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Leading and trailing zero
Ratios
Spelling out numbers

Punctuation
Colon
- When to use a colon
- When not to use a colon
Comma
- When to use a comma
- When not to use a comma
Em Dash (—)
- When to use an en dash
- When NOT to use an en dash
En Dash (–)
- When to use a period
- When NOT to use a period
Hyphen
- When to use a hyphen
- When not to use a hyphen
Period
- When to use a period
- When NOT to use a period
Semicolon
- When to use a semicolon
- When not to use a semicolon

References
Citations in text
Reference style
Journal articles
- One to three authors
- More than three authors (use et al.)
Committees, groups, or organizations
Parts of an issue
Supplements
Special departments, features, or columns
Corrections
Books
- Reference to an entire book
- Reference to a chapter in a book
Electronic sources
Books
- E-books
- CD-ROM
- Online URL
Conference proceedings, presentations, and webinars
Databases
E-mail and e-mail list (listserv) messages
- E-mail
- E-mail list message
Government/organization reports
Journal articles
- URL
- DOI
Legal references
News releases
<table>
<thead>
<tr>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Newspapers</td>
<td>28</td>
</tr>
<tr>
<td>Package inserts</td>
<td>28</td>
</tr>
<tr>
<td>Software</td>
<td>28</td>
</tr>
<tr>
<td>CD</td>
<td>28</td>
</tr>
<tr>
<td>PDA (personal digital assistant)</td>
<td>28</td>
</tr>
<tr>
<td>CD-ROM</td>
<td>28</td>
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<tr>
<td>Websites</td>
<td>28</td>
</tr>
<tr>
<td>Government and corporate bulletins/publications</td>
<td>28</td>
</tr>
<tr>
<td>Newspapers</td>
<td>29</td>
</tr>
<tr>
<td>Oral Presentations At A Meeting</td>
<td>29</td>
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<tr>
<td>Other media</td>
<td>29</td>
</tr>
<tr>
<td>Audiotapes, videotapes, DVDs</td>
<td>29</td>
</tr>
<tr>
<td>Television or radio broadcasts</td>
<td>29</td>
</tr>
<tr>
<td>Package inserts</td>
<td>29</td>
</tr>
<tr>
<td>Personal communications</td>
<td>29</td>
</tr>
<tr>
<td>Unpublished material</td>
<td>29</td>
</tr>
<tr>
<td>Material accepted for publication but not yet published</td>
<td>29</td>
</tr>
<tr>
<td>Material submitted for publication but not yet accepted</td>
<td>29</td>
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<td>31</td>
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<td>Usage</td>
<td>32</td>
</tr>
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<td>Eponyms</td>
<td>32</td>
</tr>
<tr>
<td>Greek letters</td>
<td>32</td>
</tr>
<tr>
<td>Italics</td>
<td>32</td>
</tr>
<tr>
<td>Subscripts and superscripts</td>
<td>33</td>
</tr>
<tr>
<td>Superscripts (superiors)</td>
<td>33</td>
</tr>
<tr>
<td>Subscripts (inferiors)</td>
<td>33</td>
</tr>
<tr>
<td>Titles</td>
<td>34</td>
</tr>
</tbody>
</table>
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**


**JOURNAL CITATION MATCHER**


**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](http://www.jointcommission.org/assets/1/18/Do_Not_Use_List.pdf))

**STYLE AND USAGE**

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

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

**Canadian states and territories**

<table>
<thead>
<tr>
<th>AB</th>
<th>Alberta</th>
<th>NU</th>
<th>Nunavut</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>British Columbia</td>
<td>ON</td>
<td>Ontario</td>
</tr>
<tr>
<td>MB</td>
<td>Manitoba</td>
<td>PE</td>
<td>Prince Edward Island</td>
</tr>
<tr>
<td>NB</td>
<td>New Brunswick</td>
<td>QC</td>
<td>Quebec</td>
</tr>
<tr>
<td>NL</td>
<td>Newfoundland and Labrador</td>
<td>SK</td>
<td>Saskatchewan</td>
</tr>
<tr>
<td>NS</td>
<td>Nova Scotia</td>
<td>YT</td>
<td>Yukon Territory</td>
</tr>
<tr>
<td>NT</td>
<td>Northwest Territories</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**


**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).


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).
<table>
<thead>
<tr>
<th>Term</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ampere</td>
<td>A</td>
</tr>
<tr>
<td>after meals (post cibum)</td>
<td>pc</td>
</tr>
<tr>
<td>as needed (pro re nata)</td>
<td>PRN</td>
</tr>
<tr>
<td>at bedtime (hora somni)</td>
<td>hs</td>
</tr>
<tr>
<td>before meals (ante cibum)</td>
<td>ac</td>
</tr>
<tr>
<td>by mouth (per os)</td>
<td>po</td>
</tr>
<tr>
<td>calorie</td>
<td>cal</td>
</tr>
<tr>
<td>candela</td>
<td>cd</td>
</tr>
<tr>
<td>Celsius (close up to degree [eg, 40°C])</td>
<td>C</td>
</tr>
<tr>
<td>centigram</td>
<td>cg</td>
</tr>
<tr>
<td>centimeter</td>
<td>cm</td>
</tr>
<tr>
<td>cubic centimeter</td>
<td>cm³</td>
</tr>
<tr>
<td>cubic foot</td>
<td>cu ft</td>
</tr>
<tr>
<td>cubic inch</td>
<td>cu in</td>
</tr>
<tr>
<td>cubic meter</td>
<td>m³</td>
</tr>
<tr>
<td>cubic micrometer</td>
<td>μm³</td>
</tr>
<tr>
<td>cubic millimeter</td>
<td>mm³</td>
</tr>
<tr>
<td>cubic yard</td>
<td>cu yd</td>
</tr>
<tr>
<td>dalton</td>
<td>Da</td>
</tr>
<tr>
<td>deciliter</td>
<td>dL</td>
</tr>
<tr>
<td>drop (gutta)</td>
<td>gtt</td>
</tr>
<tr>
<td>equivalent</td>
<td>Eq</td>
</tr>
<tr>
<td>every (quaque)</td>
<td>q*</td>
</tr>
<tr>
<td>Fahrenheit (close up to degree [eg, 98°F])</td>
<td>F</td>
</tr>
<tr>
<td>femtogram</td>
<td>fg</td>
</tr>
<tr>
<td>femtoliter</td>
<td>fL</td>
</tr>
<tr>
<td>femtomole</td>
<td>fmol</td>
</tr>
<tr>
<td>fluid ounce</td>
<td>fl oz</td>
</tr>
<tr>
<td>foot</td>
<td>ft</td>
</tr>
<tr>
<td>four times a day</td>
<td>QID</td>
</tr>
<tr>
<td>gram</td>
<td>g</td>
</tr>
<tr>
<td>hertz</td>
<td>Hz</td>
</tr>
<tr>
<td>hour</td>
<td>hr*</td>
</tr>
<tr>
<td>inch</td>
<td>in</td>
</tr>
<tr>
<td>intramuscular</td>
<td>IM</td>
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<tr>
<td>intravenous</td>
<td>IV</td>
</tr>
<tr>
<td>kelvin</td>
<td>K</td>
</tr>
<tr>
<td>kilocalorie</td>
<td>kcal</td>
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<td>kilodalton</td>
<td>kDa</td>
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<td>kilogram</td>
<td>kg</td>
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<tr>
<td>kilohertz</td>
<td>kHz</td>
</tr>
<tr>
<td>kilometer</td>
<td>km</td>
</tr>
<tr>
<td>kilovolt</td>
<td>kV</td>
</tr>
<tr>
<td>kilovolt-ampere</td>
<td>kVA</td>
</tr>
<tr>
<td>kilowatt</td>
<td>kW</td>
</tr>
<tr>
<td>liter</td>
<td>L</td>
</tr>
<tr>
<td>left eye (oculus sinister)</td>
<td>os</td>
</tr>
<tr>
<td>megahertz</td>
<td>MHz</td>
</tr>
<tr>
<td>megaunit</td>
<td>MU</td>
</tr>
<tr>
<td>Term</td>
<td>Symbol</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>megawatt</td>
<td>MW</td>
</tr>
<tr>
<td>meter</td>
<td>m</td>
</tr>
<tr>
<td>microampere</td>
<td>μA</td>
</tr>
<tr>
<td>microgram (spell out; do not use μg)</td>
<td>mcg</td>
</tr>
<tr>
<td>microliter</td>
<td>μL</td>
</tr>
<tr>
<td>micrometer</td>
<td>μm</td>
</tr>
<tr>
<td>micromolar</td>
<td>μM</td>
</tr>
<tr>
<td>micromole</td>
<td>μmol</td>
</tr>
<tr>
<td>microosmole</td>
<td>μOsm</td>
</tr>
<tr>
<td>microvolt</td>
<td>μV</td>
</tr>
<tr>
<td>microwatt</td>
<td>μW</td>
</tr>
<tr>
<td>miles per hour</td>
<td>mph</td>
</tr>
<tr>
<td>milliampere</td>
<td>mA</td>
</tr>
<tr>
<td>milliequivalent</td>
<td>mEq</td>
</tr>
<tr>
<td>milligram</td>
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<tr>
<td>millimeter</td>
<td>mm</td>
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<td>millimolar</td>
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<tr>
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<td>mmol</td>
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<tr>
<td>milliosmole</td>
<td>mOsm</td>
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<tr>
<td>millivolt</td>
<td>mV</td>
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<tr>
<td>milliwatt</td>
<td>mW</td>
</tr>
<tr>
<td>minute</td>
<td>min*</td>
</tr>
<tr>
<td>molar</td>
<td>M</td>
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<tr>
<td>mole</td>
<td>mol</td>
</tr>
<tr>
<td>month</td>
<td>mo*</td>
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<td>nanogram</td>
<td>ng</td>
</tr>
<tr>
<td>nanometer</td>
<td>nm</td>
</tr>
<tr>
<td>nanomolar</td>
<td>nM</td>
</tr>
<tr>
<td>nanomole</td>
<td>nmol</td>
</tr>
<tr>
<td>normal (solution)</td>
<td>N</td>
</tr>
<tr>
<td>oral</td>
<td>PO</td>
</tr>
<tr>
<td>osmole</td>
<td>osm</td>
</tr>
<tr>
<td>ounce</td>
<td>oz</td>
</tr>
<tr>
<td>picogram</td>
<td>pg</td>
</tr>
<tr>
<td>picometer</td>
<td>pm</td>
</tr>
<tr>
<td>picomolar</td>
<td>pM</td>
</tr>
<tr>
<td>picomole</td>
<td>pmol</td>
</tr>
<tr>
<td>pint</td>
<td>pt</td>
</tr>
<tr>
<td>pound</td>
<td>lb</td>
</tr>
<tr>
<td>quart</td>
<td>qt</td>
</tr>
<tr>
<td>right eye (oculus dexter)</td>
<td>od</td>
</tr>
<tr>
<td>second</td>
<td>sec*</td>
</tr>
<tr>
<td>square centimeter</td>
<td>cm²</td>
</tr>
<tr>
<td>square foot</td>
<td>sq ft</td>
</tr>
<tr>
<td>square inch</td>
<td>sq in</td>
</tr>
<tr>
<td>square meter</td>
<td>m²</td>
</tr>
<tr>
<td>square millimeter</td>
<td>mm²</td>
</tr>
<tr>
<td>subcutaneous</td>
<td>sub-Q</td>
</tr>
<tr>
<td>Term</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>three times a day (ter in die)</td>
<td>TID</td>
</tr>
<tr>
<td>twice a day (bis in die)</td>
<td>BID</td>
</tr>
<tr>
<td>volt</td>
<td>V</td>
</tr>
<tr>
<td>volume</td>
<td>vol</td>
</tr>
<tr>
<td>watt</td>
<td>W</td>
</tr>
<tr>
<td>week</td>
<td>wk*</td>
</tr>
<tr>
<td>yard</td>
<td>yd</td>
</tr>
<tr>
<td>year x</td>
<td>yr*</td>
</tr>
</tbody>
</table>

*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](http://www.jointcommission.org/assets/1/18/dnu_list.pdf)).

**Do Not Use:**
- U
- IU
- Q.O.D., QOD, q.o.d., qod
- MSO₄
- MgSO₄

**Use Instead:**
- units
- International Units
- every other day
- morphine sulfate
- 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

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

14
**COLUMN HEADINGS**
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.

*Scores are based on a scale of 1 to 10.

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 (0.0 mg *not* .0 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 a history 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*
When not to use a colon

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

When to use a 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)


**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

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 (e.g., 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)
**When NOT to use a period**
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.)

COMMITTEES, GROUPS, OR ORGANIZATIONS
PARTS OF AN ISSUE

SUPPLEMENTS

SPECIAL DEPARTMENTS, FEATURES, OR COLUMNS

CORRECTIONS

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

REFERENCE TO A CHAPTER IN A BOOK


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

CD-ROM

Online URL

CONFERENCE PROCEEDINGS, PRESENTATIONS, AND WEBINARS

DATABASES

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

JOURNAL ARTICLES
URL
DOI

LEGAL REFERENCES

NEWS RELEASES

NEWSPAPERS

PACKAGE INSERTS

SOFTWARE
CD

PDA (personal digital assistant)

CD-ROM

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.


GOVERNMENT AND CORPORATE BULLETINS/PUBLICATIONS
**NEWSPAPERS**

**ORAL PRESENTATIONS AT A MEETING**

**OTHER MEDIA**

**AUDIOTAPES, VIDEOTAPES, DVDs**

**TELEVISION OR RADIO BROADCASTS**

**PACKAGE INSERTS**

**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**

**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).
In general, change British to American spelling except for proper nouns or usage in published content (e.g., 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:

~ $\chi^2$ 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.

e-mail  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

**SUPERSCRIP TS (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.

- \( \text{C}_6\text{H}_{12}\text{O}_6 \)
- vitamin \( \text{B}_{12} \)
- \( x_0 \)
- \( \rho_{\text{rock}} \)
- \( C_{\text{dec}} = 12_{\text{dec}} = 14_{\text{ser}} \)
Titles

Set the following titles in italics:

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

Set the following titles in quotation marks:

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

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

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