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Stephen M. Stahl, Assisted by Debbi Ann Morrissette
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Stahl's Illustrated Violence

Neural Circuits, Genetics and Treatment

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Illustrations



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PREFACE

This book is designed to be fun, with all concepts illustrated by full color images, figures, and tables supplemented by text. The visual learner will find that this book makes psychopharmacological concepts easier to master, and the non-visual learner may enjoy this book's short explanations of complex psychopharmacological concepts. Each chapter builds upon previous ones, synthesizing information about basic biology, diagnostics, treatment plans, 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 psychopharmacological concepts rely. After this once-over, we suggest going back through the book to read the text alongside the images. Learning from visual images and textual supplements should reinforce one another, providing novices with solid conceptual understanding at each step along the way.

Readers more familiar with these topics should find that going back and forth between the images and the text enables them to better understand complex psychopharmacological concepts. They may find themselves using this book frequently to refresh their psychopharmacological knowledge, and hopefully, they will refer their colleagues to this desk reference.

This book is intended as a conceptual overview of various topics. We provide you with a visual language to better understand the rules of psychopharmacology at the expense of discussing the exceptions to these rules. A Suggested Readings section at the back of this book gives you a good start for more in-depth learning about particular concepts.

Stahl's Essential Psychopharmacology (4th ed.) and *Stahl's Essential Psychopharmacology: The Prescriber's Guide* (4th ed.) can be helpful supplementary tools for more in-depth information on particular topics. You can also search the Neuroscience Education Institute's Web site (www.neiglobal.com) for articles, lectures, slides, and courses on psychopharmacological topics.

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

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



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CME Information

Overview

In this book, we will discuss what is known regarding individuals who are violent or aggressive, including neural circuitry and possible genetic influences underlying violent and aggressive behavior as well as the evidence- and practice-based treatment strategies that may reduce such behavior. Given the fact that mental illness may increase the risk of violent or aggressive behavior, yet with only a small subset of mentally ill patients exhibiting this disturbing behavior, it is crucial that we are able to predict which individuals are more likely to be violent or aggressive and take measures to prevent violent acts.

Target Audience

This activity has been developed for prescribers specializing in psychiatry. There are no prerequisites. All other health care providers interested in psychopharmacology are welcome for advanced study, especially primary care physicians, nurse practitioners, psychologists, and pharmacists.

Statement of Need

The following unmet needs and professional practice gaps regarding violence were revealed through new medical knowledge and following a critical analysis of activity feedback, expert faculty assessment, and a literature review:

- Increasingly, pressure is being put on mental health professionals to better predict which individuals are at the greatest risk for committing acts of violence
- There is also great demand for clinicians to employ treatment strategies aimed at preventing violent and aggressive behavior
- There is little evidence-based psychopharmacology for the management of treatment-resistant aggressive symptoms in individuals with violence and assaultiveness other than clozapine
- Standard doses of all antipsychotics target 60-80% occupancy of D2 receptors, but this may principally treat positive symptoms and be effective only in individuals who are neither treatment resistant nor violent; very high-dose antipsychotic treatment to target >80% D2 receptor occupancy may be justified in individual cases

To help address clinician performance gaps with respect to understanding and treating violent or aggressive behavior, quality improvement efforts need to provide education regarding 1) the epidemiology, neurobiology, and genetics of violence,

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impulsivity, and aggression and 2) strategies to address violent, impulsive, and aggressive behavior in patients with mental illness.

Learning Objectives

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

- Understand the epidemiology and heterogeneity of violence and aggression
- Utilize knowledge of environmental and genetic risk factors for predicting which individuals may become violent or aggressive
- Explore the neurobiological factors thought to underlie violent and aggressive behavior
- Apply evidence-based treatment strategies to individuals with violent or aggressive behavior

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Nurses: for all of your CNE requirements for recertification, the ANCC will accept *AMA PRA Category 1 Credits*[™] from organizations accredited by the ACCME.

Physician Assistants: the NCCPA accepts *AMA PRA Category 1 Credits*[™] from organizations accredited by the AMA (providers accredited by the ACCME).

A certificate of participation for completing this activity is available.

Activity Instructions

This CME activity is in the form of a printed monograph and incorporates instructional design to enhance your retention of the information 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 6.0 hours.

Instructions for CME Credit

To receive your certificate of CME credit or participation, please complete the posttest and evaluation, available only online at www.neiglobal.com/CME (under "Book"). If a passing score of 70% or more is attained (required to receive credit), you can immediately print your certificate. There is a fee for the posttest for this

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These materials have been peer reviewed to ensure the scientific accuracy and medical relevance of the information presented and its independence from commercial bias. The Neuroscience Education Institute takes responsibility for the content, quality, and scientific integrity of this CME activity.

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Objectives

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- Describe the epidemiology and heterogeneity of violence and aggression
 - Utilize knowledge of environmental and genetic risk factors to predict which individuals may become violent or aggressive
 - Explore the neurobiological factors thought to underlie violent and aggressive behavior
 - Apply evidence-based assessment and treatment strategies to individuals with violent or aggressive behavior

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Introduction

Increasingly, pressure is being put on mental health professionals to better predict which individuals are at the greatest risk of committing acts of violence. There is also great demand for clinicians to employ treatment strategies aimed at preventing violent and aggressive behavior. In this book, we will discuss what is known about violent and aggressive individuals, including neural circuitry and possible genetic influences underlying violent and aggressive behavior as well as evidence- and practice-based treatment strategies that may reduce such behavior. Given the fact that mental illness may increase the risk of violent or aggressive behavior, yet with only a small subset of mentally ill patients exhibiting this disturbing behavior, it is crucial to be able to predict which individuals are more likely to be violent or aggressive and take measures to prevent violent acts.