Stahl's Illustrated

Pharmacological Treatments for Psychosis

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Illustrations

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PREFACE

These books are designed to be fun, with all concepts illustrated by full-color images and the text serving as a supplement to figures, images, and tables. The visual learner will find that this book makes psychopharmacological concepts easy to master, while the non-visual learner may enjoy a shortened text version of complex psychopharmacological concepts. Each chapter builds upon previous chapters, synthesizing information from basic biology and diagnostics to building treatment plans and dealing with complications and comorbidities.

Novices may want to approach this book by first looking through all the graphics, gaining a feel for the visual vocabulary on which our psychopharmacological concepts rely. After this once-over glance, we suggest going back through the book to incorporate the images with supporting text. Learning from visual concepts and textual supplements should reinforce one another, providing you with solid conceptual understanding at each step along the way.

Readers more familiar with these topics should find that going back and forth between images and text provides an interaction with which to vividly conceptualize complex psychopharmacology. You may find yourself using this book frequently to refresh your psychopharmacological knowledge. And you will hopefully refer your colleagues to this desk reference.

This book is intended as a conceptual overview of different topics; we provide you with a visual-based language to incorporate the rules of psychopharmacology at the expense of discussing the exceptions to these rules. The references section at the end gives you a good start for more in-depth learning about particular concepts presented here. Stahl's Essential Psychopharmacology and Stahl's Essential Psychopharmacology: The Prescriber's Guide can be helpful supplementary tools for more in-depth information on particular topics in this book. You can also search topics in psychopharmacology on the Neuroscience Education Institute's website (www.neiglobal.com) for lectures, courses, slides, and related articles.

Whether you are a novice or an experienced psychopharmacologist, this book will hopefully lead you to think critically about the complexities involved in psychiatric disorders and their treatments.

Best wishes for your educational journey into the fascinating field of psychopharmacology!

CME/CE Information

Released: February 1, 2024
CME/CE credit expires: January 31, 2027

Target Audience: This activity has been developed for the healthcare team or individual prescriber specializing in mental health. All other healthcare team members interested in psychopharmacology are welcome for advanced study.

Learning Objectives: After completing this activity, you should be better able to:

- Describe the neurobiology of psychosis and schizophrenia
- Differentiate drugs for psychosis based on their pharmacology
- Recognize how different drugs' receptor binding profiles affect symptoms of psychosis and specific side effects
- Choose the best treatment practices and switching methods when prescribing drugs for psychosis

Accreditation: In support of improving patient care, Neuroscience Education Institute (NEI) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

NEI designates this enduring material for a maximum of 10.0 *AMA PRA Category 1 Credits*™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

The content in this activity pertaining to pharmacology is worth 10.0 continuing education hours of pharmacotherapeutics.

Credit Types: The following are being offered for this activity:

- Nurse Practitioner: ANCC contact hours
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Peer Review: The content was peer reviewed by an MD specializing in forensic psychiatry to ensure the scientific accuracy and medical relevance of information presented and its independence from bias. NEI takes responsibility for the content, quality, and scientific integrity of this CME/CE activity.

Disclosures: All individuals in a position to influence or control content are required to disclose all relevant financial relationships. Potential conflicts were identified and mitigated prior to the activity being planned, developed, or presented.

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Support: This activity is supported solely by the provider, NEI.

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Introduction

Psychosis is a collection of psychological symptoms resulting in the loss of touch with reality. It is a common feature to many psychiatric disorders, particularly schizophrenia and other conditions in the schizophrenia spectrum, as well as mood disorders (bipolar disorder and major depression with psychotic features). Psychosis may also manifest due to an underlying medical disease or substance use. Approximately 1.5 to 3.5% of people will meet diagnostic criteria for a psychotic disorder. The presence of psychosis generally indicates a serious mental illness, which often requires early intervention and long-term treatment to achieve favorable outcomes (Calabrese & Al Khalili, 2023).

So-called antipsychotics (serotonin/dopamine antagonists) are the gold-standard treatment for psychotic episodes and disorders. However, advancements in our understanding of the neurobiology of psychosis, particularly schizophrenia, may soon expand our treatment options. This expansion also challenges our conceptualization of the "antipsychotic." Antipsychotics are synonymous with dopamine D2 antagonism, but newer medications in development do not directly target this receptor. Furthermore, D2 antagonists are used to successfully treat non-psychotic symptoms like depression. Therefore, throughout this book we use the neuroscience-based nomenclature, which is based on mechanism of action and not therapeutic indication, wherever possible when referring to drugs for psychosis.

In the following pages, we describe the symptoms of psychosis, the neurocircuitry that underlies those symptoms, and the evidence-based therapeutic targets for the treatment of those symptoms. Chapters 1–2 describe the neurobiological models and neurocircuitry that underlie psychosis and how malfunctioning circuits are connected to symptoms. An emphasis is placed on schizophrenia as the prototypical psychotic disorder; however, Parkinson's disease psychosis and dementia-related psychosis are also discussed. Chapter 3 addresses additional receptor actions that lead to common side effects of serotonin/dopamine antagonists. Chapters 4–5 review pharmacological properties of dopamine receptor blocking agents and strategies for switching medications. Finally, Chapter 6 describes advancements in the development of novel pharmacological treatments for psychosis that do not directly target the dopamine D2 receptor.