



The Journal of the  
American Osteopathic Association

Established 1901

## Guidance for Peer Reviewers

*JAOA* Editorial Staff

This module is available online at

<http://jaoa.org/DocumentLibrary/PRmodule.pdf>

# Guidance for Peer Reviewers

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**Goal of this presentation:** To standardize peer review skills among *JAOA* reviewers and leadership

**Time requirement:** 30-45 minutes

You should browse these slides when you start a PR and annually; you may refer to these as an aide while reviewing manuscripts

**At the conclusion, you will understand:**

- The role of the *JAOA* peer reviewer
- Key elements of a study
- How to review a paper for the *JAOA*
- Where to find valuable PR resources



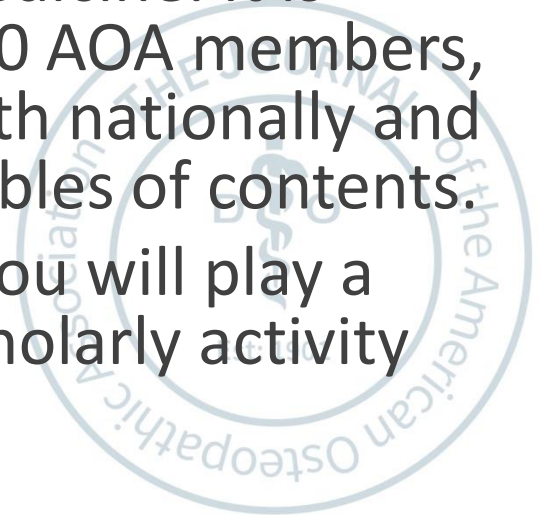
# Welcome to the Team!

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**Thank you** for being a peer reviewer for the AOA's scientific journal.

**The *JAOA*'s mission:** To advance medicine through the timely publication of peer-reviewed osteopathic medical research.

- The *JAOA* is a century-old scientific journal reflecting the scholarly activity of osteopathic medicine. It is distributed in print to more than 28,000 AOA members, and more than 110,000 individuals, both nationally and internationally, receive its electronic tables of contents.
- By effectively reviewing manuscripts, you will play a direct role in improving osteopathic scholarly activity and its reflection to the world.



# The Role of a *JAOA* Reviewer

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**As a peer reviewer, you have 3 roles:**

1. Provide feedback to authors to improve the quality of their manuscript
2. Provide feedback to the editor to improve the quality of the *JAOA*
3. Improve the quality of scholarly publication of the osteopathic medical profession



# Types of Manuscripts Submitted

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- Original Contributions
- Reviews
- Evidence-Based Clinical Reviews
- Clinical Practice
- Brief Reports
- Case Reports
- Medical Education
- Special Communications
- Clinical Reviews
- Health Policy
- Editorials
- In My View
- The Somatic Connection
- Clinical Images
- In Your Words
- Letters to the Editor
- Book Reviews
- SURF

See [guidelines online](#) for specific information about each manuscript type



# Manuscript Decisions

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What happens to submitted manuscripts?

Decision	What It Means
Accept	Rare on first round; most benefit from some revision
Minor Revision	Authors must address concerns of reviewers; manuscripts must be re-reviewed before acceptance
Major Revision	Requires major overhaul but is potentially worthy of publication; these manuscripts will undergo repeat peer review
Reject & Resubmit	Unacceptable as written; has potential if specific features are met; undergoes repeat peer review
Reject	Poor science, flawed methods, opinion based, no real value, duplicate publication, clear bias, too esoteric, wrong audience

# JAOA Peer Review Process

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- The *JAOA* uses a **single-blind peer review** process—authors are revealed to reviewers, but reviewers are not revealed to authors
- Each manuscript is reviewed by **2 to 4 experts** in the field
- Peer reviewers are **blind copied on decision letters** so that they can see the comments of their peers



# Basic Guidelines

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## **Before you accept a review request, ask yourself:**

- Am I qualified to review this manuscript?
  - The *JAOA* tries to send manuscripts to subject experts
- Do I have adequate time (1-4 hours)?
  - A thoughtful review takes time
- Can I meet the deadline (2-3 weeks)?
- Do I have any conflicts?
  - Personal, professional, or financial; if unsure, check with *JAOA* staff at [jaoa@osteopathic.org](mailto:jaoa@osteopathic.org) before accepting the invitation.

*If you are okay with these, proceed to next step*





# Basic Guidelines

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## Once you accept the invitation to review:

- Submit your review in a timely manner
- Keep the manuscript and your review confidential
- Do not contact the authors
- **Be objective, constructive, and systematic**

Remember: You represent *The Journal*

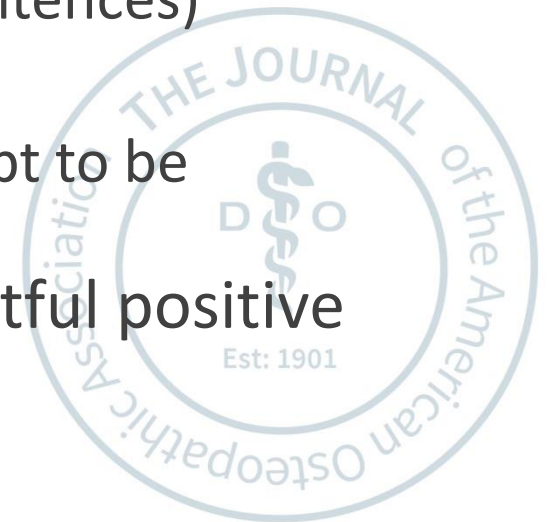


# Basic Guidelines

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Keep in mind that your comments will be sent to the authors, so please be courteous and professional.

- Be polite
  - Avoid insults, sarcasm, or demeaning statements (the editor will remove these and likely you as a reviewers)
- Direct your comments to the manuscript
  - Avoid personal statements (ie, “you” sentences)
- Remember The Golden Rule
  - Review as you would like your manuscript to be reviewed
- Authors and editors appreciate thoughtful positive and negative feedback
  - Help make the manuscript better



# Getting Started

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The *JAOA* and many other journals use an online Web-based manuscript tracking system

- To get started, you must respond to the peer review invitation e-mail
  - Make sure e-mails from manuscriptcentral.com are on your e-mail server's safe list
- If you are not available to review the manuscript, suggest another expert



# Getting Started

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Once you have accepted the invitation:

- Start here:  
<http://www.osteopathic.org/JAOAsubmit>
- Enter your user ID and password
  - For help, contact Nicole FioRito  
([nfiorito@osteopathic.org](mailto:nfiorito@osteopathic.org))
- Click on the **Review** tab
- Open the manuscript you're assigned to review, read the paper, and complete the peer review form
- Enjoy the experience!



# Reading The Manuscript

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During the initial reading of the manuscript, ask yourself:

- Do I care about this manuscript?
  - Does it address an important, relevant question?
    - To health care, the public, or osteopathic medicine
  - Is it interesting and original?

*For original research articles,*

- Do I understand it?
  - Are the questions and methods clear?
  - How could they be better?
- Do I believe the findings?
  - Are the conclusions justified by the data?
  - Are the methods valid?
- Are the findings meaningful for the osteopathic profession?



# The Tenets of Osteopathic Medicine

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The **Tenets of Osteopathic Medicine** reflect the underlying philosophy of osteopathic medicine.

- The body is a unit; the person is a unit of body, mind, and spirit.
- The body is capable of self-regulation, self-healing, and health maintenance.
- Structure and function are reciprocally interrelated.
- Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function.

***Articles in the JAOA should reflect these***



# Manuscript Format

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- Original research manuscripts should adhere to the standard structure:
  - Title (reflects the purpose of the manuscript)
  - Abstract
  - Introduction
  - Methods
  - Results
  - Discussion
  - Conclusion
  - Figures/Graphs
  - Tables
  - References

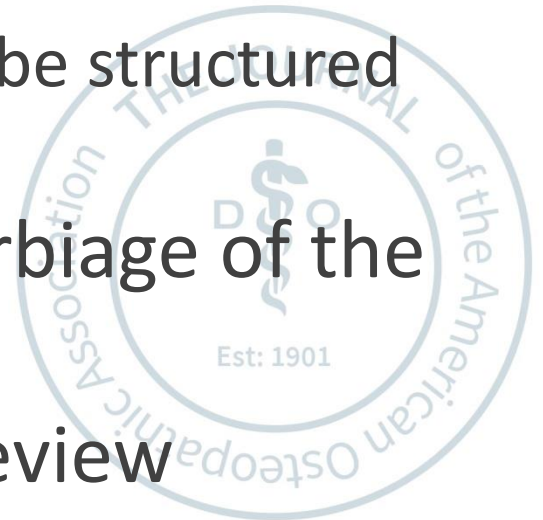
NOTE: *The majority of the guidelines here pertain primarily to original research studies. For other article types, review the [author guidelines](#) of the JAOA.*



# Reviewing the Parts: Abstract

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- Needs to be succinct and accurate
- Remember, many readers only look at the abstract!
- Should describe the context, objective, methods, results, and conclusion
  - Original research abstracts should be structured to reflect these headings
- It should not be a copy of the verbiage of the paper
- Re-read it after you finish your review





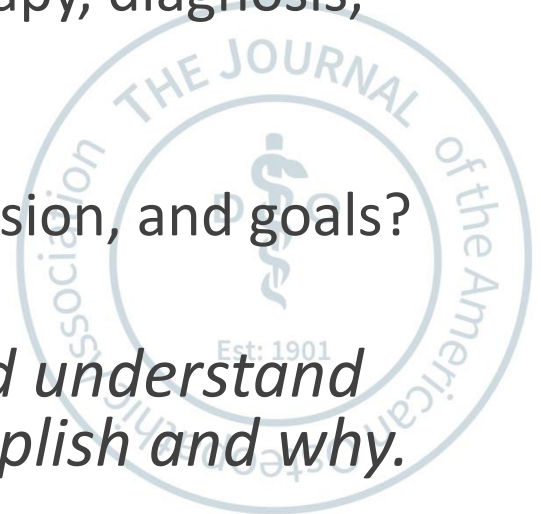
# Reviewing the Parts: Introduction

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The introduction should **set up the question** the study is designed to address.

- Paragraph 1 – Background
  - What previous work has led to this question? Is the literature review up to date with recent references?
- Paragraph 2 – Research question
  - What is the domain of inquiry? (eg, therapy, diagnosis, prognosis, quality)
- Paragraph 3 – Agenda
  - What are the study design, desired precision, and goals?
  - Is the primary objective clearly stated?

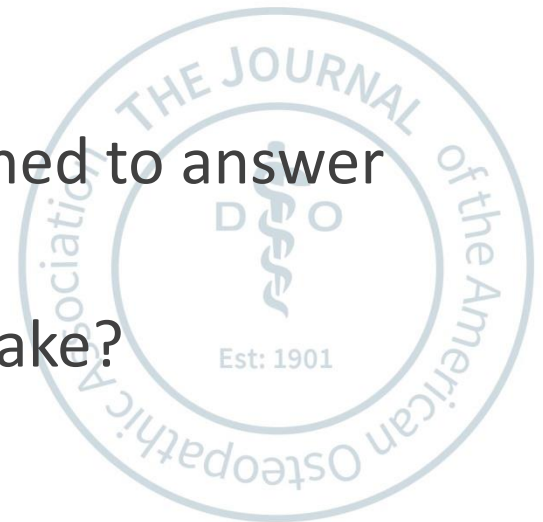
*After reading the introduction, you should understand what the authors want to know or accomplish and why.*



# Reviewing the Parts: Methods

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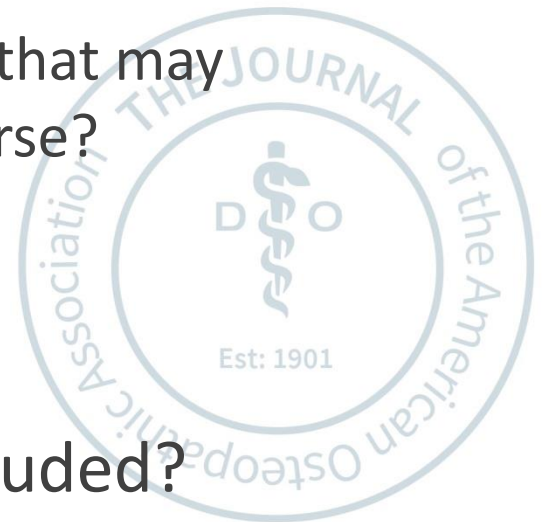
- The most critical part of the manuscript
  - If these are incorrect, the manuscript will be flawed
- Questions to consider while reviewing
  - Have the authors clearly described the blueprint to answer the question described in the introduction?
  - Are the methods reproducible?
  - Are the methods appropriately designed to answer the question?
  - What assumptions did the authors make?



# Methods: Participants and Setting

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- Who
  - Who are the subjects (eg, patients, students, medical records) and is the sample random?
  - What were the inclusion and exclusion criteria? (eg, age, sex, comorbidities)
    - Are any comorbidities accounted for that may influence outcomes, for better or worse?
- When and Where
  - When were data collected?
  - What geographic regions were included?



# Methods: Data Collection

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Keep the following questions in mind while reviewing the methods section:

- What is the study design?
- What is the intervention?
- Was IRB approval and informed consent obtained?
- What techniques are being used?
- What is being measured?
- What outcomes are going to be reported?
- What power, precision, or accuracy is expected and how will it be calculated?
- Are all participants followed to conclusion?
- How are dropouts handled in the analyses?



# Methods: Study Design Types

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- Experimental
  - Randomized; single or double blinded
- Quasi-experimental
  - Not randomized
- Non-experimental (or observational)
  - Case control
  - Case series
  - Cross-sectional
  - Cohorts
  - Surveys
  - Database extraction



# Methods: Survey-Based Studies

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Consider the following questions when reviewing:

- What is the survey?
- Is it validated?
  - Did the authors create it, or is it a standard survey used in other studies?
- How were the participants recruited?
- Was it self-administered or by interview?
- How were responses measured?
- IS the survey tool provided for review?
- Were the questions clear?



# Methods: Medical Record Reviews

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Consider the following questions when reviewing medical record reviews:

- Was permission granted?
- Was a standardized abstraction form used?
- How were the charts selected (cases, controls, inclusion, exclusion)?
- Who did the abstraction?
- Were investigators blinded or unblinded?
- How were missing data handled?
- Did monitoring of abstractors occur?
- Was reliability between abstractors considered?
- Are outcomes clearly defined?



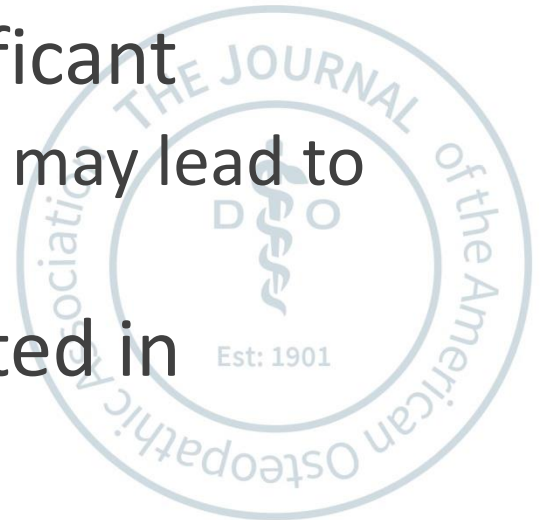
# Methods: Misinterpretation of $P$ Values

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Two common problems in analyses:

- Investigators test hypotheses for statistical significance but avoid clinical significance
  - Are the findings clinically important?
- Investigators overtest data to try and find anything that is statistically significant
  - Problem of multiple testing, which may lead to type 1 error

Also, was a power analysis completed in advance?



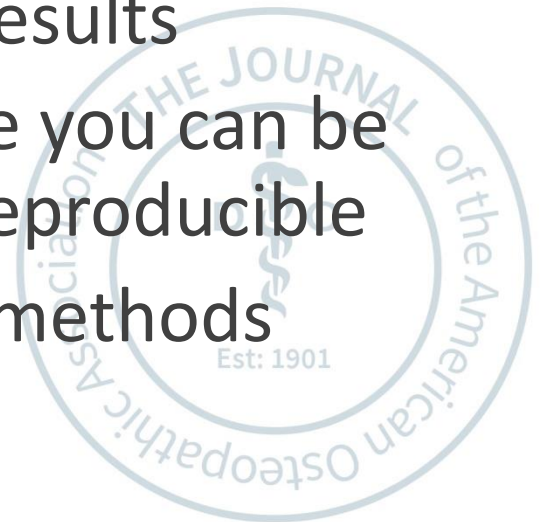


# Methods: Wrap up

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When you have finished reading the methods, you should:

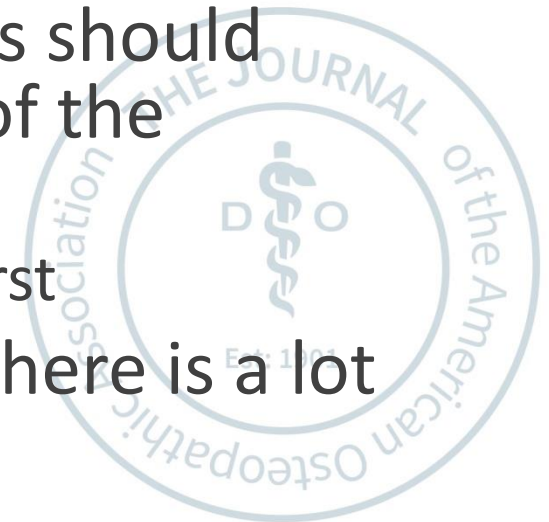
- Understand how the authors tested their hypothesis
- Be able to determine what assumptions the authors made that may bias their results
- Know with what level of confidence you can be sure their results are reliable and reproducible
- Be able to repeat the study by the methods description provided



# Reviewing the Parts: Results

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- Should parallel what the authors said they were going to measure in their methods
  - Should be able to follow all participants; no data gaps
- Should have no “new” or unanticipated results presented that do not follow from the methods
- The order of presentation of results should parallel the order of presentation of the methods
  - Primary outcomes should be listed first
- Section headings may be useful if there is a lot of complex data



# Results: Presentation of Findings

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- Data may be descriptive, tabular, or graphical
  - Refer to *JAOA* articles on graphic elements
    - [Part 1: Tables](#)
    - [Part 2: Figures](#)
- Characteristics of enrollees are typically provided in Table 1
- Primary and secondary results should be reported



# Results: Evaluating Data Presentation

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- Do the authors provide the raw data?
  - Eg, numerator/denominator should be provided with %, SD with mean
- Are the numbers accurate? Do they add up?
- Are the results in line with the methods?
- Are there clear primary results?
- Are the tables and figures valuable and defined?



# Reviewing the Parts: Discussion

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This is **not** a literature review. Authors must identify:

- Whether the hypothesis was verified
- What questions were answered and why the findings are important
- Results in the context of bigger picture
  - Discuss findings as they relate to published literature
- Limitations of the manuscript's results
  - Why the findings might not tell the full story
  - Was the sample size too small?
  - Were the assumptions correct?
  - Were too many subjects excluded?
  - Was there bias affecting the results?



# Reviewing the Parts: Conclusion

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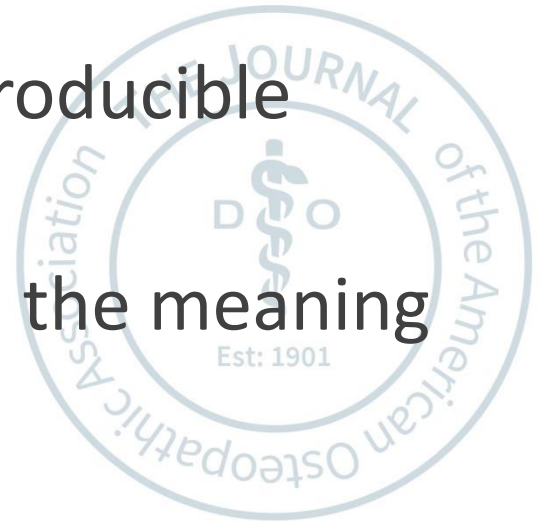
- States the primary findings of the study
  - Should directly relate to the previously stated objective of the study
  - Should state whether or not the findings agree with original hypothesis
  - Should not overstate or expand beyond results
- Makes suggestions for future studies



# Reviewing the Parts: Figures

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- Figures such as bar charts should illustrate important features of the methods and results
- They should not repeat data presented in text
- Authors should limit figures to those essential to understanding of the data
- These should be of the highest reproducible quality
- There must be legends that explain the meaning of the figures



# Reviewing the Parts: Tables

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- Tables should be used to summarize complex data collections and
  - make the data more understandable
  - allow the reader to make comparisons
- Examples
  - Table 1. Demographics
  - Table 2. Results
- Tables are not necessary if the information is provided in the text





# Reviewing the Parts: References

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All statements of fact must be backed up by primary references

- Do the citations reflect current knowledge?
- Are the key papers in the area cited?
  - Make sure key references haven't been missed
- Are they complete
  - References are often pasted and may not follow basic standard style
- Do they meet style guidelines?
  - Should follow AMA style consistently
  - [JAOA reference examples available online](#)



# Reviewing the Parts: Abstract

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Re-review the abstract for accuracy

- Now that you have read—and understand—the study, go back and make sure the abstract reflects what was really found
- The abstract should be focused
- It should reflect information presented in the body of the paper
- The conclusion should match but not overstate the findings



# Writing Your Peer Review

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- Briefly outline the paper
  - This paper is a \_\_\_\_\_ study which looks at the question \_\_\_\_\_ using \_\_\_\_\_ methods
  - The authors found \_\_\_\_\_
  - The results can be viewed with \_\_\_\_\_ confidence
- In the peer review form, highlight specific line numbers and sections in your comments
- Highlight strengths and weaknesses of the manuscript
- Provide constructive feedback to authors and editors
- If you feel the statistics need review, say so

*Peer reviewers do not decide acceptance or rejection; that is an editorial decision.*



# Peer Review Examples

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Comment	More Helpful Comment
“The methods need to be expanded.”	“Many key elements of the methodology are absent. The authors must identify the inclusion and exclusion criteria and describe the randomization and blinding process.”
“Myofascial is misspelled in the abstract.”	“I noticed several typographical errors. The authors should ask a colleague to review the study for such problems before resubmission.” (NOTE: Although reviewers are encouraged to point out poor writing, it is best to focus reviews on the clinical aspects of the manuscripts)
“The introduction is too long.”	“A thorough discussion of previous literature on the topic appears in the introduction; although this information is appropriate, it should appear in the Discussion.”
“The conclusion is not appropriate.”	“The authors have overstated the claims of the study. They investigated disease A in population X, yet they claim that their findings are proven for a wider population.”
“Too few patients.”	Is it a pilot study? Was a power analysis conducted? If there were indeed too few patients, make sure that it is identified as a limitation of the study and that the conclusion takes the small population into account.

# What Makes Manuscripts Acceptable?

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- The topic is timely and relevant
- It focuses on a distinctive aspect of osteopathic medicine
- The manuscript is well-written, flows well, and is easy to comprehend
- The study is well-designed with the appropriate methodology
- The conclusions are supported

*Bordage G, Acad Med 2001*



# Why Are Manuscripts Rejected?

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- The manuscript topic is not of interest to people
- There is an insufficient problem statement
  - We cannot figure out why the problem is important
- Poorly written
- Sample size is too small or too biased
  - Reported as a pilot study but it is just underpowered to answer the question
- Suboptimal or insufficiently described means of measuring data
- Incomplete or insufficiently described statistics
- Overinterpretation of the data

*Bordage G, Acad Med 2001*



# Helpful Checklists

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Several organizations have checklists for various study designs. Refer to these:

- Randomized controlled trials: [CONSORT](#)
- Case reports: [CARE](#)
- Observational studies: [STROBE](#)

In addition, be sure to keep the [tenets of osteopathic medicine](#) in mind

*Bordage G, Acad Med 2001*



# Additional Resources

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- International Committee of Medical Journal Editors ([www.icmje.org](http://www.icmje.org))
- World Association of Medical Editors ([www.wame.org](http://www.wame.org))
- Council of Science Editors ([www.councilscienceeditors.org](http://www.councilscienceeditors.org))
- Committee on Publication Ethics (<http://publicationethics.org>)
- The Equator Network ([www.equator-network.org](http://www.equator-network.org))
- Journal websites (including Cochrane, GRADE, AGREE)

[BMJ How to Read a Paper](#)

[JAMA Users Guide to Medical Literature](#)





# Thank You!

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Thank you for taking your valuable time to be a peer reviewer and to complete this presentation. Your work helps us improve the *JAOA* and the quality of our profession's research.

- Please send an e-mail to [jaoa@osteopathic.org](mailto:jaoa@osteopathic.org) confirming that you have completed this presentation.
- Questions, comments, or feedback? Contact *JAOA* staff: [jaoa@osteopathic.org](mailto:jaoa@osteopathic.org).

