

Antibiotics Simplified

SECOND EDITION

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Contents

Introduction	vii
New to the <i>Second Edition</i>	xi
Acknowledgments	xiii
PART 1: Considerations with Antibiotic Therapy	1
Chapter 1: The Wonderful World of Microbiology	3
Chapter 2: General Approach to Infectious Diseases	15
Chapter 3: Antibiotic Pharmacodynamics	23
Chapter 4: Adverse Consequences of Antibiotic Use	29
PART 2: Antibacterial Drugs	35
Chapter 5: Beta-Lactams	37
Penicillins	39
Natural Penicillins	41
Antistaphylococcal Penicillins	43
Aminopenicillins	45
Antipseudomonal Penicillins	47
Beta-Lactam/Beta-Lactamase Inhibitor Combinations	49
Cephalosporins	53
First-Generation Cephalosporins	55
Second-Generation Cephalosporins	57
Third-Generation Cephalosporins	61
Fourth-Generation Cephalosporins	65

Fifth-Generation Cephalosporins	67
Carbapenems	69
Monobactams	73
Chapter 6: Glycopeptides	75
Chapter 7: Fluoroquinolones	79
Chapter 8: Aminoglycosides	83
Chapter 9: Tetracyclines and Glycylcyclines	87
Chapter 10: Macrolides and Ketolides	91
Chapter 11: Oxazolidinones	95
Chapter 12: Nitroimidazoles	97
Chapter 13: Nitrofurans	101
Chapter 14: Streptogramins	105
Chapter 15: Cyclic Lipopeptides	109
Chapter 16: Folate Antagonists	113
Chapter 17: Lincosamides	117
Chapter 18: Polymyxins	121
PART 3: Antimycobacterial Drugs	125
<hr/>	
Chapter 19: Antimycobacterial Drugs	127
Chapter 20: Rifamycins	131
Chapter 21: Isoniazid	135
Chapter 22: Pyrazinamide	139
Chapter 23: Ethambutol	141
PART 4: Antifungal Drugs	143
<hr/>	
Chapter 24: Antifungal Drugs	145
Chapter 25: Polyenes	149
Chapter 26: Antimetabolites	153
Chapter 27: Azoles	157
Fluconazole	159
Itraconazole	163

Voriconazole	167
Posaconazole	171
Chapter 28: Echinocandins	175
PART 5: Antiviral Drugs	179
<hr/>	
Chapter 29: Antiviral Drugs	181
Chapter 30: Anti-Herpes Simplex Virus and Varicella-Zoster Virus Agents	185
Chapter 31: Anti-Cytomegalovirus Agents	187
Chapter 32: Neuramidase Inhibitors	191
Chapter 33: Antiretroviral Drugs	195
Nucleoside and Nucleotide Reverse Transcriptase Inhibitors	197
Non-nucleoside Reverse Transcriptase Inhibitors (NNRTIs)	201
Protease Inhibitors	205
Entry and Integrase Inhibitors	209
PART 6: Antiparasitic Drugs	213
<hr/>	
Chapter 34: Antiparasitic Drugs	215
Chapter 35: Quinolines	219
Chapter 36: Atovaquone	223
Chapter 37: Benzimidazoles	227
Chapter 38: Pentamidine	229
Chapter 39: Ivermectin	233
Appendix 1: Selected Normal Human Flora	236
Appendix 2: Clinically Useful Spectra of Activity	238
Appendix 3: Empiric Regimens for Common Infections	240
Index	245

Introduction

Antibiotics—the word sends terror coursing through the veins of students and makes many healthcare professionals uncomfortable. The category of antibiotics actually contains many different classes of drugs that differ in spectrum of activity, adverse effect profiles, pharmacokinetics and pharmacodynamics, and clinical utility. These classes can seem bewildering and beyond comprehension. We believe that taking a logical, stepwise approach to learning the pharmacotherapy of infectious diseases can help burn away the mental fog preventing optimal use of these drugs.

Learning the characteristics of antibiotics simplifies learning infectious disease pharmacotherapy. Students and clinicians who attempt to learn the antibiotics of choice for different types of infections before knowing the characteristics of those drugs never truly understand the context of what they are attempting to learn. Once the characteristics of the antibiotics are known, making a logical choice to treat an infection is much easier. This approach takes some time up front, but it will be well worth the effort when the clinician realizes that the pharmacotherapy of all infections is fundamentally similar and logical.

■ How to Use This Book

We wrote this book in an effort to condense the many facts that are taught about antibiotics in pharmacology and pharmacotherapy courses into one quick reference guide. It is meant to supplement material learned in pharmacology, not to supplant it. Use this book as a reference when you encounter a class of antibiotics that you know you have heard about; it will remind you of key points you may have forgotten.

This book contains six parts. Part 1 reviews basic microbiology and how to approach the pharmacotherapy of a patient with a presumed infection. The chapters in Parts 2–6 provide concise reviews of various classes of antibacterial, antimycobacterial, antifungal, antiviral, and antiparasitic drugs. Again, this book is intended to supplement your other pharmacology textbooks. These chapters give key points about each class of antibiotics—they are not thorough reviews. The appendices contain references that may help in daily use.

■ Format of the Drug Class Reviews

Each drug class chapter follows the same basic format. The agents belonging to each class are listed first. The drugs used most commonly in practice are **bolded**.

Spectrum

The spectra listed are not exhaustive. This section summarizes key organisms against which each class has or does not have activity.

Adverse Effects

This section lists key adverse effects. This list is not exhaustive, but it gives the most common and/or concerning adverse effects of each class.

Dosing Issues

This section discusses common problems or potential errors in drug dosing for select drug classes.

Important Facts

This section provides a summary of significant facts for each drug class.

What They're Good For

This section lists some of the most common and/or useful indications for the agents in the class. Often the agents discussed have not been approved for these indications by the Food and Drug Administration (FDA), but they are commonly used for them anyway. Conversely, many FDA indications that the antibiotics do have are not listed here, because they are often out-of-date.

Don't Forget!

In this section, we list points that are often overlooked or especially important when dealing with the drug class.

As you read this book, try to think of situations in which the antibiotics would be useful to your patients. Think of *why* an antibiotic is useful for an indication; don't just learn *that* it is. It is our sincere hope that you too have that magic moment where the world of antibiotics and the study of infectious diseases click together. Let us know when it happens.

New to the *Second Edition*

The *Second Edition* of *Antibiotics Simplified* expands on the drug classes covered in the first while retaining the “key point” focus of the text that has made it successful. In addition to antibacterial and antifungal agents, the *Second Edition* includes antiviral agents (including antiretrovirals for HIV), antimycobacterial agents, and antiparasitic agents. A new appendix includes empiric regimens for common infections for quick reference.

Acknowledgments

Our thanks go to those who helped to edit this text, and to our wives, who put up with us while we wrote it.

We dedicate this text to the pharmacy students of Temple University and University of California–San Francisco. We hope you find it useful.

