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978-0-521-68716-4 - The Epilepsy Prescriber's Guide to Antiepileptic Drugs

Philip N. Patsalos and Blaise F. D. Bourgeois

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# The Epilepsy Prescriber's Guide to Antiepileptic Drugs

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## PREFACE

With the rapidly increasing number of available antiepileptic drugs to choose from, those involved in any aspect of the treatment of patients with epilepsy face the challenge of remaining familiar with all relevant aspects of every medication that is currently available, including the newest ones. The purpose of *The Epilepsy Prescriber's Guide to Antiepileptic Drugs* is to present all the necessary information in a format that allows the prescriber to easily and rapidly find the specific answer to any question that may arise in the process of initiating and monitoring a medication for the treatment of epilepsy. As opposed to standard textbooks, this unique guide focuses, in a systematic and didactic manner, on all the information that the prescriber will need to choose and use a medication, as well as on features of the drug that may need to be discussed with the patient before or during treatment.

The topics covered for each drug follow an identical sequence and include chemical name and structure; brand names in major countries; generics available; licensed indications; nonlicensed use; seizure types for which the drug is ineffective or contraindicated; mechanism of action; pharmacokinetic parameters; interaction profile; common, life-threatening, or dangerous adverse effects; dosing and use; laboratory monitoring; use in special populations (renal and hepatic impairment, children, the elderly, pregnant, and breast-feeding women); the overall place of the drug in the treatment of epilepsy; suggested reading.

The reader can use this guide in many different ways and for various purposes, such as to rapidly review a synopsis of all relevant aspects of a given drug, to choose a drug for a patient by reviewing the spectrum of efficacy and adverse effects of several drugs, to find the answer to one specific question about a specific drug, or as a guide to discuss precautions and adverse effects with a patient before or during treatment. In all instances, this information will be rapidly and easily found.

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## INTRODUCTION

The purpose of *The Epilepsy Prescriber's Guide to Antiepileptic Drugs* (AEDs) is to provide practical and concise information so as to allow the optimum use of AEDs in clinical practice. This quick reference guide provides a wealth of invaluable information for use by all who treat patients with epilepsy, including neurologists, neurosurgeons, general physicians, those caring for the elderly, emergency medicine doctors, medical students and trainees at all levels, general practitioners, nurses and epilepsy nurse specialists, and practice pharmacists.

All of the drugs are presented in the same design format and in alphabetical order to facilitate rapid access to information. Specifically, each drug is divided into eight sections and each section is designated by a unique color background: therapeutics, pharmacokinetics, drug interaction profile, adverse effects, dosing and use, special populations, and the overall place of the drug in the treatment of epilepsy, followed by suggested reading of key references.

### Section 1: Therapeutics

Covers the chemical name and structure; brand names in major countries; generics available; licensed indications as approved by the United States Food and Drug Administration (FDA) and the European Medicines Agency (EMA) or the United Kingdom Medicines and Healthcare products Regulatory Agency (MHRA); nonlicensed use; seizure types for which the drug is ineffective or contraindicated; mechanism of action; efficacy profile.

### Section 2: Pharmacokinetics

Highlights the pharmacokinetic parameters relevant to each drug's clinical therapeutics and includes absorption and distribution, metabolism, and elimination parameters.

### Section 3: Drug interaction profile

The interaction profile of each drug is divided into three major sections which include pharmacokinetic interactions, pharmacodynamic interactions, and interaction with hormonal contraception. The pharmacokinetic interaction section is further subdivided into interactions between AEDs and interactions between AEDs and non-AED drugs. Noninteracting drugs have been omitted.

### Section 4: Adverse effects

Explains how the drug causes adverse effects; contains a list of common, life-threatening, or dangerous adverse effects; an effect on weight is noted, and advice about what to do about adverse effects.

### Section 5: Dosing and use

Provides the usual dosing range; available formulations; how to dose and dosing tips; how to withdraw drug; symptoms of overdose and how to

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manage; what tests and therapeutic drug monitoring are needed; other warnings and precautions; and when not to use.

### **Section 6: Special populations**

Gives information about use of the drugs in the presence of renal and hepatic impairments, and any precautions to be taken for treating children, the elderly, and pregnant and breast-feeding women.

### **Section 7: The overall place of the drug in the treatment of epilepsy**

This section provides an overview, based on the authors' opinions, as to where each AED can be placed in relation to the treatment of patients with epilepsy and summarizes the primary and secondary seizure types for which it shows efficacy, and finally highlights the potential advantages and disadvantages of each AED.

### **Section 8: Suggested reading**

In this section, the authors highlight the key references that were used in compiling the information contained in each drug section and readers are advised to read these if more information is needed. Readers are also encouraged to consult standard comprehensive reference books on epilepsy and AED textbooks for more in-depth information.

At the back of the guide is an index by drug name. In addition, there is a list of abbreviations and a table highlighting the interactions that can occur between the different AEDs.