Sheridan

American Society of Health-System Pharmacists
Style Guide

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Introduction

Style for the ASHP books is based on AMA style. Refer to this style guide first, and defer to the *AMA Style Manual* (11th Edition) if the information cannot be found herein.

Other suggested resources appear below.

DICTIONARIES
The American Heritage Dictionary (Fifth Edition)
Dorland's Illustrated Medical Dictionary (32nd Edition

DRUG NAMES (TRADE AND GENERIC)
AHFS Drug Information 2013

JOURNAL ABBREVIATIONS
PubMed (http://www.ncbi.nlm.nih.gov/nlmcatalog/journals)

JOURNAL CITATION MATCHER
PubMed (http://www.ncbi.nlm.nih.gov/pubmed/citmatch)

MEDICAL ABBREVIATIONS
Stedman's Medical Abbreviations, Acronyms & Symbols Fifth Edition
The Joint Commission (http://www.jointcommission.org/assets/1/18/Do_Not_Use_List.pdf)

STYLE AND USAGE
The Chicago Manual of Style (17th Edition)

Abbreviations

For uncommon or lengthy terms that appear more than once in a chapter, spell out at first instance in the running text (not in headings, sidebars, footnotes, tables, or figures) and follow with the abbreviation in parentheses:

> Magnetic resonance imaging (MRI) is a test that uses a magnetic field and pulses of radio wave energy to make pictures of organs and structures inside the body.

The abbreviation can then be used thereafter in the chapter.

Do not use abbreviations in headings or at the beginning of sentences unless in a monograph, table, or figure.

Academic degrees, certificates, and honors

Do not use periods in abbreviations for academic degrees, certificates, and honors (BA, MS, MD, BSPharm, PharmD, RPh, FASHP).

Binomial nomenclature

After first mention of the binomial species name, abbreviate the genus portion of the name without a period. Do not abbreviate the specific species name.

Do not begin a sentence with an abbreviated genus name; either spell out or reword.

Italicize genus and species names of microorganisms, plants, and animals when used in the singular and the names of a variety of subspecies. Do not italicize plural forms, adjectival forms, or class, order, family, or tribe names (eg, *Chlamydia trachomatis,* chlamydia, *Streptococcus*, streptococcus organisms, streptococci).

> *Staphylococcus aureus* is a common cause of hospital-acquired infection. Nosocomial *S aureus* infection is also a source of community acquired infection.

Companies, agencies, and organizations

Use abbreviations with or without periods according to the official name of the company (eg, JPMorgan Chase & Co., B. C. Decker, American Mensa, Ltd, CBS). If in doubt, consult the company's website. In running text, it is acceptable to omit elements such as Inc., & Co., and LLC (eg, "JPMorgan Chase has offices in over 60 countries").

Spell out the names of agencies and organizations on first occurrence in the text, and then use the abbreviations or acronyms without periods (FDA, ASHP, NIH, APhA, NASA).

Designation of time

In text, spell out days of the week and months. In reference lists, tables, and figures, use three letters (capitalize the first letter and lowercase the rest) without periods (eg, Mon, Tue, Wed, Thu, Fri, Sat, Sun, Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec).

Use lowercase letters with periods for *ante meridiem* (before noon) and *post meridiem* (after noon) in the text and elsewhere (a.m., p.m.).

For time zones, use uppercase letters without periods (eg, EST, CST).

For systems of chronology, use uppercase letters without periods in the text and elsewhere (eg, 3000 BC, 500 AD).

See Units of Measure for abbreviations of units of time.

Geographical names

COUNTRIES, STATES AND TERRITORIES

In running text, spell out *United States* when used as a noun (eg, They moved to the United States.), and use U.S. as an adjective (eg, They became U.S. citizens.). In tables and figures, the abbreviation U.S. as a noun can be used to save space.

In running text, spell out the names of U.S. states and territories as well as Canadian provinces and territories. In reference lists, tables, and figures, use two-letter USPS codes as shown below.

U.S. states and territories

AL	Alabama	IL	Illinois	MT	Montana	PR	Puerto Rico
AK	Alaska	IN	Indiana	NE	Nebraska	RI	Rhode Island
AZ	Arizona	IA	Iowa	NV	Nevada	SC	South Carolina
AR	Arkansas	KS	Kansas	NH	New Hampshire	SD	South Dakota
CA	California	KY	Kentucky	NJ	New Jersey	TN	Tennessee
CO	Colorado	LA	Louisiana	NM	New Mexico	TX	Texas
CT	Connecticut	ME	Maine	NY	New York	UT	Utah
DE	Delaware	MD	Maryland	NC	North Carolina	VT	Vermont
DC	District of Columbia	MA	Massachusetts	ND	North Dakota	VA	Virginia
FL	Florida	MI	Michigan	OH	Ohio	WA	Washington
GA	Georgia	MN	Minnesota	OK	Oklahoma	WV	West Virginia
HI	Hawaii	MS	Mississippi	OR	Oregon	WI	Wisconsin
ID	Idaho	MO	Missouri	PA	Pennsylvania	WY	Wyoming

Canadian states and territories

AB	Alberta	NU	Nunavut
BC	British Columbia	ON	Ontario
MB	Manitoba	PE	Prince Edward Island
NB	New Brunswick	QC	Quebec
NL	Newfoundland and Labrador	SK	Saskatchewan
NS	Nova Scotia	YT	Yukon Territory
NT	Northwest Territories		

Spell out the names of countries in running text. In tables and figures, countries can be abbreviated using upper- and lowercase letters with periods (eg, Fr., Ger.).

STREET ADDRESSES

Do not abbreviate addresses in running text (eg, "The pharmacy is located on Curry Avenue in Bethesda, Maryland"). Complete mailing addresses may be abbreviated in the text:

> Washington Pharmacy
> 114 Curry Ave.
> Bethesda, MD 20814

Single-letter compass point abbreviations in mailing addresses are followed by a period (5307 N. Highland Ave.), but two-letter compass point abbreviations are not (342 Severn Dr. NW).

Journal names

In reference lists, abbreviate journal names according to the U.S. National Library of Medicine's journal catalog search at http:// www.ncbi.nlm.nih.gov/nlmcatalog/journals. The journal-name abbreviation is italicized and followed by a period, which denotes the close of the title group of bibliographic elements. Satpathy R. Bare metal stents versus drugeluting stents for saphenous vein grafts [editorial]. *J Interv Cardiol.* 2011;24(2):181-183.

Military services and titles

Use full capitals without periods for abbreviations of the U.S. military services (USN, USA, USAF, USMC).

The U.S. military omits periods in the official abbreviated forms of its ranks. The abbreviations for a given rank vary across the branches. Please check the U.S. Department of Defense's website for the correct abbreviations (http://www.defense. gov/about/insignias/officers.aspx).

Names and titles of persons

GIVEN NAMES

Given names should not be abbreviated in the text (Benjamin Franklin, *not* Benj. Franklin) except by using initials followed by a period and a space (James A. Smith, E. B. White).

Abbreviate *Junior* and *Senior* when they are part of a person's name (David A. Foster, Jr.).

If a person's entire name is abbreviated using initials, do not use periods (FDR, JFK).

PROFESSIONAL, CIVIL, AND RELIGIOUS TITLES

Professional, civil, and religious titles preceding a full name may be abbreviated. Titles preceding a surname alone should be spelled out (Governor McDonnell).

Use periods in abbreviations that end with a lowercase letter (Dr. Christine Rose, Pres. Barbara Hewitt, Hon. William Portman, Gov. Bob McDonnell, Rev. Elizabeth Brown, St. Francis).

Do not use periods in abbreviations that appear in full capitals (CEO Douglas Martin).

SOCIAL TITLES

Use periods in social titles when they precede a full name or surname (Ms. Anna Martin, Mr. Bennett).

Technology and science

Do not use periods in technical, clinical, and scientific abbreviations (JPEG, dpi, HIV, ADPase, bid, kg, mL, HCl).

Below are approved abbreviations for units of measure and other pharmacy-related terms. Use singular abbreviations for units of measurement (eg, 10 mg, *not* 10 mgs, 150 lb *not* 150 lbs).

ampere	A
after meals (post cibum)	pc
as needed (pro re nata)	PRN
at bedtime (hora somni)	hs
before meals (ante cibum)	ac
by mouth (per os)	po
calorie	cal
candela	cd
Celsius (close up to degree symbol [eg, 40°C])	C
centigram	cg
centimeter	cm
cubic centimeter	cm³
cubic foot	cu ft
cubic inch	cu in
cubic meter	m³
cubic micrometer	μm³
cubic millimeter	mm³
cubic yard	cu yd
dalton	Da
deciliter	dL
drop (gutta)	gtt
equivalent	Eq
every (quaque)	q*
Fahrenheit (close up to degree symbol [eg, 98°F])	F
femtogram	fg
femtoliter	fL
femtomole	fmol
fluid ounce	fl oz
foot	ft
four times a day	QID
gram	g
hertz	Hz
hour	hr*
inch	in
intramuscular	IM
intravenous	IV
kelvin	K
kilocalorie	kcal
kilodalton	kDa
kilogram	kg
kilohertz	kHz
kilometer	km
kilovolt	kV
kilovolt-ampere	kVA
kilowatt	kW
liter	L
left eye (oculus sinister)	os
megahertz	MHz
megaunit	MU

megawatt	MW
meter	m
microampere	µA
microgram (spell out; do not use µg)	mcg
microliter	µL
micrometer	µm
micromolar	µM
micromole	µmol
microosmole	µOsm
microvolt	µV
microwatt	µW
miles per hour	mph
milliampere	mA
milliequivalent	mEq
milligram	mg
milliliter	mL
millimeter	mm
millimolar	mM
millimole	mmol
milliosmole	mOsm
millivolt	mV
milliwatt	mW
minute	min*
molar	M
mole	mol
month	mo*
nanogram	ng
nanometer	nm
nanomolar	nM
nanomole	nmol
normal (solution)	N
oral	PO
osmole	osm
ounce	oz
picogram	pg
picometer	pm
picomolar	pM
picomole	pmol
pint	pt
pound	lb
quart	qt
right eye (oculus dexter)	od
second	sec*
square centimeter	cm^2
square foot	sq ft
square inch	sq in
square meter	m^2
square millimeter	mm^2
subcutaneous	sub-Q

three times a day (ter in die)	TID
twice a day (bis in die)	BID
volt	V
volume	vol
watt	W
week	wk*
yard	yd
year x	yr*

*Use sec, min, hr, wk, mo, yr, and q in virgule expressions (75 mL/hr, 15 mcg/kg/day), drug sigs (q 6 hr), tables, and figures. Do not use these abbreviations in running text, table footnotes, or figure legends.

Do not abbreviate *day* or *dose* as they can be mistaken for one another.

Do not abbreviate unit, International Units, microunit, milliunit, or milli-International Unit.

Do not abbreviate the following terms; spell them out to avoid ambiguity. Refer to the Joint Commission's Official "Do Not Use" list of abbreviations (http://www.jointcommission.org/assets/1/18/dnu_list.pdf).

Do Not Use:	**Use Instead:**
U	units
IU	International Units
Q.O.D., QOD, q.o.d., qod	every other day
MSO_4	morphine sulfate
$MgSO_4$	magnesium sulfate

Capitalization

Abbreviations and acronyms

Do not capitalize words from which an abbreviation or acronym is derived unless those words are proper nouns:

> National Institutes of Health (NIH)
> residency program directors (RPDs)
> enzyme-linked immunosorbent assay (ELISA)

Eponyms and words derived from proper nouns

For medical eponyms (eg, names of conditions, diseases, syndromes, and diagnostic procedures), capitalize the proper noun but not the common noun:

> Alzheimer disease
> Charcot-Marie-Tooth disease
> Down syndrome
> Wilms tumor
> Winkler test

Do not capitalize derivative terms:

> mullerian duct
> arabic and roman numerals
> brussels sprouts
> darwinian
> parkinsonism

Organisms

Capitalize the formal name of a genus when used in the singular, with or without a species name. Capitalize formal genus names but not plural generic designations (streptococci) or derived adjectives (streptococcal).

Do not capitalize the name of a species, variety, subspecies, phylum, class, order, or family.

Sociocultural designations

Capitalize names of nationalities, ethnicities, religions, languages, and political parties. Do not capitalize *white* or *black* as a reference to race.

Titles and headings

Do not capitalize conjunctions, articles, or prepositions unless a preposition contains four or more letters (eg, Women's Health Across the Lifespan).

Do not capitalize the second part of a hyphenated compound if (1) either part is a suffix or prefix; (2) both parts constitute a single word; or (3) each part of the hyphenated compound carries equal weight:

>Nonsteroidal Anti-inflammatory Drugs
>Long-term Treatment of Diabetes
>Drug-Resistant Bacteria

Capitalize a person's title when it precedes the person's name. Do not capitalize the title when it follows the name:

>Committee Chair Michael Buckner organized the meeting.
>At the meeting, Michael Buckner was elected to be the committee chair.

Figures and Tables

Figures

FIGURE CITATIONS
Every figure must be cited in text in numerical order. Citations should appear in boldface (eg, **Figure 1-3**).

FIGURE NUMBER
Number a figure according to the chapter number and its order of appearance in the chapter. Use a hyphen to separate the two numbers (eg, **Figure 2-3**, the third figure in Chapter 2).

FIGURE TITLE
The figure title should be separated from the figure number by a period. The title should be a brief, descriptive phrase.

> **Figure 2-1.** Pathophysiology of DVT and PE_2

FIGURE LEGEND
The figure legend should be written in sentence format. The legend may contain (1) basic information that describes the figure; (2) definitions of abbreviations used in the figure (eg, CLO = cod liver oil; MOM = milk of magnesia); and (3) source notes (eg, adapted from, reprinted with permission from, all rights reserved). Insert the source notes in parentheses. References in the source notes should be formatted according to ASHP's reference guidelines (see References).

> Pulmonary emboli usually originate in the deep veins of the leg. (1) The thrombus typically originates around the venous valves and other areas of stasis. (2) Clots that extend or originate above the knee are at a higher risk of embolization. (3) Pulmonary emboli travel through the venous system, through the right side of the heart, to the lungs. PTE = pulmonary thromboembolism. *Source*: Reprinted with permission from Tapson VF. Acute pulmonary embolism. *N Engl J Med.* 2008;358:1037-1052. Massachusetts Medical Society. All rights reserved.

Tables

TABLE CITATIONS
Every table must be cited in text in numerical order. Citations should appear in boldface (eg, **Table 1-3**).

TABLE NUMBER
Number a table according to the chapter number and its order of appearance in the chapter. Use a hyphen to separate the two numbers (eg, Table 4-2, the second figure in Chapter 4).

TABLE TITLE
Separated by a period, the table title follows the table number and appears above the table. The title should be a brief, descriptive phrase.

> **Table 4-2.** Pharmacokinetics of Available Antithrombin Agents[4]

The main categories of information in the table should have separate columns with a brief heading that identifies all items listed in that column. Set column headings in boldface type and capitalize according to style for titles and headings (all words are capitalized except for conjunctions, articles, or prepositions containing four letters or less). Column headings should be consistent in style and presentation between all tables in the manuscript.

ROW HEADINGS

Set row headings in regular type and capitalize according to style for sentences (capitalize the first word and any proper nouns). Row headings should be consistent in style and presentation between all tables in the manuscript.

FIELD/TABLE CELLS

The field or body of a table presents the data. Each cell (intersection of column and row) contains relevant data. Capitalize according to style for sentences (capitalize the first word and any proper nouns). Short phrases are preferred over long sentences. Use common abbreviations. Blank cells can create ambiguity so use abbreviation NA (not applicable) to indicate that an entry in a cell does not apply. Use superscript lowercase letters (a–z) in order of appearance for entries requiring explanatory notes below the table.

FOOTNOTES

Footnotes contain information about the table and should appear below the table in the following order: abbreviation key, explanatory notes, and source notes. Abbreviations specific to a table should be defined. Explanatory notes should be indicated by using superscript lowercase letters (a–z) listed in alphabetical order and written in sentence format. References in the source notes should be formatted according to ASHP's reference guidelines (see References).

CT = computed tomography; MRI = magnetic resonance imaging.

[a]Scores are based on a scale of 1 to 10.

Source: Adapted with permission from Emerson RG. Anatomic and physiologic bases of posterior tibial nerve somatosensory evoked potentials. *Neurol Clin.* 1988;6:735-742.

Footnotes

Use asterisk (*), dagger (†), double dagger (‡), and section mark (§), in that order, for text footnotes per page. These marks follow all marks of punctuation except the dash or parenthesis, and the footnotes will appear at the very bottom of the text page.

> A photometric endotoxins test that met all requirements of the BET was verified and implemented for high-risk-level CSPs prepared in an institutional pharmacy.*
>
> ———————————————————————————————————
>
> *See Cooper JF, especially pages 284-285, for an analysis of an automated endotoxin testing program for compounded sterile preparations at an institutional compounding pharmacy.

Numbers

Comma

Use commas in numbers of four or more digits (eg, 5,000).

Ranges

Use hyphens in numerical ranges (eg, 10-30 mg, 6-12 years) in tables and figures. To avoid confusion, the word "to" should replace hyphens if one of the values in a range is a negative number.

Repeat symbols and use word *to* in percentage, degree, and currency ranges (eg, 10% to 30%, 32°C to 54°C).

Dates

Use American format for dates (January 1, 2020 **not** 1 January 2020)

Enumerated series

For enumerated series in running text, enclose numbers in parentheses (1), (2), (3), etc.

-fold

Always use numerals for "-fold" (eg, 5-fold, 10-fold, 100-fold).

Fractions

Always hyphenate fractions (eg, three-fourths).

Leading and trailing zero

For dosages, follow The Joint Commission's rules regarding trailing zero (X mg **not** X.0 mg) and leading zero (0.X mg **not** .X mg).

Remove leading zeros in *P* values in text, tables, and figures (eg, *P* < .001).

Ratios

Ratios can be expressed in three ways: 1 to 4 *or* 1:4 *or* 1/4.

Spelling out numbers

Use numerals 1 through 9 when accompanied by units of measurement, equations, formulas, percentages, ages, times in dosages, and periods of time (eg, 5 mg, 8%, 3-year-old girl, take 3 times a day, 4 hours).

Spell out numbers 1 through 9 when not accompanying units of measurement, equations, formulas, percentages, ages, times in dosages, and periods of time (eg, two drinks, three children, four doses, eight patients). Spell out numbers 1 through 9 if appearing at the beginning of a sentence (eg, "Two patients were given treatment").

Spell out ordinals first through ninth unless part of a series (eg, 5th edition).

Spell out one of two adjacent numbers (eg, twelve 3-inch bandages).

Punctuation

Colon

Capitalize the first letter of the first word after a colon if what follows the colon is a complete sentence.

WHEN TO USE A COLON

1. To introduce a definition or quote.

>   A: The first letter in the alphabet.
>   As H. G. Wells once said: History is in essence ahistory of ideas.

2. Between an independent clause and an enumeration or explanation

>   He is an ideal colleague: honest, reliable, and competent.
>   There is only one possible explanation: The car broke down.

3. After the salutation of a formal business letter

>   Dear Mr. Bennett:

4. In a business memo

>   TO:
>   SUBJECT:

5. Between hour, minutes, and seconds

>   5:30 p.m.
>   3:18:07

6. Between Biblical chapters and verses, in citations for literary works, and between the publication volume and number

>   Genesis 1:26
>   Part 2:15
>   Vol. 3:22

7. In ratios

>   A ratio of 4:1

8. To separate titles and subtitles

>   *Delivering Health Care in America: A Systems Approach*

1. To separate a verb from its direct object or subject complement in text

> *Incorrect:*   The treatment prescribed may include: creams, sprays, and gels. (incorrect)
> *Correct:*   The treatment prescribed may include creams, sprays, and gels. (correct)

2. To separate a verb from its direct object or subject complement in bulleted lists

> *Incorrect:*
> The treatment prescribed may include:
>
> · creams
> · sprays
> · gels

> *Correct:*
> The treatment prescribed may include
>
> · creams
> · sprays
> · gels

> *Correct (an independent clause precedes the colon):*
> The treatment prescribed may include the following:
>
> · creams
> · sprays
> · gels

3. To separate a preposition from its object(s)

> *Incorrect:*
> They went to: England, Ireland, and Scotland.

> *Correct:*
> They went to England, Ireland, and Scotland.

Comma

1. To connect two sentences (comma plus a conjunction such as *and, but, or, nor, for, so, yet*)

> More Americans are aware they have high blood pressure, and more are taking medicine to try to control it.

2. To set off introductory elements

> Before starting a patient on warfarin, assess the patient's baseline coagulation status.

3. To set off parenthetical elements (a part of a sentence that can be removed without changing the essential meaning of that sentence)

> Mr. Reynolds, who is the company president, will present the award at the annual picnic.

4. To separate coordinate adjectives

> They designed a randomized, double-blind, placebo-controlled trial.

WHEN NOT TO USE A COMMA

1. Before a conjunction that joins a complete sentence with an incomplete sentence

> *Incorrect:* She had been a pharmacist at Dawson Pharmacy for almost four years, and was very familiar with their regular customers. [incomplete sentence after the comma because subject *she* is missing]

> *Correct:* She had been a pharmacist at Dawson Pharmacy for almost four years and was very familiar with their regular customers.

Em Dash (—)

Use an em dash to indicate a sudden interruption in a sentence All of these factors—age, severity of symptoms, psychic preparation, and choice of anesthetic agent—determine the patient's reaction.

En Dash (–)

WHEN TO USE AN EN DASH

To show relational distinction in a compound adjective when one of the elements of the adjective is an open compound (such as New York) or when two or more of the elements are hyphenated compounds

> New York–London flight
> post–World War II
> Winston-Salem–oriented group

WHEN NOT TO USE AN EN DASH

1. In text citation ranges (use hyphens instead)

> They conducted a study on the complication and monitoring of warfarin in post-valve surgery.[12-14]

2. In reference page number ranges (use hyphens instead)

> Krieg AF, Gambino R, Galen RS. Clinical laboratory testing: current procedures and recommendations for laboratory technicians. *JAMA.* 1975;233:176-178.

Hyphen

WHEN TO USE A HYPHEN

1. To divide words at the end of a line (insert the hyphen between syllables) phar-ma-cist, prep-a-ra-tion

2. To join two or more words serving as a single adjective before a noun

   one-way street, well-known author

   Exception: When compound modifiers come after a noun, they are not hyphenated (eg, "The author is well known").

3. With compound numbers

   thirty-six children

4. In ranges and dimensions that modify nouns

   10- to 14-day period
   a 5- to 10-mg dose
   a 3×4-cm strip
   a 3-cm-diameter tube

   Note: Attempt to reword awkward phrases containing both hyphens and en dashes.

   1–2-mg/kg loading dose → a loading dose of 1–2 mg/kg

5. In text citation ranges and in reference page number ranges

   They conducted a study on the complication and monitoring of warfarin in post-valve surgery.[12-14]

   Krieg AF, Gambino R, Galen RS. Clinical laboratory testing: current procedures and recommendations for laboratory technicians. *JAMA.* 1975;233:176-178.

6. In compounds formed with the following prefixes: *ex-*, *self-*, and *all-* and with the suffix *–elect*

   ex-husband
   self-assured
   all-inclusive
   mayor-elect

7. In common fractions, whether the fraction is used as a noun or adjective.

   Three-fourths of the vials are missing.
   A two-thirds majority is required to win the election.

8. in numerical ranges in tables and figures

   10-30 mg, 6-12 years

   Exception: To avoid confusion, the word "to" should replace hyphens if one of the values in a range is a negative number (eg, 0.25 to −0.15).

WHEN NOT TO USE A HYPHEN
1. In running text (use word *to* instead)

   The patients ranged from 12 to 30 years of age.

2. In most compounds formed with the prefixes *ante-*, *anti-*, *bi-*, *bio-*, *co-*, *contra-*, *counter-*, *de-*, *extra-*, *infra-*, *inter-*, *intra-*, *macro-*, *meta-*, *micro-*, *mid-*, *mini-*, *multi-*, *neo-*, *non-*, *over-*, *post-*, *pre-*, *pro-*, *pseudo-*, *re-*, *semi-*, *socio-*, *sub-*, *super-*, *supra-*, *trans-*, *tri-*, *ultra-*, *un-*, *under*

> antifungal
> coworker
> nonresistant

> ***Exceptions:*** Hyphenate prefixes that appear before repeated vowels, before a number or capitalized word, before an abbreviation, or in homographs (eg, anti-inflammatory, pre-1970, anti-American, non-mRNA, re-creation).

3. When combinations of words are commonly read together as a unit

> inner ear disorder
> medical school student
> open heart surgery
> peer review journal
> public health organizations

4. In names of disease entities used as modifiers

> basal cell carcinoma
> connective tissue disorder
> grand mal seizures
> sickle cell anemia
> small cell lung cancer

5. In complex modifying phrases that include suffixes or prefixes, combinations of hyphens and en dashes should be used to avoid ambiguity

> non–self-governing

Period

WHEN TO USE A PERIOD

1. To mark the end of a declarative or an imperative sentence

> Lucy has registered for the 2011 ASHP Midyear Clinical Meeting & Exhibition.
> Wait here.

2. In some abbreviations (*see* Abbreviations)

3. To express a decimal point

> $9.99
> 0.8%

4. In ellipses

> The First Amendment provides that "Congress shall make no law respecting . . . the right of the people peaceably to assemble, and to petition the Government for a redress of grievances."

5. In enumerations/outlines (after a number, letter, or Roman numeral)

1. After incomplete sentences in bullet lists

2. After chapter titles, headings and subheadings, running heads, column heads in tables

3. In some abbreviations (see Abbreviations section)

Semicolon

WHEN TO USE A SEMICOLON
1. To separate two independent (but related) clauses

> Twenty workers started the project; only seven remain.

2. To separate two independent clauses joined by a conjunctive adverb such as *however*, *in fact*, *furthermore*, *moreover*, *therefore*, *consequently*, *otherwise*, *nevertheless*, *thus*

> Most states do not have requirements to become a pharmacy technician; however, formal training is available and may help gain employment.

3. To separate long or complicated items in a series, which already includes commas

> They have offices in Ontario, Canada; London, England; Munich, Germany; Milan, Italy; Sydney, Australia; and Tokyo, Japan.

WHEN NOT TO USE A SEMICOLON
1. When there is only one independent clause in a sentence

> *Incorrect:* Whenever we go downtown; we get lost.
> *Correct:* Whenever we go downtown, we get lost.

2. To connect participial phrases or dependent clauses to the only independent clause in the sentence

> *Incorrect:* Ethan ate his dinner; leaving only three pieces of broccoli.
> *Correct:* Ethan ate his dinner, leaving only three pieces of broccoli.

References

Citations in text

Each reference should be cited in the text, tables, and figures in consecutive numerical order by means of superscript Arabic numerals.

It is acceptable for a reference to be cited only in a table or figure and not in the text if it is in sequence with references cited in the text (eg, if Table 1 is cited after reference 5 in the text, and it includes 5 references that are not cited in the text, those references should be numbered as references 6-10).

Place superscript Arabic numerals *outside* periods, commas, and parentheses but *inside* colons, semicolons, and em dashes. When two or more references are cited at a given point, use hyphens to join the first and last numbers of a closed series; use commas without space to separate numbers not in a closed series.

> As reported previously,[1-3;19]
> The derived data were as follows[29;32]:

Place reference citations at the end of sentences, unless there is a specific reason to place elsewhere in the sentence (eg, According to Smith,[4] Jones,[5] and Wilson,[6] the results are inconclusive.). Avoid placing reference citations immediately after a numeral to avoid confusion.

> *Avoid:* The largest study to date included 56[9] patients.
> *Better:* The largest study to date included 56 patients.[9]

Move reference numbers after a title to source line below table.

Reference style

JOURNAL ARTICLES
For journal articles, list up to three author names; if there are more than three authors, insert "et al." after the third author name. Capitalize the first letter of the first word of the article title as well as any proper nouns. Italicize the journal abbreviation and place a period after the abbreviation. List copyright year followed by a semicolon, volume number followed by issue in parentheses and a colon, and pages cited (use hyphen in page ranges). Do not insert a space after the semicolon or colon. Do not abbreviate page numbers.

ONE TO THREE AUTHORS
Lee JK, Grace KA, Taylor AJ. Effect of a pharmacy care program on medication adherence and persistence, blood pressure, and low-density lipoprotein cholesterol. *JAMA.* 2006;296(21):2563-2571.

MORE THAN THREE AUTHORS (USE ET AL.)
McClure SR, O'Neal BC, Grauer D, et al. Compliance with recommendations for prevention and detection of controlled-substance diversion in hospitals. *Am J Health-Syst Pharm.* 2011;68(8):689-694.

COMMITTEES, GROUPS, OR ORGANIZATIONS
Council on Scientific Affairs. Scientific issues in drug testing. *JAMA.* 1987;257(22):3110-3114.

PARTS OF AN ISSUE
McCormick MS, Kass B, Elixhauser A, et al. Annual report on access to and utilization of health care for children and youth in the United States—1999. *Pediatrics.* 2000;105(1, pt 3):219-230.

SUPPLEMENTS
Dworkin RH, Jolnson RW, Breuer J, et al. Recommendations for the management of herpes zoster. *Clinic Infect Dis.* 2007;44(suppl 1):S1-S26.

SPECIAL DEPARTMENTS, FEATURES, OR COLUMNS
Satpathy R. Bare metal stents versus drug-eluting stents for saphenous vein grafts [editorial]. *J Interv Cardiol.* 2011;24(2):181-183.

CORRECTIONS
Korpi A. Detection of mouse and rat urinary aeroallergens with an improved ELISA [published correction appears in *J Allergy Clin Immunol.* 2004;113(6):1226]. *J Allergy Clin Immunol.* 2004:113(4):677-682.

BOOKS
For books, list up to three author names; if there are more than three authors, insert "et al." after the third author name. Italicize the book title, and capitalize the first letter in each word of the book title except for articles (a, an, the), coordinating conjunctions (and, but, or, for, nor), and prepositions of four letters or less, unless they are the first word of the title. When referencing a chapter in a book, capitalize the first letter of the first word of the chapter title as well as any proper nouns. List city and state of publication (use two-letter USPS codes) followed by a colon, the publisher's name followed by a semicolon (it is not necessary to insert punctuation in the publisher's name such as commas or periods), and the copyright year. If also listing pages cited, insert a colon after the year followed by the page(s) cited (eg, 2006:396-398.). Use a hyphen in page ranges. Do not insert a space after the colon. Do not abbreviate the page numbers.

REFERENCE TO AN ENTIRE BOOK
McEvoy GK, ed. *AHFS: Drug Information 2011.* Bethesda, MD: American Society of Health-System Pharmacists; 2011. Aronoff GR, Berns JS, Brier ME, et al. *Drug Prescribing in Renal Failure.* 4th ed. Philadelphia, PA: American College of Physicians; 1999. *Physicians' Desk Reference.* 61st ed. Montvale, NJ: Thomson PDR; 2007.

REFERENCE TO A CHAPTER IN A BOOK
Cole BR. Cystinosis and cystinuria. In: Jacobson HR, Striker GE, Klahr S, eds. *The Principles and Practice of Nephrology.* Philadelphia, PA: BC Decker Inc; 1991:396- 403.

Dowling TC, Comstock TJ. Quantification of renal function. In: DiPiro JT, Talbert RL, et al., eds. *Pharmacotherapy: A Pathophysiologic Approach.* 6th ed. New York, NY: McGraw-Hill; 2005:761.

ELECTRONIC SOURCES
Provide dates published, updated, and accessed where applicable.

BOOKS

E-books

Fields HL, Martin JB. Pain: pathophysiology and management [e-book]. In: Kasper DL, Fauci AS, Longo DL, et al., eds. *Harrison's Principles of Internal Medicine.* 16th ed. New York, NY: McGraw-Hill; 2005. http://www.netlibrary.com.ezproxy.samford.edu/Reader. Accessed April 16, 2007:71-73.

CD-ROM

Alberts BA, Johnson AM, Lewis JC, et al. *Molecular Biology of the Cell* [CD-ROM]. 4th ed. New York, NY: Garland Science; 2003.

Online URL

Lunney JR, Foley KM, Smith TJ. Describing Death in America. Washington, DC: National Cancer Policy Board, Institute of Medicine; 2003. http://www.nap. edu/books/0309087252/html/. Accessed December 6, 2005.

CONFERENCE PROCEEDINGS, PRESENTATIONS, AND WEBINARS

Chu H. Search engines for the World Wide Web. Paper presented at: American Society for Information Science 1996 Annual Conference; October 19–24, 1996; Baltimore, MD. http://www.asis.org/annual-96/ electronicproceedings/chu/html. Accessed February 26, 2004.

DATABASES

PDQR—NCI's Comprehensive Cancer Database [database]. Bethesda, MD: National Cancer Institute; 2007. http://www.cancer.gov/cancertopics/pdq/cancerdatabase .Updated June 9, 2006. Accessed April 16, 2007.

E-MAIL AND E-MAIL LIST (LISTSERVE) MESSAGES

References to e-mail and e-mail list messages should be listed parenthetically in the text.

E-mail

There have been no reports of toxic reactions (Joan Smith, MD, e-mail communication, March 29, 2004).

E-mail list message

The Editorial Committee of the World Association of Medical Editors (WAME) is preparing a statement on government embargoes and scientific exchange (Margaret Winker, MD, WAME listserve, February 25, 2004).

GOVERNMENT/ORGANIZATION REPORTS

World Health Organization. Equitable access to essential medicines. http://whqlibdoc.who.int/hq/2004/WHO_EDM_2004.4.pdf. Published March 2004. Accessed December 6, 2005.

JOURNAL ARTICLES

URL

Duchin JS. Can preparedness for biological terrorism save us from pertussis? *Arch Pediatr Adolesc Med.* 2004;158(2):106-107. http://archpedi.ama-assn.oeg/cgi/content/full/158/2/106. Accessed June 1, 2004.

DOI

Smith LR. Community screening for visual impairment in the elderly. *Cochrane Database Syst Rev.* 2002;(2):CD001054. doi:10.1002/140651858. CD1001054.

LEGAL REFERENCES

U.S. Food and Drug Administration. The Orphan Drug Act. 1983. http://www.fda.gov/orphan.oda.htm. Accessed December 6, 2005.

NEWS RELEASES

Hopkins response to FDA observations [news release]. Baltimore, MD: Johns Hopkins Office of Communications and Public Affairs; September 7, 2001. http://www.hopkinsmedicine.org/press/2001/september/010907A.htm. Accessed April 5, 2004.

NEWSPAPERS

Weiss R. The promise of precision prescriptions. *Washington Post.* June 24, 2000:A1. http://www.washingtonpost.com. Accessed October 10, 2001.

PACKAGE INSERTS

Byetta [package insert]. San Diego, CA: Amylin Pharmaceuticals; October 2007. http://pi.lilly.com/us/byetta-pi.pdf. Accessed March 18, 2008.

SOFTWARE

CD

Epi Info [computer program]. Version 3.2. Atlanta, GA: Centers for Disease Control and Prevention; 2004.

PDA (personal digital assistant)

Skyscape *(Dorland's Pocket Medical Dictionary)* [computer program]. Version 4.0. Marlborough, MA: Skyscape; 2003.

CD-ROM

Mosby's Drug Consult [CD-ROM]. St. Louis, MO: Mosby; 2006.

WEBSITES

Provide as much information as possible: (1) author(s); (2) title of the specific item cited; (3) name of the website; (4) URL; date published or updated; and (5) date accessed.

Newcomb K. Search engines come together on sitemaps auto-discovery. SearchEngine Watch Website. http://searchenginewatch.com/ showPage.html?page=3625565. Updated April 12, 2007. Accessed April 16, 2007.

GOVERNMENT AND CORPORATE BULLETINS/PUBLICATIONS

U.S. Bureau of the Census. *Statistical Abstract of the United States: 1993.* 113th ed. Washington, DC: U.S. Bureau of the Census; 1993.

NEWSPAPERS

Travis D. Advertising our dishonor: my industry should be ashamed of itself for pushing cigarettes on kids. *Washington Post.* September 8, 1996:C3, C10.

ORAL PRESENTATIONS AT A MEETING

Eisenberg J. Market forces and physician workforce reform. Paper presented at: Annual Meeting of the Association of American Medical Colleges; October 28, 1995; Washington, DC.

OTHER MEDIA

AUDIOTAPES, VIDEOTAPES, DVDS

Acland RD. *Acland's DVD Atlas of Human Anatomy* [DVD]. Philadelphia, PA; Lippincott Williams & Wilkins: 2003.

TELEVISION OR RADIO BROADCASTS

Mental illness in children—part 1 [transcript]. *Morning Edition.* National Public Radio. September 22, 2003.

PACKAGE INSERTS

Lamisil [package insert]. East Hanover, NJ: Sandoz Pharmaceuticals Corp; 1993.

PERSONAL COMMUNICATIONS

Do not include personal communications (e-mail, letter, conversation) in the list of references. Instead, place the information along with a date in the text as follows:

> According to an e-mail from H. E. Marman, MD (August 2005)…
> According to a letter from H. E. Marman, MD (August 2005)…
> In a conversation with H. E. Marman, MD (August 2005)…
> Similar findings have been noted by H. E. Marman (oral communication, August 2005).

UNPUBLISHED MATERIAL

MATERIAL ACCEPTED FOR PUBLICATION BUT NOT YET PUBLISHED

Orfi D. Incidental Findings: *Lessons from My Patients in the Art of Medicine.* Boston, MA: Beacon Press. In press.

MATERIAL SUBMITTED FOR PUBLICATION BUT NOT YET ACCEPTED

Do not include material that has been submitted for publication but has not yet been accepted in the list of references. Instead, place the material along with a date in the text as follows: Similar findings have been noted by H. E. Marman, MD (unpublished data, January 2005).

Spelling

In general, change British to American spelling except for proper nouns or usage in published content (eg, British journals). Consult the *The American Heritage Dictionary* (Fifth Edition) for preferred spelling.

Statistics

Italicize *n* for subset values.

Close up SD, SE, SEM to the symbol (eg, ±SD).

Statistical tests:

~ χ^2 test (***not*** chi-square[d] test)
~   *t* test (italic)
~   *U* test (italic)

Usage

affect/effect As a verb, *affect* means to have bearing or influence on something; *effect* means to cause something to happen. As a noun, *affect* refers to emotion; *effect* is the power to produce a consequence.

although/though When used as a conjunction, these words can be interchangeable. In formal text, *although* should be used because *though* is an abbreviation of the word *although*. When used as an adverb, *though* (meaning "however") is correct.

assure/ensure/insure *Assure* means to provide positive information to a person or group. *Ensure* means to make certain. *Insure* means to take precaution beforehand (insure a life, insurance).

eg/ie *eg* means "for example" and introduces a list of examples; *ie* means "that is" and introduces a restatement or definition.

email No hyphen.

healthcare One word.

Internet Capitalized.

on/upon In scientific text, *upon* often means *on* and can be changed accordingly.

since Use only in a temporal sense (*eg*, "Since 1999, many studies have focused…"); otherwise, use *because* (*eg*, "Because the patient did not respond to therapy…").

that/which Use *that* to introduce restrictive (essential) clauses and *which* to introduce nonrestrictive (nonessential) clauses. A *which* clause can be, but is not always, set off by commas; *that* clauses never are.

toward/upward/onward In American English, these words appear in the singular (not towards or upwards).

website One word, not capitalized.

Eponyms

Use the nonpossessive form for medical eponyms (eg, Down syndrome, Alzheimer disease, Wilms tumor, Betz cell). Use the possessive form for nonmedical eponyms (eg, St. John's wort, Russell's viper) and if it is part of an official company/association name (eg, The Alzheimer's Association).

See also Capitalization/Eponyms and words derived from proper nouns.

Greek letters

Greek letters are preferred (eg, α, β) unless common usage dictates otherwise (eg, tau protein).

Italics

Set the following in italics:

~ Foreign words (ie, those not found in the *American Heritage Dictionary)*
~ Emphasized words (eg, "What is meant by *random selection*?")
~ Defined terms (eg, "An *angiogram* is an x-ray of one or more blood vessels…")
~ Words given as words (eg, "The term *critical mass* is used metaphorically…")

~ Letters given as letters (eg, the letter *p*)
~ Genus and species names of microorganisms, plants, and animals when used in the singular and the names of a variety of subspecies (plural or adjectival forms and class, order, family, or tribe names are not italicized [eg, *Chlamydia trachomatis*, chlamydia, *Streptococcus*, streptococcus organisms, streptococci])

See also Titles for a list of names and titles that should be italicized.

Subscripts and superscripts

SUPERSCRIPTS (SUPERIORS)
Use superscript characters for copyright, registered, and trademark symbols; reference citations; mathematical numbers or variables raised to the power of another number or variable; charges of subatomic particles and ions; and atomic isotopes. **Exception:** Do not superscript the copyright symbol (©).

> American Society of Health-System Pharmacists®
> AirPrint™
> The multidose vials contain benzyl alcohol 0.9% as a preservative.[5]
> x^4
> ^{131}I

Do not superscript the ordinal characters *st, nd, rd,* and *th*, even in reference lists (eg, 2nd **not** 2nd).

SUBSCRIPTS (INFERIORS)
Use subscript characters for chemical formulas and compounds; vitamins; in mathematic variables or sequences; and for radices or bases of written numbers.

> $C_6H_{12}O_6$
> vitamin B_{12}
> x_0
> v_{rocket}
> $C_{hex} = 12_{dec} = 14_{oct}$

Titles

Set the following titles in italics:

book	collection/anthology (eg, of poems, songs, etc)
periodical (eg, magazine, journal, newsletter)	long poem
brochure	play
newspaper	movie
pamphlet	radio/television series
guideline	opera
notice	long musical composition
policy	album/CD
report	work of art
hearing	art exhibition
proceeding	art exhibition catalogue
symposium	ship
workshop	train
published paper/presentation/speech/ lecture/debate	aircraft (but not abbreviation)
	legal case

Set the following titles in quotation marks:

article	short musical composition
chapter	short poem
radio/television episode	short story
campaign	essay
dissertation	unpublished paper/presentation/speech/ lecture/debate
thesis	
manuscript	substantive conference title
song	

Do not italicize or use quotation marks for the following titles (ie, set in roman):

act	forum
amendment	initiative
bill	task force
code	archive
law	award
clinical trial	course title
study	database
treaty	depository
book section (preface, index)	manuscript collection
book series	monument
book edition	motto
newspaper column	religious work
part of a play (Act 1)	software program
group name	signs (eg No Smoking)
conference	weblog
committee	website