

# THE AMERICAN MEDICAL ASSOCIATION STYLE GUIDE

## REFERENCES

According to the American Medical Association (AMA), in the *AMA Manual of Style 11<sup>th</sup> Edition*, there are three purposes of references – to document, to acknowledge, and to direct readers to additional resources.

### **References in Text: Citations**

#### Superscripted Numbers:

Each reference should be cited in the text, tables, or figures in consecutive numerical order using superscripted Arabic numerals. The superscripted number beside the citation refers to its place within the reference list. A reference only cited in a table or a figure legend is acceptable if it is in order with the references cited in the text.

Use Arabic superscript numerals *outside* periods and commas.

As reported previously,<sup>1,3-8,19</sup>

Use Arabic superscript numerals *inside* colons and semicolons.

The derived data were as follows<sup>3,4</sup>:

When more than two references are cited at a given place in the manuscript, use hyphens to join the first and last numbers of a closed series.

As reported previously,<sup>1,3-8,19</sup>

Use commas without a space to separate other parts of a multiple citation.

The derived data were as follows<sup>3,4</sup>:

#### Multiple Citations In Text

The appearance of a “hole” in a print copy is created by a multiple citation of sufficient superscript characters, usually comprised of about 20 to 25 characters (including spaces and punctuation and depending on the column width and type size). In this situation, use an asterisk in the text and give the citation in a footnote at the bottom of the page. See the example below.

As reported previously,\*

---

\*References 3, 5, 7, 9, 11, 13, 21, 24-29, 31.

To note:

- (1) Reference numerals in such a footnote are set full size and on the line rather than as superscripts.
- (2) The spacing is different from that in superscript reference citations.
- (3) If two or more such bottom-of-the-page footnotes appear in a single article, then use an asterisk for the first footnote, a dagger for the second, and a double dagger for the third.

### Citations in Tables

If a cell in the table involves a citation of a reference number *and* a footnote symbol, give the reference number first, followed by a comma and the footnote symbol (e.g., <sup>3,a</sup>).

### Citation of Different Page Numbers from the Same Source

If the author cites different page numbers from the same source in their paper, then the page numbers need to be included in the superscript citation, and the source will only appear once in the list of references.

Note that the superscript may include more than 1 page number, citation of more than 1 reference, or both, and that all spaces are closed up.

These patients showed no sign of protective sphincteric adduction.<sup>3(p21),9</sup>  
Westman<sup>5(pp3,5),9</sup> reported 8 cases in which vomiting occurred.

### In Text Parenthetical Citations

In the instance that a reference list is not utilized (e.g. news articles), parenthetical citations are the proper in-text documentation of sources that would be in the reference list.

When using sources, make sure that they meet the criteria for usage in an AMA paper.

Note that in the text of the source:

- The author, or authors, may not be named.
- The title may not be given.
- The name of the journal is abbreviated only when enclosed in parentheses.
- Inclusive page numbers are given.

Some resources, such as URLs, may be listed in the text when it is the website itself that is referred to rather than the content on that site.

Examples:

Wiese et al recently reported that an extract from the fruit of the prickly pear cactus had a moderate effect on reducing the symptoms of the alcohol hangover (*Arch Intern Med.* 2004;164[12]:1334-1340).

The effect of an extract from the fruit of the prickly pear cactus on reducing the symptoms of the alcohol hangover was reported in a recent issue of the *Archives of Internal Medicine* (2004;164[12]:1334-1340).

*The Archives of Internal Medicine* article (2004;164[12]:1334-1340) on the effects of an extract of the fruit of the prickly pear cactus on reducing the symptoms of the alcohol hangover received widespread publicity (e.g., *USA Today.* June 29, 2004:7D).

Physicians may wish to consult the NIH Clinical Trials Registry (<http://clinicaltrials.gov>).

### In Text Citations: What to Avoid

To avoid any confusion between the superscript reference citation and an exponent, avoid placing a superscript reference citation immediately after a number or an abbreviated unit of measure.

*Avoid:* The 2 largest studies to date included 26<sup>2</sup> and 18<sup>3</sup> patients.

*Better:* The 2 largest studies to date included 26 patients<sup>2</sup> and 18 patients.<sup>3</sup>

*Avoid:* The largest lesion found in the first study was 10 cm.<sup>2</sup>

*Better:* The largest lesion found in the first study<sup>2</sup> was 10 cm.

Nota Bene:

AMA does not utilize *ibid* or *op cit* for in-text listings of reference materials.

**Minimum Acceptable Data for References**

To be acceptable, references to journals, books, or websites must include certain data. Enough information should be provided so that the reader is able to identify and retrieve the material needed from the sources. More complete data should be used if it is available. Note that information varies slightly between online and print journals and books.

The information provided in the section below is only for quick reference, so for all of these forms, please consult Chapter 3, Section 4 of the *AMA Manual of Style 11<sup>th</sup> Edition*.

Punctuation of References

Different punctuation marks divide each part of the overall reference into bibliographic groups.

- **Periods:** make each bibliographic group different from one another and create a sequence of different yet specific bibliographic elements in the overall reference.
- **Commas:** utilized if the items are sub-elements of the bibliographic element or a set of closely related elements (ex. the authors' names in the reference list).
- **Semicolons:** utilized if the elements in the bibliographic group are different (ex. between the publisher's name and the copyright year) or if there are multiple occurrences of elements within a group; semicolons are also used before volume identification data.
- **Colons:** utilized before the publisher's name, between the title and subtitle, and after a connective phrase such as "In" or "Presented at."

Journals:

*Print:* Author(s). Article title. *Abbreviated Journal Name per JAMA*. Publication year;volume no.(issue no.):inclusive page numbers.

*Online:* Author(s). Article title. *Abbreviated Journal Name per JAMA*. Publication year;volume no.(issue no.):inclusive page numbers. Published/Updated/Accessed date. URL or DOI (if available)

Books:

*Print:* Author(s). *Book Title*. Edition number (if second edition or above). Publisher's name; copyright year.

*Online:* Author(s). *Book Title*. Edition number (if second edition or above). Publisher's name; copyright year. Published/Updated/Accessed date. URL or DOI (if available)

Chapter of a Book:

*Print:* Author(s). Title of book chapter: subtitle (if relevant). In: editor name(s), ed(s). *Book title*: subtitle (if available). Edition (if second edition or above).

Name of publisher; publication year: inclusive page numbers.

*Online:* Author(s). Title of book chapter: subtitle (if available). In: editor name(s), ed(s). *Book title:* subtitle (if available). Edition (if second edition or above). Name of publisher; publication year: inclusive page numbers. URL or DOI (if available)

Website: Author(s) or name of the organization responsible for the site. Title of webpage (or, if no title is available, the name of the organization responsible for the site). Name of the website. Published or Updated or Accessed date. URL.

### **The Reference List**

References to retrievable information are made in the reference list. This includes (but is not limited to) articles published or accepted for publication in scholarly or mass-circulation print or electronic journals, magazines, or newspapers; books that have been published or accepted for publication; papers presented at professional meetings; abstracts; theses; CD-ROMs, films, videotapes, and audio files; package inserts or a manufacturer's documentation; monographs; official reports; databases; websites; legal cases; patents; and new releases.

References should be listed in numerical order at the end of the manuscript (except as specified Chapter 3, Sections 3 and 5 in the *AMA Style Guide*).

Each reference should have its own reference number; no two references should be combined under the same reference number.

References to sources that have not yet been accepted for publication – such as oral, written, and electronic sources – cannot be used as listed references. Instead, they should be included parenthetically in your paper.

Authors are responsible for proper construction of citations and therefore should meticulously review each one.

### **Numbering**

References should be numbered consecutively with Arabic numerals in the order they are cited in the text.

Unnumbered references, in the form of a resource or reading list, are rarely used in *JAMA* and the *Archives Journals*. When they are used, these references appear alphabetically – by the first author's last name – in a list separate from the specifically cited reference list.

### **Authors**

#### **Authors In Reference Citations**

Use the author's last name followed by initials without periods in reference citations.

1 author: Doe JF.

In listed references, the names of all authors should be given unless there are more than 6.

If there are 7 or more authors, the names of the first 3 authors are used and are followed by “et al.” The US National Library of Medicine (NLM) guidelines do not limit the number of authors listed, but, for space considerations, the *AMA Manual of Style* does.

Do not use *and* between names.

Roman numerals and abbreviations for Junior (Jr) and Senior (Sr) follow the author's initials. The *AMA Manual of Style* prefers II, III, and IV, unless the author prefers Arabic numerals.

2 authors: Doe JF, Roe JP III.  
6 authors: Doe JF, Roe JP III, Coe RT Jr, Loe JT Sr, Poe EA, van Voe AE.  
7 or more authors: Doe JF, Roe JP III, Coe RT Jr, et al.

*JAMA* and *Archives Journals*, in bylines, make a distinction between a group of individuals writing *for* a group and a group of individuals writing *as* or *in addition to* a group.

If authors provide this information in their reference lists, *for* or *and* will be retained; however, if this information is not provided, the reference will use the individuals named and the group name without *for* or *and*.

Note that the group name is preceded by a semicolon rather than a comma. This shows that the information that follows is related to what precedes it but is somehow distinct.

Also note that articles (e.g., *the*) in the group name are removed.

1 author *for* a group: Doe JF; for Laser ROP Study Group  
1 author *and* a group: Doe JF; and Laser ROP Study Group  
7 or more authors *for* a group: Doe JF, Roe JP III, Coe RT Jr, et al.; for Laser ROP Study Group  
7 or more authors *and* a group: Doe JF, Roe JP III, Coe RT Jr, et al.; and Laser ROP Study Group

### References to Authors in Text

When mentioned in the text, only the last names of authors are used.

Doe<sup>7</sup> reported on the survey.

For a 2-author reference, list both last names.

Doe and Roe<sup>8</sup> reported on the survey.

For references with 3 or more authors or authors and a group, include the first author's surname followed by "et al.," "and associates," or "and colleagues."

Doe et al<sup>9</sup> reported on the survey.

Do not use the possessive form "*et al's*"; rephrase the sentence instead.

The data of Doe et al<sup>9</sup> support our findings.

In material that is less clinical (e.g., book reviews, historical features, letters to the editor), the author's first name or honorific may be used at first mention:

We agree with Dr Tayeb that the prevalence of domestic violence is difficult to determine.

In *Growing Up Fast*, Joanna Lipper profiles 6 teenaged mothers living in Pittsfield, Massachusetts, at the turn of the 21st century.

## **Titles**

In titles of articles, books, parts of books, and other material, use the spelling, abbreviations, and style for numbers used in the original. Note that numbers that begin a title are spelled out. Exceptions are made for years (see section 2.1.2 of the *AMA Manual of Style* for further information).

## **Names of Organisms**

In all titles, follow the style recommended for capitalization and use of italics in scientific names of organisms given in sections 10.3.6 and 15.14 of the *AMA Manual of Style*.

Use Times New Roman or Garamond for genus and species names in book titles.

## **Non-English Words and Phrases**

In all titles, follow the guidelines recommended for use of italics or roman in non-English words and phrases in section 12.1.1 of the *AMA Manual of Style*. For example, if *In Vivo* or *In Vitro* were set italic in a cited title, *JAMA* and the *Archives Journals* would set these in roman type.

## **Subtitles**

Style for subtitles follows that for titles (section 3.9 of the *AMA Manual of Style*) in spelling, abbreviations, numbers, capitalization, and use of italics.

1. Klein R, Klein BEK, Moss SE, et al. The relation of retinal vessel caliber to the incidence and progression of diabetic retinopathy, XIX: the Wisconsin Epidemiologic Study of Diabetic Retinopathy. *Arch Ophthalmol*. 2004;122(1):76- 83.

For journal articles, however, the subtitle begins with a lowercase letter. A colon and a space separate title and subtitle, even if a period was used in the original.

Do not change an em dash, the long double dash (—), to a colon.

If the subtitle is numbered, as is common when articles in a series have the same title but different—numbered—subtitles, use a comma after the title, followed by a roman numeral immediately preceding a colon.

# **MANUSCRIPT PREPARATION**

## **Titles and Subtitles**

Titles should be concise, specific, and informative and should contain the key points of the work. Similarly, although subtitles are frequently useful in expanding on titles, they should not contain key elements of the study as a supplement to an overly general title. Additionally, too much detail should be avoided.

*Avoid:* Psychiatric Disorders: A Rural-Urban Comparison

*Better:* Rural-Urban Differences in the Prevalence of Psychiatric Disorders

Subtitles should complement the title by providing supplementary information that gives more detail about the content and aids in information retrieval.

Subtitles of scientific manuscripts may be used to amplify the title; however, the main title should be able to stand alone. Phrases such as “Role of,” “Effects of,” “Treatment of,” “Use of,” and “Report of a Case of” can often be omitted from both titles and subtitles. Although sometimes – especially in randomized controlled trials, (in which causality can be demonstrated) – the use of such phrases as “effects of” is appropriate.

Randomized controlled trials should be identified in the title or subtitle so that readers are alert to

Examples from *AMA Manual of Style, 11th Edition* (Oxford: Oxford University Press, 2020).

Revised by Kalee Schoonmaker: Spring 2021

**Student Learning Assistance Center (SLAC)**

Texas State University-San Marcos

the level of evidence and study design; it is also helpful to researchers performing a meta-analysis. Other aspects of study design may be included in the title or subtitle. Sometimes a subtitle will contain the name of the group responsible for the study, especially if the study is 1) large, 2) best known by its group name or acronym, or 3) if it is a part of a series of reports from the same group.

### Quotation Marks

If quotation marks are required in the title or subtitle, they should be double, not single.

### Numbers

In general scientific writing, and in the title, numerals are used to express numbers in most circumstances. Here are the following exceptions:

- Numbers that begin a sentence, title, subtitle, or heading (exceptions may be made for years)
- Common fractions
- Accepted usage such as idiomatic expressions and numbers used as pronouns
- Other uses of “one” in running text
- Ordinals *first* through *ninth*
- Numbers spelled out in quotes or published titles

### Drugs

If drug names appear in the title or subtitle:

- (1) use the approved generic or nonproprietary name
- (2) omit the non-base moiety unless it is required
- (3) avoid the use of proprietary names unless
  - (a) several products are being compared.
  - (b) the article is specific to the particular formulation of a drug (e.g., the vehicle, not the active substance, caused adverse reactions).
  - (c) the number of ingredients is so large that the resulting title would be clumsy and a generic term would not do (such as, “multivitamin tablet”).

### Genus and Species

Genus and species should be expanded and italicized in the title or subtitle and an initial capital letter should be used for the genus but not the species name – just as in text.

### Abbreviations

Avoid using abbreviations in the title and subtitle, unless space restrictions require them. An exception to this rule is when the title or subtitle includes the name of a group that is best known by its acronym.

In both cases, the abbreviation should be written in full in the abstract and the first time it is written in the text.

### Capitalization

Capitalize the first letter of each major word in titles and subtitles. Do not capitalize articles (e.g., *a*, *an*, *the*), prepositions of 3 or fewer letters, coordinating conjunctions (e.g., *and*, *or*, *for*, *nor*, *yet*, *so*, *but*), or the *to* in infinitives.

Do not capitalize a 2-letter verb, such as *Is* or *Be*.

Exceptions are made for some expressions, such as compound terms from languages other than English (which require that you capitalize all parts of the expression) and phrasal verbs. Also, in the case

of a temporary hyphenated compound, in which each part of the hyphenated term carries equal weight, capitalize both words (e.g., *Cost-Benefit Analysis*).

### **Names of Cities, Counties, States, Provinces, or Countries**

Include cities, states, counties, provinces, or countries in titles only when it is essential, especially for places that may not be referenced by other locations.

In other cases, include this geographic information in the abstract and the text only.

### **Bylines and End-of-Text Signatures**

In major articles, authors are listed in a byline, which appears immediately below the title or subtitle. Authors' names and academic degrees are used.

### **Authors' Names**

The byline or signature block should contain each author's full name (unless initials are preferred to full names), including, for example, Jr, Sr, II, III, middle initials, and highest academic degree(s).

When a byline contains more than 1 name, use semicolons to separate the authors' names.

See the *AMA Manual of Style* section 2.2.4 for more information on authors and groups that act as authors.

### **Footnotes to the Title Page**

Footnotes should be avoided in text but are allowed on the title page. They are placed in the following order: author affiliations, death of an author, information about members of a group, and corresponding author contact information.

Author affiliation – the institutions with which an author is professionally affiliated – including locations, are given in the footnote. Authors' last names are given parenthetically in the footnote following their respective institutions. If all authors in the byline are affiliated with the same department and institution, there is no need to include their names in the footnote.

If 2 or more authors share the same last name, their initials should be used in addition to the last name to distinguish them.

Title and academic rank are not included in this footnote.

See the *AMA Manual of Style* section 2.3.3 for more information.

### **Page Numbers and Titles**

Printed pages normally carry a shortened version of the title article and the page number. The shortened version of the title should be kept brief but should emphasize the main point of the article, not just repeat the first few words of the title.

Ask the supervising professor whether they prefer that this information be at the top of the page (running header) or the bottom (running footer). No punctuation follows the running header/footer.

### **Abstracts**

The abstract of a research report summarizes the main points of an article:

- (1) the study object or background
- (2) the study design and methods
- (3) primary results
- (4) principal conclusions

For scientific studies and systematic reviews, narrative expressions, such as “X is described,” “Y is discussed,” and “Z is also reviewed,” do not add meaning and should be avoided.

Results should be presented in a quantitative fashion, but authors and editors should verify thoroughly the accuracy of all data and numbers reported and ensure consistency with the results



published in the full article.

### **Structured Abstracts**

For reviews of original data, systematic reviews (including meta-analyses), clinical reviews, and structured abstracts, it is recommended that you use predetermined sideheads.

Many journals limit the number of words to 250, but some allow for 300 for reports of original data and for systematic reviews. Seek specific advice on this in section 2.5.1 of the *AMA Manual of Style*.

### **Unstructured Abstracts**

For other major manuscripts, include a conventional unstructured abstract of a maximum of 150 words. Consult the journal's instructions for authors for special requirements in individual publications.

### **Keywords and Epigraphs**

See sections 2.6 and 2.7 of the *AMA Manual of Style* for information on using keywords or epigraphs in abstracts.

### **Parts of a Manuscript, Heading, Subheadings, and Side Headings**

A consistent pattern of organization for all headings should be used for original research articles (see section 20.1 for more information). Many scientific articles follow the introduction, methods, results, and discussion (IMRAD) pattern.

However, not all articles will conform to a single pattern because format and section headings vary with the type of article.

- **Introduction**

Not to exceed 2 or 3 paragraphs, the introduction should provide the context for the article, the objective of the study, the hypothesis or research question (purpose statement), how and why the hypothesis was developed, and why it is important. It should convince the expert that the authors know the subject and should fill in gaps for the novice.

- **Methods**

The "Methods" section should include, as appropriate, a detailed description of:

- (1) study design or type of analysis and dates and period of study as well as mention of institutional review board or ethics committee approval (informed consent; see also section 5.8)
- (2) condition(s), factor(s), or disease(s) studied
- (3) details of sample (e.g., study participants and the setting from which they were drawn, inclusion and exclusion criteria)
- (4) intervention(s), if any
- (5) outcome measures or observations
- (6) statistical analysis

Enough information should be provided to enable an informed reader to recreate the study. If a methods article has already been published, then that article should be cited and important points should be summarized.

- **Results**

The results reported in the manuscript should be specific and relevant to the research hypothesis. Characteristics of the study participants should be followed by presentation of the results, from broad to specific.

This section should not include implications or weaknesses of the study but should include validation measures if conducted as part of the study. Results should not discuss the rationale for the statistical procedures that were used.

Data in tables and figures should not be duplicated in the text. (See section 4.0 on the visual

Examples from *AMA Manual of Style, 11th Edition* (Oxford: Oxford University Press, 2020).

Revised by Kalee Schoonmaker: Spring 2021

**Student Learning Assistance Center (SLAC)**

Texas State University-San Marcos

presentation of data.)

- **Discussion**

The “Discussion” section should be a formal consideration and critical examination of the study.

The research question or hypothesis should be addressed in this section, and the results should be compared to and contrasted with the findings of other studies; however, a lengthy reiteration of the results should be avoided.

The study’s limitations and the generalizability of the results should be discussed as well as mention of unexpected findings with suggested explanations. The type of future studies needed, if appropriate, should be mentioned.

This section should end with a clear, concise conclusion that does not go beyond the findings of the study. Note that “Comments” has traditionally been used here rather than “Discussion.” Ask the supervising professor what they prefer.

### **Levels of Headings**

A consistent style or typeface should be used for each level of heading throughout a manuscript so that the reader may visually distinguish between primary and secondary headings.

### **Number of Headings**

There is no certain maximum number of headings required. However, because headings are meant to divide a whole subject into various parts, there should be a minimum of 2.

Headings reflect the progression of logic or the flow of thought in an article and guide the reader. Headings also help break up the copy, making the article more attractive and easier to read.

Headings may even be used in articles such as editorials and reviews, which usually do not follow the organization described for research articles.

### **In Headings Avoid**

- Using a single abbreviation as a heading, even if the abbreviation has been expanded earlier in the text; if the abbreviation appears as the sole item in a heading, spell it out.
- Expanding abbreviations for the first time in a heading; spell the abbreviation out in the heading if that is its first appearance and introduce the abbreviation, if appropriate, at the next appearance of the term.
- Citing figures or tables in the heading; instead, cite them in the appropriate place in the text that follows the heading.
- Avoid citing references in headings.

### **Ethical Guidelines**

Remember to review Chapter 5 of the *AMA Manual of Style* for ethical and legal considerations including topics including (but not limited to) authorship responsibility, scientific misconduct, conflicts of interest, and confidentiality.

**For Information about Addenda, Acknowledgements, List of Participants in a Group Study, Funding and Support, Financial Disclosure, about Published Articles, and Other Matters, see the *AMA Manual of Style* in SLAC.**