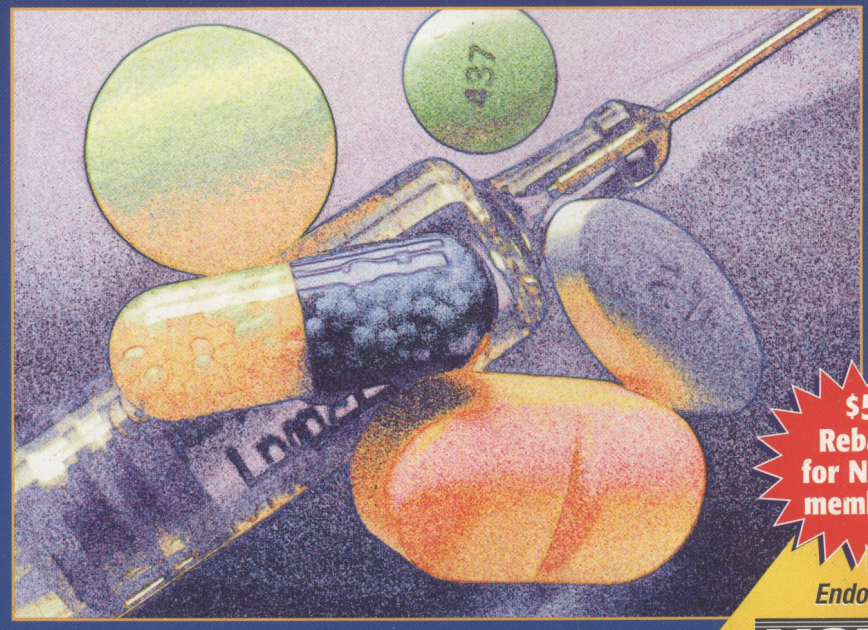
Springhouse Nurse's Drug Guide 2005

Foreword by Roger T. Malseed, PhD



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Springhouse Nurse's Drug Guide 2005

SIXTH EDITION

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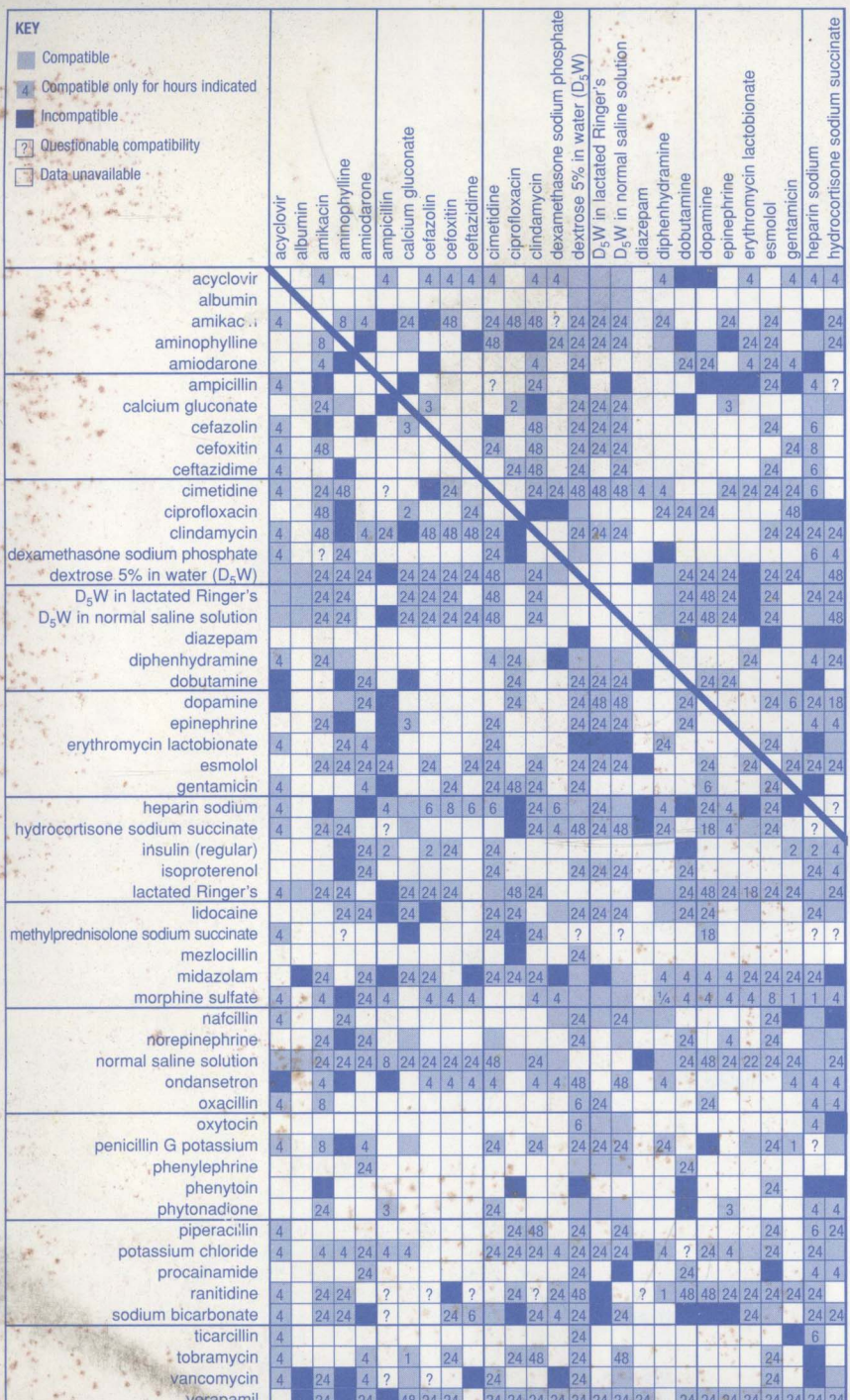
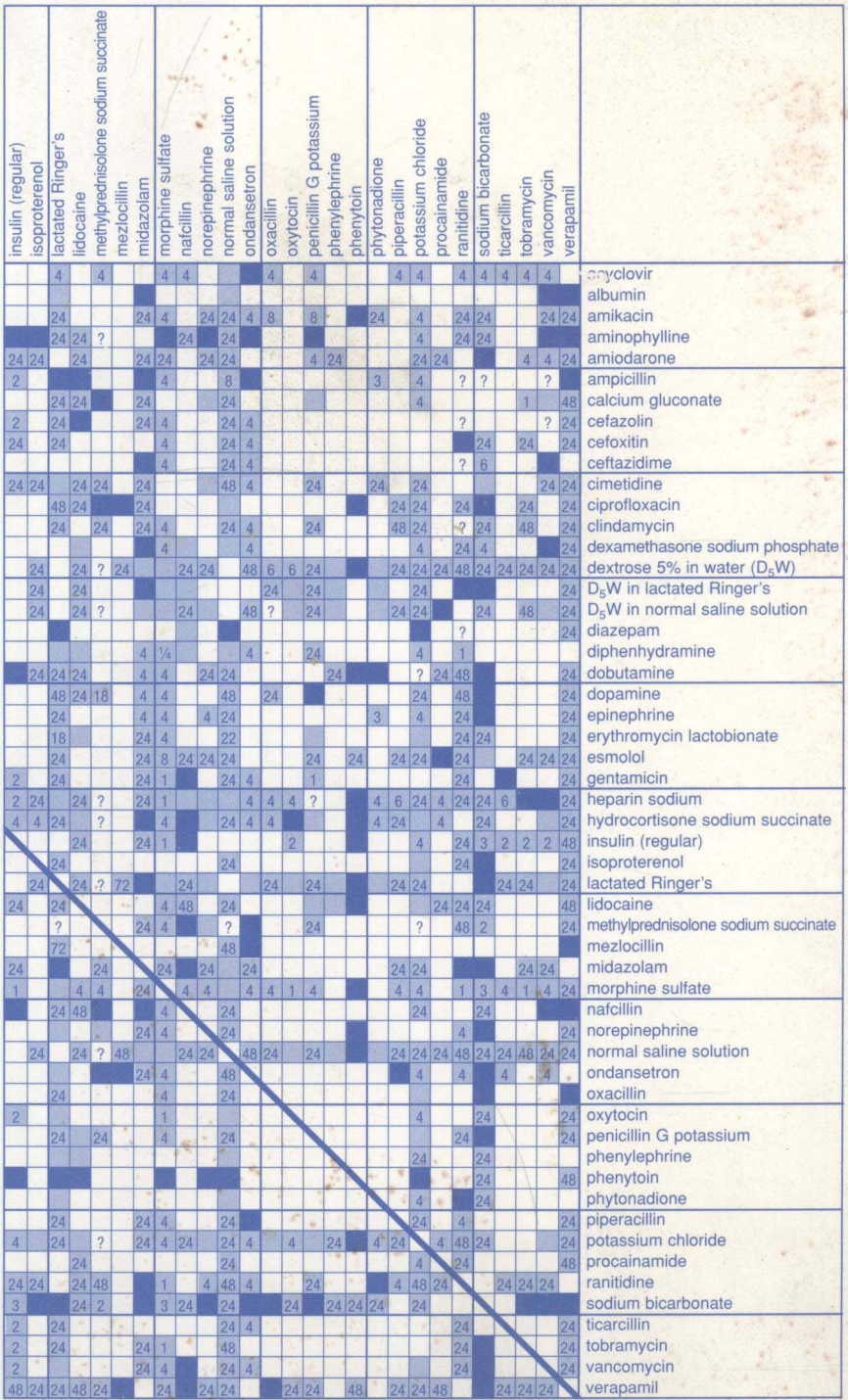
I.V. drug compatibility





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Foreword

During my thirty years of teaching pharmacology to nursing students, I have had the opportunity to review many drug reference guides for content as well as accuracy. As an educator and a licensed pharmacist, I judge a drug reference not only on its applicability to the student but also to the practicing health professional. I can think of no other nursing drug guide that fulfills these criteria better than *Springhouse Nurse's Drug Guide 2005.* The new 6th edition of this well-received drug guide has all of the unique and popular features of previous editions that have set it apart from other drug guides while adding several new features that only increase its usefulness.

The early chapters are devoted to important aspects of drug usage, such as calculating dosages, administering drugs by different routes, and avoiding medication errors. A section outlining appropriate drug classifications precedes the individual drug monographs and assists the reader in grouping drugs sharing similar actions, an important learning tool especially for the student user.

The drug monographs themselves make up the bulk of the book and contain a wealth of useful, pertinent information. A listing of common American brand names and those available in Canada and Australia follow phonetic pronunciation of the generic drug name. Among the other distinct features of the *Springhouse Nurse's Drug Guide 2005* monographs are the designation of indications as either approved or off-label and the classification of adverse reactions as either common, uncommon, life-threatening, or common and life-threatening. This latter feature is of enormous value in properly responding to an adverse drug reaction depending on its potential for serious harm. Every monograph containing an I.V. drug provides information about properly preparing, administering, monitoring, and storing I.V. drugs. The I.V. compatibility table on the inside front cover complements these I.V. administration sections. A new feature in the Interactions section of each monograph is the highlighting of rapid-onset interactions that must be given immediate attention. The breakdown of drug-herb, drug-food, and drug-lifestyle interactions in addition to drug-drug interactions provides important information for monitoring drug therapy in the outpatient setting, where OTC drug use and patient behavior often can result in problematic interactions. Following the detailed presentation of the pharmacology of each drug, a section devoted to the nursing process provides additional information to help the reader make proper decisions to guarantee safe and effective drug use.

An extensive section on herbal medications provides further data on these widely used products, with additional interactions between herbs and foods prominently noted. Color photographs of commonly used drugs are displayed mid-guide and cross-referenced to the appropriate monograph page, aiding the user in visually identifying many common oral drugs. Users can test their drug knowledge using the enclosed free CD-ROM, which contains a pharmacology review and self-test, a drug-class match game, and a link to eDrugInfo.com, a Web site with drug news and updates.

As in previous editions, the appendices offer a wealth of relevant information for students as well as practitioners, including a critical section on look-alike and sound-alike drug names. Increasingly, these similarities are contributing to serious medication errors, and several manufactures have initiated labeling changes to avoid just such errors. Nurses need to be especially vigilant in this regard, and *Springhouse Nurse's Drug Guide 2005* provides valuable information to help avoid these errors.

Endorsed by the National Student Nurses' Association (NSNA), the *Guide* remains an invaluable addition to the labcoat and library of every nurse, whether prospective or practicing. This nearly 1,500-page guide provides one of the most comprehensive, topical, and accurate drug references currently available. Students will find it to be a useful reference during their academic careers and beyond, while practitioners will appreciate the instant retrieval of essential drug information. The often-overwhelming

volume of new drug information has been made exceedingly manageable within the pages of *Springhouse Nurses' Drug Guide 2005*. I will continue to use and recommend the *Guide* enthusiastically.

Roger T. Malseed, PhD
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How to use *Springhouse Nurse's Drug Guide 2005*

Springhouse Nurse's Drug Guide 2005 is the premier drug reference for all nursing students—beginning to advanced. Tightly organized entries offer consistent, practical drug information for more than 750 common generic drugs, presented in a clear writing style that be ginning students can understand. The book is a must-have for advanced students as well; it includes comprehensive pharmacokinetic and pharmacodynamic information and route-onset-peak-duration tables that give readers a clear understanding of drug actions. Because each entry also follows a nursing process organization, the book even helps students formulate accurate patient care plans. Students of all levels will find that *Springhouse Nurse's Drug Guide 2005* offers a comprehensive, convenient resource for all aspects of drug information.

The book begins with introductory material crucial to safe, accurate drug administration. Chapter 1 discusses drug therapy as it relates to the nursing process. Chapter 2 explains how to calculate dosages and provides examples for each step in the calculations. Chapter 3 discusses how to administer drugs by commonly used routes and includes illustrations to guide students through the steps of each procedure. Chapter 4 focuses on common medication errors and explains how to avoid them.

Drug classifications

Springhouse Nurse's Drug Guide 2005 provides complete overviews of 40 pharmacologic and therapeutic drug classifications, from alkylating drugs to xanthine derivatives. Following the class name is an alphabetical list of examples of drugs in that class; the drug highlighted in color represents the prototype drug for the class. The text then provides class-specific information on indications, actions, adverse reactions, contraindications, and precautions. Look for the special Lifespan logo () for contraindications and precautions for specific populations including children, pregnant and breast-feeding women, and elderly patients.

Alphabetical listing of drugs

Drug entries in this text appear alphabetically by generic name for quick reference. The generic name is followed by a pronunciation guide and an alphabetical list of brand (trade) names. Brands that don't need a prescription are designated with a dagger (†); those available only in Canada with a closed diamond (♦); those available only in Australia with an open diamond (◇); and those that contain alcohol with a single asterisk (*). The mention of a brand name in no way implies endorsement of that product or guarantees its legality.

Each entry then identifies the drug's pharmacologic and therapeutic classifications; that is, its chemical category and its major clinical use. Listing both classifications helps you grasp the multiple, varying, and sometimes overlapping uses of drugs within a single pharmacologic class and among different classes. Each entry then lists the drug's pregnancy risk category and, if appropriate, its controlled substance schedule.

Indications and dosages

The next section lists the drug's indications and provides dosage information for adults, children, and elderly patients, as applicable. Off-label indications (uses that are clinically accepted but not approved by the FDA) are designated with a double dagger (‡). Dosage instructions reflect current clinical trends in therapeutics and can't be considered as absolute or universal recommendations. For individual application, dosage instructions must be considered in light of the patient's clinical condition.

When giving a drug to an impaired patient or another patient who requires an adjusted dose, look for the Adjust-a-Dose label and logo () at the end of the indication.

I.V. administration

This new section, only found in monographs for drugs that can be given I.V., addresses preparation, administration, and storage information, as well as cautions and other information about the safe use of I.V. drugs.

Contraindications and precautions

This section specifies conditions in which the drug should not be used and details recommendations for cautious use. The Lifespan logo () draws your attention to contraindications and precautions for special populations, such as children, pregnant and breast-feeding women, and elderly patients.

Adverse reactions

This section lists adverse reactions to each drug by body system. The most common adverse reactions (those experienced by at least 10% of people taking the drug in clinical trials) are in *italic* type; less common reactions are in roman type; life-threatening reactions are in ***bold italic*** type; and reactions that are common *and* life-threatening are in **BOLD CAPITAL** letters.

Interactions

This section lists each drug's confirmed, clinically significant interactions with other drugs (additive effects, potentiated effects, and antagonistic effects), herbs, foods, and lifestyle (such as alcohol use or smoking).

Drug interactions are listed under the drug that is adversely affected. For example, antacids that contain magnesium may decrease absorption of tetracycline. Therefore, this interaction is listed under tetracycline. To determine the possible effects of using two or more drugs simultaneously, check the interactions section for each of the drugs in question.

A new feature to this edition shows in color the drugs that cause interactions that arise quickly and require immediate attention, called rapid-onset interactions.

Effects on lab test results

This section lists increased and decreased levels, counts, and other laboratory test results that may be caused by the drug.

Pharmacokinetics

This section describes absorption, distribution, metabolism, and excretion, along with the drug's half-life. It also provides a quick reference table highlighting onset, peak, and duration for each route of administration. Values for half-life, onset, peak, and duration are for patients with normal renal function, unless specified otherwise.

Action

This section explains the drug's chemical and therapeutic actions. For example, although all antihypertensives lower blood pressure, they don't all do so by the same pharmacologic process.

Available forms

This section lists all available preparations for each drug (for example, tablets, capsules, solutions for injection) and all available dosage forms and strengths. As with the brand names discussed above, over-the-counter dosage forms and strengths are marked with a dagger (†); those available only in Canada with a closed diamond (♦); those available only in Australia with an open diamond (◇); and those that contain alcohol with an asterisk (*).

Nursing Process

This section uses the nursing process as its organizational framework. It also contains an Alert logo () to call your attention to vital, need-to-know information or serve as a warning about a common drug error.

- Assessment focuses on observation and monitoring of key patient data, such as vital signs, weight, intake and output, and laboratory values.
- Nursing diagnoses represent those most commonly applied to drug therapy. In actual use, nursing diagnoses must be relevant to an individual patient; therefore, they may not include the listed examples and may include others not listed.
- Planning and implementation offers detailed recommendations for drug administration, including full coverage of P.O., I.M., S.C., and other routes.
- Patient teaching focuses on explaining the drug's purpose, promoting compliance, and ensuring proper use and storage of the drug. It also includes instructions for preventing or minimizing adverse reactions.
- Evaluation identifies the expected patient outcomes for the listed nursing diagnoses.

Because nursing considerations in this text emphasize drug-specific recommendations, they don't include standard recommendations that apply to all drugs, such as "assess the six rights of drug therapy before administration" or "teach the patient the name, dose, frequency, route, and strength of the prescribed drug."

Photoguide to tablets and capsules

To make drug identification easier and to enhance patient safety, *Springhouse Nurse's Drug Guide 2005* offers a full-color photoguide to the most commonly prescribed tablets and capsules. Shown in their actual sizes, the drugs are arranged alphabetically by generic names. Trade names and most common dosage strengths are included. Page references appear under each drug name so you can turn quickly to information about the drug.

Herbal medicines

Herbal medicine entries appear alphabetically by name, followed by a phonetic spelling.

Reported uses

This section lists reported uses of herbal medicines. Some of these uses are based on anecdotal claims; other uses have been studied. However, a listing in this section should not be considered a recommendation; herbal medicines aren't regulated by the FDA.

Dosages

This section lists the routes and general dosage information for each form of the herb and, where available, in accordance with its reported use. This information has been gathered from the herbal literature, anecdotal reports, and available clinical data. However, not all uses have specific dosage information; often, no consensus exists. Dosage notations reflect current clinical trends and should not be considered as recommendations by the publisher.

Cautions

This section lists any condition, especially a disease, in which use of the herbal remedy is undesirable. It also provides recommendations for cautious use, as appropriate.

Adverse reactions

This section lists undesirable effects that may follow use of an herbal supplement. Some of these effects have not been reported but are theoretically possible, given the chemical composition or action of the herb.

Interactions

This section lists each herb's clinically significant interactions, actual or potential, with other herbs, drugs, foods, or lifestyle choices. Each statement describes the effect of the interaction and then offers a specific suggestion for avoiding the interaction. As with adverse reactions, some interactions have not been proven but are theoretically possible.

Action

This section describes the herb's chemical and therapeutic actions.

Common forms

This section lists the available preparations for each herbal medicine as well as dosage forms and strengths.

Nursing considerations

This section offers helpful information, such as monitoring techniques and methods for the prevention and treatment of adverse reactions. Patient teaching tips that focus on educating the patient about the herb's purpose, preparation, administration, and storage are also included, as are suggestions for promoting patient compliance with the therapeutic regimen and steps the patient can take to prevent or minimize the risk or severity of adverse reactions.

Appendices and index

The appendices include a list of look-alike and sound-alike drug names for use in preventing drug errors, a listing of opioid analgesic combination products detailing the components of each product, a list of dialyzable drugs, a glossary explaining unfamiliar medical words and phrases, a list of drugs that shouldn't be crushed, a table of equivalents, a new English-to-Spanish translator of common drug-related

phrases, and a list of normal laboratory test values.

The comprehensive index lists drug classifications, generic drugs, brand names, indications, and herbal medicines included in this book.

PharmDisk 6.0

The CD-ROM included with this book (inside the back cover) offers two exciting Windows-based software programs. "Pharmacology Self-test" tests your knowledge with 300 multiple-choice questions. And a challenging interactive game helps you learn drug classifications. *PharmDisk 6.0* also provides a link to eDrugInfo.com.

eDrugInfo.com

This Web site keeps *Springhouse Nurse's Drug Guide 2005* current by providing the following features:

- updates on new drugs, new indications, and new warnings
- patient teaching aids on new drugs
- news summaries of pertinent drug information.

The Web site also gives you:

- information on herbs
- links to pharmaceutical companies, government agencies, and other drug information sites
- a bookstore full of nursing books, software, and more.

Plus, registering with eDrugInfo.com entitles you to e-mail notifications when new drug updates are posted.

Guide to abbreviations

ACE	angiotensin-converting enzyme
ACT	activated clotting time
ADH	antidiuretic hormone
AIDS	acquired immunodeficiency syndrome
ALT	alanine transaminase
APTT	activated partial thromboplastin time
AST	aspartate transaminase
AV	atrioventricular
b.i.d.	twice daily
BPH	benign prostatic hyperplasia
BUN	blood urea nitrogen
cAMP	cyclic adenosine monophosphate
CBC	complete blood count
CK	creatine kinase
CMV	cytomegalovirus
CNS	central nervous system
COMT	catechol-*O*-methyltransferase
COPD	chronic obstructive pulmonary disease
CPK	creatine phosphokinase
CSF	cerebrospinal fluid
CV	cardiovascular
CVA	cerebrovascular accident
CYP	cytochrome P450
DIC	disseminated intravascular coagulation
D_5W	dextrose 5% in water
dl	deciliter
DNA	deoxyribonucleic acid
ECG	electrocardiogram
EEG	electroencephalogram
EENT	eyes, ears, nose, throat
FDA	Food and Drug Administration
g	gram
G	gauge
GABA	gamma-aminobutyric acid
GFR	glomerular filtration rate
GGT	gamma-glutamyltransferase
GI	gastrointestinal
gtt	drops
GU	genitourinary
G6PD	glucose-6-phosphate dehydrogenase
H	histamine
HDL	high-density lipoprotein
HIV	human immunodeficiency virus
HMG-CoA	beta-hydroxy-beta-methylglutaryl coenzyme A
hr	hour
h.s.	at bedtime
ICU	intensive care unit
I.D.	intradermal
I.M.	intramuscular
INR	international normalized ratio
IPPB	intermittent positive-pressure breathing
IU	international unit
I.V.	intravenous
kg	kilogram
L	liter
lb	pound
LDH	lactate dehydrogenase

LDL	low-density lipoprotein
M	molar
m^2	square meter
MAO	monoamine oxidase
mcg	microgram
mEq	milliequivalent
mg	milligram
MI	myocardial infarction
min	minute
ml	milliliter
mm^3	cubic millimeter
Na	sodium
NG	nasogastric
NSAID	nonsteroidal anti-inflammatory drug
OTC	over-the-counter
oz	ounce
PABA	para-aminobenzoic acid
$Paco_2$	carbon dioxide partial pressure
Pao_2	oxygen partial pressure
PCA	patient-controlled analgesia
P.O.	by mouth
P.R.	by rectum
p.r.n.	as needed
PT	prothrombin time
PTT	partial thromboplastin time
PVC	premature ventricular contraction
q	every
q.i.d.	four times daily
RBC	red blood cell
RDA	recommended daily allowance
REM	rapid eye movement
RNA	ribonucleic acid
RSV	respiratory syncytial virus
SA	sinoatrial
S.C.	subcutaneous
SIADH	syndrome of inappropriate antidiuretic hormone
S.L.	sublingual
SSRI	selective serotonin reuptake inhibitor
T_3	triiodothyronine
T_4	thyroxine
tbs	tablespoon
t.i.d.	three times daily
tsp	teaspoon
USP	United States Pharmacopeia
UTI	urinary tract infection
WBC	white blood cell