledge of them, prescribers will place elderly patients at serious risk of harmful drug effects or (if patients are not given the therapy they need) will deny them the many advantages of correctly conducted treatment. The objective should always be safe and efficacious therapy.

Those aspects of therapeutics that raise no particular problem in the elderly have been deliberately omitted or dealt with very briefly, as have the specialized subjects of drugs used in anaesthetics, in diagnostic procedures (e.g. radiology) and nuclear medicine, and in cancer therapy. We have not considered traditional and herbal remedies, because there is in most cases no scientific evidence of their efficacy.

Some modifications have been necessitated by national variations in practice. In addition it has been necessary to bear in mind that the availability of some drugs varies in different parts of the world. The present text is based on those drugs likely to be available in most countries and thus of universal relevance. The drug monographs are grouped according to the anatomical therapeutic chemical (ATC) classification system developed by the Nordic Council on Medicines and recommended by WHO for use in drug utilization studies.

F.I. Caird, Editor-in-Chief  
Glasgow, 1984

## Introduction to the second edition

When the WHO Regional Office for Europe launched the first edition of *Drugs for the elderly* ten years ago, it was an immediate success. French and later Russian editions ensued. The book was reprinted twice and, because demand persisted, a further reprinting was considered. During that time, however, remarkable progress had been made in clinical pharmacology and pharmacotherapy. In particular, the aging of the world's population has stimulated interest in the use and misuse of drugs in the elderly. More than 20 authoritative textbooks have been published since the first appeared in 1979, and scores of articles and reviews are now available. Most of this information is either out of reach of the poorer countries, however, or is far too expensive to obtain. For that reason there still seemed to be a niche for a small, internationally available and understandable, and relatively inexpensive book on the subject. Since medical practice as such has not undergone very drastic changes, the main body of the text has been left untouched, but fundamental changes have been introduced throughout in the views on drug therapy and the choice of available drugs. As time and funds were short, it was impossible to repeat the original approach taken – multi-authorship and an editorial committee of international experts. Revision was mainly done within and later outside the Regional Office with the help of available books and databases. I am very grateful to Dr Hans Liedholm and Ms Agneta Björck Linné (Department of Community Medicine, Malmö University Hospital, Sweden) for reviewing the final version of the manuscript and suggesting a number of useful changes and additions.

Because of the anticipated wide distribution of this book in the WHO European Region, and especially in the countries of

central and eastern Europe and the newly independent states of the former USSR, drugs on the WHO Model List of Essential Drugs have been given some preference over others.

In the first edition references to the literature were deliberately omitted. Inserting references throughout the text of this edition would have made the book unwieldy, too large and too expensive. The main sources of information and suggestions for further reading are therefore given in Annex 1. Care has been taken that all recommendations are supported by appropriate data from the literature. Although the Editor of this revision takes full responsibility for any remaining scientific errors, WHO cannot be held liable for either the choice of drugs or recommendations on dosages.

L. Offerhaus  
Copenhagen, 1995