

Article Format

1. **Title.** A good title catches the reader's attention and encourages reading of the article. Titles are also the basis of indexing and referencing and should be constructed with care to convey clearly and concisely the subject of the paper. Keep in mind that many potential readers will first come across your paper in *Index Medicus*, on a reference list, or in abstract form. Choose a title that will generate interest in the paper. Titles should be succinct so they can be read at a glance. Most effective titles run less than ten words. Think of the title as a label and omit nonessential words and phrases such as "report on," "pilot study," "assessment of," and similar descriptors. These qualifying details may be included in the abstract or introduction.

Be as specific as possible in your title. A title that is too general will not adequately convey the subject of your article. Run-on titles and subtitles are generally discouraged as they make referencing more difficult. Here are examples of effective versus less effective titles:

Excess words: Report on the Destruction of Renal Calculi by Use of Ultrasound
Better: Ultrasonic Destruction of Kidney Stones

Excess words: Prior Study to Assess the Incidence of Coronary Artery Disease in a Group of High School Football Coaches
Better: Coronary Artery Disease in High School Football Coaches

Center the title on the upper part of the title page and double-space if the title runs more than one line. If there is more than one author, list the primary author first. Affiliations are given below and keyed by symbols to the authors' names. At the bottom of the title page indicate the name, address and telephone number of the corresponding author.

2. **Introduction.** Assuming the title and abstract have drawn the reader's attention, a good introduction will answer the question of "why" the paper was written and promote interest in the subject. It should present the purpose and scope of the paper and provide any background information needed by the reader. An introduction may range from a few sentences to a page or two in length, depending upon the nature and complexity of the study.

Begin with a strong opening sentence to set the tone of the paper. For example:

Is the busy executive more likely to die prematurely from coronary artery disease?

Then provide a historical review of the subject, citing previous work and building the background for your study. Next, explain why you undertook this study and itemize the issues. Finally, state the objectives of your study and briefly present the outcome. Any specialized terms or definitions fundamental to the paper should be presented here. Write the introduction in the present tense, as it gives established and accepted information.

3) **Materials and Methods.** This section presents the “how” and the “what” of the paper. Because you are explaining how you conducted your study, this section should be written in the past tense. Include source of data, method of organization, and system of analysis. Give sufficient information to allow others to assess the validity of the study and repeat the experimental method if desired. If the method is well established, this section can be relatively short; if controversial, more detail will be necessary.

4) **Results.** In this section present the data or results obtained from the study in a straightforward, factual manner, without commentary or interpretation. As the section of greatest interest to most readers, it is the heart of the paper. The primary objective is to summarize the data in the most complete and efficient manner possible. Tables and figures can make a significant contribution to effectiveness and clarity of data presentation. This section is written in the past tense.

5) **Discussion.** Here is the place to answer the question “so what?” What is the significance of the findings? How do they add to our knowledge? What are the scientific or clinical implications? In this section, interpret your findings; also, take the opportunity to speculate and theorize. Such discussion can spark the imagination of the reader to take the next step in furthering research on the topic. The Discussion section is written in the present tense, because the findings of the paper are now considered established as scientific knowledge.

6) **Summary and Conclusion.** The need for such an ending has been largely replaced by the abstract. During the prewriting review, determine the journal’s policy about a conclusion and include one if it is customary. You may simply restate the main thesis of the study and summarize your findings and conclusions, or perhaps make recommendations for further research or application of the findings.

7) **Abstract.** Most journals now include an abstract. This summary provides an overview of the findings and should serve to stimulate reader interest. Abstracts are frequently reprinted in other journals or entered into computer literature retrieval systems, so they must be able to stand alone. For these reasons the abstract should be written with great care, as it may be the only portion of the paper that many will read. In fact, greater care should go into preparing the abstract than almost any other section. Write the abstract last, after the paper has been completed and is ready for submission to a journal.

Abstracts may take several forms. A survey of recent issues of your target should indicate the particular form most suitable for the journal and your article. *Descriptive* abstracts simply relate the subject matter of the article. Common statements include, “The findings were listed and conclusions made.” Such abstracts have little value and are generally unacceptable. *Condensation* abstracts provide an abbreviated version of the data and conclusions, and are more complete but take up more space than the first type does. *Conclusion* abstracts briefly report the findings of the study with a statement about clinical relevance.

This format provides no documentation, but is appropriate for complex studies when abstract space is limited.

Whenever possible, an abstract should concisely state the purpose, methods, results and significance of the study. Many rewritings may be necessary before the abstract says what you wish with the fewest words. The abstract is written in the past tense. Use short sentences and active verbs to achieve brevity, clarity and impact. Abstracts usually range from 100 to 200 words, but length varies with the journal. Check length requirements in the "Instructions to Authors" page and stay within the suggested word maximum.

8) Appendix. An appendix may be necessary for a long or complex paper. Nonessential supporting information that would burden the text or slow down the reader (e.g., details of statistical methods and analysis, very technical descriptions of methods or equipment, or supporting data) is appropriate for an appendix.

9) References. References are essential for documenting any scientific paper. References assist the reader in evaluating the author's knowledge and the validity of the paper, and can guide further investigation of the subject. Each journal has its own editorial policy regarding extent of reference lists. The complexity of an article and the number of previous reports on the subject will also influence number of references. Select references carefully and cite only those that have significant value to the study. It is not necessary to reference well-known information or standard research methods. Your reference list should include articles from the following categories (listed in order of priority):

1. Articles by the originator of the concept or technique.
2. Work that has served as a background for the current study, including techniques and methods of assessment.
3. Recent important related articles to aid the reader in studying the subject in greater depth.
4. Classic articles.
5. Remaining significant articles.
6. All related articles (if you desire to be encyclopedic).

Be sure to double-check references for accuracy of citation, and cross-check to ensure they are cited at the appropriate place in the text. Refer to the "Instructions to Authors" page in your target journal for specific guidelines on number and format of references. Follow a style consistent with that of the journal. If in doubt about style or the finer points of referencing, consult the guidelines in the *AMA Manual for Authors and Editors*.

10) The Cover Letter. Finally, a cover letter is a necessary formality. Include in the letter any information and releases requested in the "Instructions to Authors." Open your letter by asking the editor to consider your article (repeat the title) for publication. You may then include a sentence about why you believe the subject matter is significant or the article worthy of publication. Keep the cover letter brief and conclude by thanking the editor for his or her consideration.