

TIPS FOR WRITING AN ABSTRACT

The purposes of a research abstract are to address the following:

1. What was your question? Why? *Introduction (or background)*
2. What did you do? *Methods section*
3. What did you find? *Results*
4. What does it mean? *Conclusion*

An abstract needs to contain concise and coherent answers to those questions, and nothing more.

AUTHORS

- Restricted to those individuals who actually did the study
- List full names and credentials, no job titles
- Author listed first is the person who did most of the work on the project
- Remaining authors listed in rough rank of relative contributions
 - Exception: senior author (the mentor) is often listed last

General writing tips

- Use active rather than passive voice
- All but the most commonplace abbreviations or acronyms should be spelled out the first time they appear
- Goal should be not to have a single grammatical mistake, misspelled word, missed space, missed capital letter, or typographical error in your abstract

RESEARCH PROJECTS (for case reports please see below)

TITLE

- The title should be an accurate promise of the abstract's contents
 - i.e. aims of study +/- take home message BUT preferable to make the title a description of what was investigated rather than to state the results or conclusions (as conclusions can often be over stated or incorrect)
 - Good: including key aspects of the study design
 - i.e. "A survey of pathology resident's attitudes on. . ." or "A case series of x presenting in y organ"
 - Bad: Redundant nonspecific phrases
 - i.e. "A research study of. . ." or "An investigation into. . ."
- Ideally about 10–12 words long
- Should not include jargon or unfamiliar acronyms

INTRODUCTION

- Provides context and explanation for doing the study and should state aim/hypothesis
- Should be no more than 3 short sentences
- Statement of a formal hypothesis helps to reinforce the investigators' objectivity
 - i.e. "We hypothesize that antibody x will be superior to antibody y at distinguishing a lesion from b lesion."
 - i.e. "Our null hypothesis is that ..."

METHODS

- Has to be concise; often you must omit many details of what was done
- Should give a good idea of the design of the study
 - i.e. retrospective or prospective, randomized, descriptive, theoretical/philosophical
- Should give an idea of tools used to gather data
 - Document/report analysis, interviews, assessments, surveys, case study, observations, statistical databases, slide review
- Types of patients/samples or measurements that were included
 - i.e. randomly selected, consecutive series, convenience sample
 - +/- can choose to mention controls (but not necessary)
- Should describe the manner in which data was analyzed
 - i.e. statistical tests

RESULTS

- Summarize the findings
- Stating "The findings will be presented" is not acceptable; do not submit an abstract if you do not yet have any results
- Results that pertain to the study's hypothesis must be included—even if no statistically significant differences were found
 - Any differences in one or more secondary or peripheral (or even unplanned) measurements that may be statistically significant can be mentioned afterwards
- It is important to give the main results not just in subjective terms ("We found immunohistochemical stain X to be superior to immunohistochemical stain Y") but also in the form of some real data
- If a table or figure is included in the abstract to convey the findings of the study more effectively, please remember that the abstract will be reduced in size for publication, and labels and data points must remain legible if the table or figure is to be effective

CONCLUSION

- A brief statement of why the study's findings are important and what you believe they mean
- Should be reasonable and supportable by the findings of the study
 - Most common mistake is to make more of the data than it deserves

CASE REPORTS

TITLE

- The title should be an accurate promise of the abstract's contents
 - You should state that this is a case report in the title
 - i.e. "Castelman's disease transforming into follicular dendritic sarcoma – a case report"
- Ideally about 10–12 words long
- Should not include jargon or unfamiliar acronyms

INTRODUCTION

- Provides clinical background for the disease being highlighted by the case report
- Sets the stage and identifies the case's features of interest
 - i.e. "X disease is very rare and rarely associated with y. We present a case of z..."
- Should be 1-3 short sentences

CLINICAL PRESENTATION

- Write down most pertinent details of clinical presentation
 - i.e. approximate patient age and sex if relevant, biochemistry values, imaging results
- Do not specify location or exact date of patient presentation as this might be used to identify the patient (try to de-identify the data as much as possible so that only medically pertinent information is presented)

RESULTS

- Summarize the pathologic findings that make the case unique and reportable
- Include any IHC or molecular studies that substantiate your morphologic interpretation

CONCLUSION

- A brief statement of why the case is important and/or what you believe the findings in the case may mean
- Should be reasonable and supportable by the findings of the study
 - Most common mistake is to make more of the case report than it deserves
 - It should be clear what is speculation and what is fact
 - Last sentence should be take home message

Reference: <http://rc.rcjournal.com/content/respcare/49/10/1206.full.pdf>