Stahl’s Illustrated Antipsychotics
Treating Psychosis, Mania and Depression
Second Edition

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PREFACE

These books are designed to be fun. All concepts are illustrated by full-color images. The text can be used as a supplement to figures, images, and tables. The visual learner will find that this book makes psychopharmacology concepts easy to master, while the non-visual learner may enjoy a shortened text version of complex psychopharmacology 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 psychopharmacology concepts rely. After this once-over glance, we suggest going back through the book to incorporate the images with text from figure legends. 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. You may also find yourself referring 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 sacrifice of discussing the exceptions to these rules. A Suggested Readings section at the end of this book gives you a good start for more in-depth learning about particular concepts presented here.

When you come across an abbreviation or figure you don’t understand, you can refer to the Abbreviation and Symbols legend in the back. After referring to these several times you will begin to develop proficiency in the visual vocabulary of psychopharmacology. Stahl’s Essential Psychopharmacology, 3rd Edition, and Stahl’s Essential Psychopharmacology: The Prescriber’s Guide, 3rd Edition can be helpful supplementary tools for more in-depth information on particular topics in this book. Now 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, hopefully this book will 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!

Stephen M. Stahl
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CME Information

Overview
This book aims to visually explain the underlying pathophysiology of schizophrenia, give an overview of the receptor profiles of conventional and atypical antipsychotics, and to provide information on best treatment approaches. The book is divided into five chapters for ease of reading and referencing. Chapter 1, “Neurobiology of Schizophrenia and Mood Disorders,” focuses on the known and hypothetical causes underlying the pathophysiology of schizophrenia and mood disorders. Chapter 2, “Multifunctionality of Antipsychotics,” is divided into multiple parts, focusing on the different receptor profiles and properties of antipsychotic medications. Chapter 3, “Side Effects of Antipsychotics: Metabolic Issues and Sedation,” explains the importance of monitoring patients initiated on antipsychotic medication. Chapter 4, “Individual Antipsychotic Drugs,” describes each antipsychotic medication currently available in terms of their approval, side effects profile, dosing tips, and drug interactions. Finally, Chapter 5, “Schizophrenia Pharmacy and Switching Strategies,” presents different ways to treat the various symptoms of schizophrenia and describes ways to switch between different antipsychotic agents. The visual component of this minibook is designed to allow the reader to easily grasp concepts.

Target Audience
This activity was designed for healthcare professionals, including psychiatrists, neurologists, primary care physicians, nurses, pharmacists, and others who treat patients with psychiatric conditions.

Statement of Need
The following unmet needs regarding antipsychotics were revealed following a vigorous assessment of activity feedback, expert faculty assessment, literature review, and through new medical knowledge:

- The neurobiology underlying schizophrenia is based on the dopamine hypothesis, but many other neurotransmitter systems are also involved. It is important to understand the interaction among these neurotransmitter systems in order to get the full picture of the underlying causes of schizophrenia.
- Many of the neurotransmitter systems involved in schizophrenia are also involved in mood disorders, and thus could be targeted by drugs effective in schizophrenia. A better understanding of the neurobiology of mood disorders can lead to a more precise choice of medication.
- The pharmacological agents used to treat schizophrenia affect neurobiological systems in specific ways; understanding the relationship between the medications and the underlying pathophysiology of schizophrenia is essential in order to select appropriate treatment for a patient.
Atypical antipsychotics are complex drugs, affecting at least 17 different receptor subtypes, each of which may contribute to efficacy and side effects. This multifunctionality of antipsychotics also allows them to be used for disorders besides schizophrenia, such as mood disorders.

Acquiring a better knowledge of the different antipsychotics on the market and in development is necessary to ascertain proper dosing and switching strategies and thus to maximize treatment benefits and minimize side effects.

Based on evaluations obtained at NEI Academies, participants wanted more information on psychosis-related matters, and additional information on dosing issues.

To help fill these unmet needs, quality improvement efforts need to increase understanding of the neurobiology of psychiatric disease states and the pharmacology of available, new, and in-development medications.

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

- Describe the hypothetical neurobiology of schizophrenia
- Describe the hypothetical neurobiology of mood disorders
- Understand the complex pharmacology of antipsychotics
- Recognize how different drug properties affect the various symptoms of schizophrenia
- Recognize how different drug properties affect the various symptoms of mood disorders
- Recognize that side effects are linked to the drug’s receptor profile
- Develop an understanding of the best treatment practices and switching methods for schizophrenia

**Accreditation and Credit Designation Statements**
The Neuroscience Education Institute is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The Neuroscience Education Institute designates this educational activity for a maximum of 3.0 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity. Non-physicians may receive a certificate of participation for completing this activity.

**Activity Instructions**
This CME activity is in the form of a printed monograph and incorporates instructional design to enhance your retention of the information and pharmacological concepts.
that are being presented. You are advised to go through the figures in this activity from beginning to end, followed by the text, and then complete the posttest and activity evaluation. The estimated time for completion of this activity is 3.0 hours.

Instructions for CME Credit
To receive your certificate of CME credit or participation, please complete the posttest (you must score at least 70% to receive credit) and activity evaluation found at the end of the monograph and mail or fax them to the address/number provided. Once received, your posttest will be graded and a certificate sent if a score of 70% or more was attained. Alternatively, you may complete the posttest and activity evaluation online and immediately print your certificate. There is a fee for CME credits for this activity.

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Stahl’s Illustrated

Objectives

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- Describe the hypothetical neurobiology of mood disorders
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- Develop an understanding of the best treatment practices and switching methods for schizophrenia