

"In the past decade or so, not only has there been a better awareness of psychiatric disorders, but increasingly larger numbers of people are seeking help for these conditions. There is indeed a better focus on personalised psychiatry and pharmacological research. With further recent advances in innovations and better medications, practice of clinical psychiatry is changing with greater hope to patients and their families and carers. In this volume, *Cambridge Prescribers Guide in Psychiatry*, authors have brought together key essentials about medications used in treatments in psychiatry in an impressively coherent and comprehensive manner. The authors deserve our thanks and congratulations on an impressive effort to bring together evidence-based information on how to use medicine and drug interventions which will go a long way in improving outcomes for patients and their carers as well as families."

#### Dinesh Bhugra, CBE Professor Emeritus, Mental Health & Cultural Diversity, IoPPN Kings College, London

"Finally, a colourful handbook about medication in use in psychiatry that you could look up quickly in the field like a bird-watcher guide. Modern clinical practice involves a reflective integration of psychopharmacology with psychosocial interventions that depend on a good grasp of the brain mechanism behind the medication used. Filtering and updating information is difficult for the busy clinician, who could find himself stuck in the clinic trying to google a less familiar medication or side effect. It is particularly reassuring to learn that *The Cambridge Prescriber's Guide in Psychiatry* is the product of coordinated crowd-sourcing of clinical students, active clinicians, as well as neuroscience experts. In particular, the unique section on the Art of Psychopharmacology for each medication presents the wisdom of practising clinicians which has hitherto largely been confined to clinical supervision in specialist apprenticeships. This work will find its place in the pockets of busy clinicians and will be a reliable source of information for students, healthcare professionals, patients and carers."

#### Professor Eric Chen MA(Oxon), MBChB(Edin), MD(Edin). FRCPsych(UK), FHKAM(Psychiatry) The University of Hong Kong

"The Cambridge Prescriber's Guide in Psychiatry will support informed and inclusive decisions about psychiatric medication as the basis of better outcomes for patients. The collaborative authorship combines Cambridgeshire & Peterborough's experienced NHS consultants, psychopharmacologists and pharmacists with the inquiring minds of our student doctors: an innovative example of why it is so rewarding to practise psychiatry in an academic teaching trust environment. The Cambridge Prescriber's Guide in Psychiatry will help make that inquisitive, evidence-based approach more widely available to prescribers in mental health care."

#### Dr Cathy Walsh Chief Medical Officer Cambridgeshire and Peterborough NHS Foundation Trust

"From Acamprosate to Zuclopenthixol - *The Cambridge Prescriber's Guide in Psychiatry* is what it says on the tin. Crystal clear information that prescribers need – to not only prescribe safely and effectively in terms of dosing and side effects but also to understand the underlying mechanism of action. Neat colour coded sections with easy to access bullet point lists of key information makes the guide an easyto-use reference tool and psychopharmaco-pedia rolled in one. Sections on the art of switching and on the mechanism of action of side effects will be appreciated equally by established clinicians as by trainees across the world. The short but pertinent list of references at the end of each medication will also appeal to those with a more academic interest in psychopharmacology. The inclusion of compound medications (e.g. Buprenorphine and Naoloxone) in the guide is especially welcome lending credence to the title of the guide as a Prescriber's guide. I particularly liked The Art of Psychopharmacology and Pearls sections, what I call the 'Wisdom sections'. Overall, the various sections are guaranteed to make every medication choice discussion with the patient an intellectually stimulating encounter and one that should result in a more rational, more safe prescribing practice – win-win for both patients and prescribers."

> Subodh Dave Dean Royal College of Psychiatrists

### Cambridge Prescriber's Guide in Psychiatry

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## Foreword

With psychiatric conditions being so prevalent and the wide indications of many available medicines, most doctors need to be confident about psychotropic drugs, regardless of whether they prescribe them themselves. But tomorrow's doctors walk a long road from the basic pharmacological principles they learn from the simplicity of the ileum to the complexities of the everyday lives of people seeking help for their mental health. The Cambridge Prescriber's Guide in Psychiatry is intended to be an everyday reference to support the clinician, whether physician, psychiatrist or other medical or allied professional involved in helping those who require psychotropic drugs as part of their healthcare. The Guide maps the journey from basic pharmacology, through evidence-based prescribing to the "clinical pearls" section which is based on experience and expertise. I am delighted that students from the School of Clinical Medicine at the University of Cambridge have played a central role in compiling the Guide. They have sifted, compared and combined the many sources on which prescribers rely to create draft entries, drug-by-drug, to discuss with Associate Editors, mainly senior clinicians from the NHS organisations with which the Clinical School collaborates to provide psychiatric experience for the students. Thus, some of tomorrow's doctors have not only greatly enhanced their learning experience in psychiatry but have contributed to today's clinical practice. All will benefit in terms of their future practice and some, perhaps many, will find that their career path leads to psychiatry.

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The Editors are grateful to the 34 students from the University of Cambridge and the Associate Editors who developed the draft entries with them, and to staff at CUP for their generous support during production.

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# Introduction

The Cambridge Prescriber's Guide in Psychiatry is intended to complement Stahl's Essential Psychopharmacology, and the recently published Cambridge Textbook of Neuroscience for Psychiatrists. The former emphasises mechanisms of action and how psychotropic drugs work upon receptors and enzymes in the brain, while the Cambridge Textbook of Neuroscience for Psychiatrists reviews the wider understanding of neuroscience in psychiatry and its application to clinical practice. Thus, the Guide gives practical neuroscience-based information on how to use psychotropic drugs in clinical practice. We have used the tried, tested and popular format of Stahl's Prescriber's Guide, adapting it for a British-English readership and prescribers relying on a UK formulary.

We have taken the unusual step of involving tomorrow's prescribers in the production of the *Guide*: student doctors at the School of Clinical Medicine, University of Cambridge. They reviewed the available pharmacological evidence and existing clinical guidelines according to templates and under the supervision of experienced consultants and pharmacists as Associate Editors; most of these Associate Editors are our clinical colleagues within the Cambridgeshire & Peterborough NHS Foundation Trust (CPFT). This information was then reviewed, cross-checked, and edited further. Through this inter-generational professional partnership, we hope to have excited the students' interest in psychopharmacology and psychiatry while integrating the art of clinical practice with the science of psychopharmacology as seen through fresh eyes.

We cannot include all available information about every drug in a single work, and no attempt is made here to be comprehensive. The *Guide* comprises punchy information and essential facts to help prescribers in everyday practice. Unfortunately, it also means excluding less critical facts and arcane information that may, nevertheless, be useful to the reader. To include everything would make the book too long and dilute the most important information. In deciding what to include and what to omit, the editorial team has drawn upon common sense and many decades of combined clinical experience.

To meet the needs of the clinician and to facilitate future updates of the *Guide*, the opinions of readers are eagerly solicited. Feedback can be emailed to PrescribersGuide@ cambridge.org. Any and all suggestions and comments are welcomed.

As in *Stahl's Prescriber's Guide*, the selected drugs are all presented in the same format in order to facilitate rapid access to information. Specifically, each drug is broken down into five sections, each designated by a standard colour background: Therapeutics, Side Effects, Dosing and Use, Special Populations, The Art of Psychopharmacology, followed by Suggested Reading.

**Therapeutics** covers the brand names in the UK and if the generic form is available; the class of drug; what indications it is prescribed for as in the British National Formulary (BNF) in bold and other common non-BNF indications; how the drug works; how long it takes to work; what to do if it works or if it doesn't work; the best augmenting combinations for partial response or treatment resistance; and the tests (if any) that are required.

Side effects explains how the drug causes side effects; gives a list of notable, lifethreatening or dangerous side effects; gives a specific rating for weight gain or sedation; and gives advice about how to handle side effects, including best augmenting agents for side effects.

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Dosing and use gives the usual dosing range; dosage forms; how to dose and dosing tips; symptoms of overdose; long-term use; if habit forming, how to stop; pharmacokinetics; drug interactions; when not to use; and other warnings or precautions.

Special populations contains specific information about any possible renal, hepatic, and cardiac impairments, and any precautions to be taken for treating the elderly, children and adolescents, and pregnant and breast-feeding women.

The art of psychopharmacology provides the editorial team's opinions on issues such as the potential advantages and disadvantages of any one drug, the primary target symptoms, and clinical pearls to get the best out of a drug for a specific patient.

**The art of switching** includes clinical pearls and graphical representations to help guide the switching process that can be particularly problematic unless the relevant pharmacological principles and profiles are considered.

The Medicines and Driving chapter outlines a summary of advice relating to driving for some of the individual drugs and classes of drugs found in the *Guide*.

There is a list of icons used in the *Guide* following this Introduction and at the back of the *Guide* are several indices. The first is an index by drug name, giving both generic names (uncapitalised) and trade names (capitalised and followed by the generic name in parentheses). The second is an index of common uses for the generic drugs included in the *Guide* and is organised by disorder/symptom. Agents that are approved in the BNF for a particular use are shown in bold but additional, evidence-based usage is also included. The third index is organised by drug class and lists all the agents that fall within each class. In addition to these indices there is a list of abbreviations.

We have attempted to make information consistent with what readers may see in other standard sources including the British National Formulary (BNF), British Association for Psychopharmacology condition-specific guidelines, Bumps (best use of medicine in pregnancy), Electronic Medicines Compendium, Martindale: The Complete Drug Reference, Maudsley Prescribing Guidelines, NICE Guidelines, Specialist Pharmacy Service, and The Renal Drug Handbook. Prescribers are encouraged to consult these standard references and comprehensive psychiatry and pharmacology textbooks for more in-depth information. They are also reminded that the Art of Psychopharmacology section is based on the Editors' opinions.

It is strongly advised that readers familiarise themselves with the standard use of these drugs before attempting any of the less frequent uses discussed, such as unusual drug combinations and doses. Reading about both drugs before augmenting one with the other is also strongly recommended. Clinical psychopharmacologists, that includes all prescribers, should regularly track blood pressure, weight, and body mass index for most of their patients. The dutiful clinician will also check out the drug interactions of non-central nervous system (CNS) drugs with those that act in the CNS, including any prescribed by other clinicians with whom they should communicate.

Initiating certain drugs may be for experts only. These might include clozapine and monoamine oxidase (MAO) inhibitors, among others. Off-label uses not included in the BNF, inadequately studied doses or combinations of drugs may also be for the expert only, who can weigh risks and benefits in the presence of sometimes vague and conflicting evidence. Pregnant or nursing women, or individuals with the features of two or more psychiatric illnesses, substance abuse, and/or a concomitant medical illness may be suitable patients for the expert. Controlled substances also require expertise. Use your best judgement as to your level of expertise: we are all learning in this rapidly

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advancing field and all patients for whom we prescribe represent important n=1 trials from which we can enhance our knowledge.

The practice of medicine is often not so much a science as it is an art. It is important to stay within the standards of medical care for the field and within your personal comfort zone. We hope that the medical students involved in compiling the *Guide* will have learned as much about this art as they have done about the science of psychopharmacology; this art includes supporting patients to make informed decisions just as it does expertise in drug prescribing.

Finally, this book is intended to be genuinely helpful for practitioners of psychopharmacology by providing them with the mixture of facts and opinions selected by the Editors. Ultimately, prescribing choices are the reader's responsibility. Every effort has been made in preparing this book to provide accurate and up-to-date information in accord with accepted standards and practice at the time of publication. Nevertheless, the psychopharmacology field is dynamic, and the Editors and publisher make no guarantees that the information contained herein is error-free. Furthermore, the Editors and publisher disclaim any responsibility for the continued currency of this information and disclaim all liability for any and all damages, including direct or consequential damages, resulting from the use of information contained in this book. Doctors recommending and patients using these drugs are strongly advised to consult and pay careful attention to information provided by the manufacturer.

## List of icons



How the drug works, mechanism of action

Life-threatening or dangerous side effects

Best augmenting agents to add for partial response or treatment resistance



Weight Gain: Degrees of weight gain associated with the drug, with unusual signifying that weight gain has been reported but is not expected; not unusual signifying that weight gain occurs in a significant minority; common signifying that many experience weight gain and/or it can be significant in amount; and problematic signifying that weight gain occurs frequently, can be significant in amount, and may be a health problem in some patients

unusual not unusual common problematic

problematic

**Sedation**: Degrees of sedation associated with the drug, with unusual signifying that sedation has been reported but is not expected; not unusual signifying that sedation occurs in a significant minority; common signifying that many experience sedation and/or it can be significant in amount; and problematic signifying that sedation occurs frequently, can be significant in amount, and may be a health problem in some patients



Tips for dosing based on the clinical expertise of the author



Drug interactions that may occur



Warnings and precautions regarding use of the drug



Dosing and other information specific to children and adolescents



Information regarding use of the drug during pregnancy



Clinical pearls of information based on the clinical expertise of the author

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#### List of icons



The art of switching



Suggested reading

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