EURASIAN JOURNAL OF SCIENTIFIC AND MULTIDISCIPLINARY RESEARCH

Manuscript writing Workshop

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Scientific writing

How to write a research manuscript.

How to prepare tables and figures.

Some advices for writing and publishing a scientific paper

- Most journals follow the following design:

IMRAD Format

- Introduction
- Methods
- Results
- And
- Discussion

TITLE
(Should be less than 20 words and contain the 3W (What, Who, Where)

Author Names and Affiliations

ABSTRACT (less than 250 words)
- Introduction / Background (Must contain aim or objective of the study)
- Methods
- Results
- Conclusion

KEYWORDS

a list of 3−5 key words is to be provided directly below the abstract. key words should express the precise content of the manuscript, as they are used for indexing purposes.

INTRODUCTION

- Maximum 3-4 paragraphs
- 100-200 words to introduce your topic
- 500-1000 words of literature review
- Last paragraph should be the aim of the study (general objective)

METHODS

200-400 words

- Describe study population and location
- Study design & Sampling methods
- List of questionnaires used and from where adopted?
- Any pretest done? Validation?
- State ethics approval from which institute
- Did all participants sign the consent form?

RESULTS

- 500 – 1000 words
- No need to explain each table in detail, only headlines
- First paragraph describes the characteristics of the sample

DISCUSSION

- Maximum 3-4 paragraphs
- 500-1000 words
- 1ST paragraph the study main findings
- 2ND paragraph: the study limitations
- 3RD and 4th paragraph: compare your results with previous studies

CONCLUSION

- 200 words
- 1 paragraph
- Maximum 3-4 sentences

ACKNOWLEDGMENT

- 1 or 2 sentences

COMPETING OF INTEREST

- Authors need to declare if they have any competing of interest

REFERENCES

- Depend on each journal style

TABLES

- Maximum of 4-5 tables
- Title of each table must be self-explanatory
- Include confidence interval and p value where possible
- Table should not be large (maximum 6 columns and 12 rows)
- Table 1: Socio-demographic characteristics
- Table 2: Dependent variable (outcome)
- Table 3: Association table (Socio-demographic and dependent)
- Table 4: Association table (other factors and dependent)
- Table 5: Multivariable table

Vancouver Citation

Your authors are always referenced with the help of a number that helps to represent the reference.

The authors must be cited by the last name, followed by initials (Smith J.).

You can also insert numbers as superscripts or use them in parentheses like (1).

Template:

Number. Last Name Initial et al. Title: Subtitle. Journal's Name. Year; Volume(Issue): pages.

When you have more than six authors, you must cite the first six individuals by et.al. or use "and others".

Your bibliography is also sorted according to numbers, not alphabetically.

Notice that we have not used a comma between the last name or any punctuation.

Example:

34. Fung J, Lai C, Young J, Wong D, Yuen J, Seto W et al. Stability of hepatitis B surface antigen over time: Implications for studies using stored sera. Journal of Medical Virology. 2011;83(11):1900–1904.


• Length
• Style
• Requirements
?
wikiHow
to do anything

What is the right time to start writing?

What is the right style of writing?

What is the basic step of writing?

What is the reasonable approach to write a scientific manuscript?

- Title page
- Abstract
- Introduction
- Review of literature
- Material and Method
- Figure and Table
- Result
- Discussion & conclusion
- Conclusion
- References

Length of the manuscript

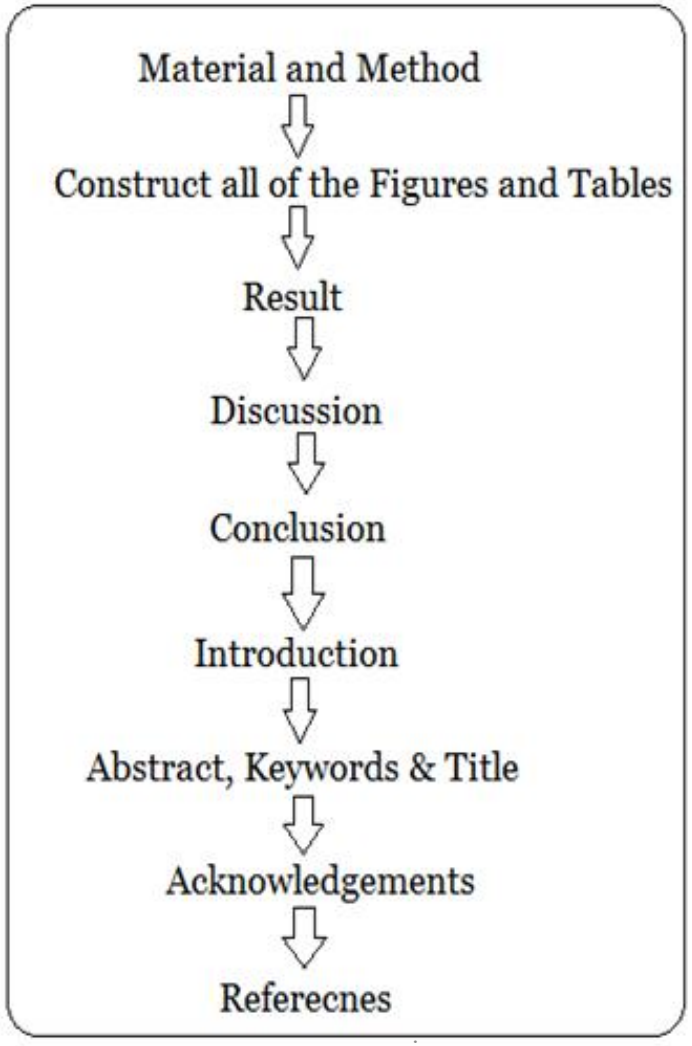
look at the journal's Authors Guideline, but an ideal length for a manuscript is 25 to 40 pages, double line spaced, including all essential data. Here are some general guidelines:

- **Title:** Short and informative
- **Abstract:** 1 paragraph (<250 words)
- **Introduction:** 2 pages
- **Methods:** 3 pages
- **Results:** 8 pages
- **Discussion:** 6 pages
- **Conclusion:** 1 paragraph
- **Figures:** 6-8 (one per page)
- **Tables:** 4-5 (one per page)
- **References:** 20-50 papers (2-4 pages)

Steps to organizing your manuscript

1. Compose a Title.
2. Write the Abstract.
3. Select Keywords for indexing.
4. Write a introduction.
5. Write the Methods.
6. Write the Results.
7. Write the Discussion. Finalize the Results and Discussion before writing the introduction. This is because, if the discussion is insufficient, how can you objectively demonstrate the scientific significance of your work in the introduction?
8. Write a clear Conclusion.
9. Write the Acknowledgements.
10. Write the References
11. Prepare the figures and tables.

A reasonable approach to writing a scientific manuscript may be the following



- before write a paper, there are two important things you should do that will set the groundwork for the entire process.

- Define your hypothesis and objectives (These will go in the Introduction.)

- Review the literature related to the topic and select some papers (about 30) that can be cited in your paper (These will be listed in the References and discussion.)

- Finally, keep in mind that each publisher has its own style guidelines and preferences, so always consult the publisher's Guide for Authors.

Define your hypothesis and objectives

- Write down questions for everything you're curious about.

- Why? When? In what ways?
-
- How? Where? What?
- Are? Who? Do?
- Under what circumstances?

Literature review on diabetes remission on bariatric patient

Full references Doi, PMID	Method Sample size	Result	Conclusion
Stacy A. Brethauer, Ali Aminian, Héctor Romero-Talamás, Esam Batayyah, et al. Can Diabetes Be Surgically Cured? Long-Term Metabolic Effects of Bariatric Surgery in Obese Patients with Type 2 Diabetes Mellitus. Annals of Surgery Volume 258, Number 4, October 2013 doi: 10.1097/SLA.0b013e3182a5034b PMID: 24018646	217 patients with T2DM who underwent bariatric surgery between 2004 and 2007 and had at least 5-year followup were assessed. y (Rouxen-Y gastric bypass, n = 162; gastric banding, n = 32; sleeve gastrectomy, n = 23) Complete remission was defined as glycated hemoglobin (A1C) less than 6% and fasting blood glucose (FBG) less than 100 mg/dL off diabetic medications. Changes in other metabolic comorbidities, including hypertension, dyslipidemia, and diabetic nephropathy, were assessed.	Long-term complete and partial remission rates were 24% and 26%, respectively, whereas 34% improved (>1% decrease in A1C without remission) from baseline and 16% remained unchanged. Shorter duration of T2DM ($P < 0.001$) and higher long-term EWL ($P = 0.006$) predicted long-term remission. Recurrence of T2DM after initial remission occurred in 19% and was associated with longer duration of T2DM ($P = 0.03$), less EWL ($P = 0.02$), and weight regain ($P = 0.015$)	Bariatric surgery can induce a significant and sustainable remission and improvement of T2DM and other metabolic risk factors in severely obese patients

Step 1: Write the Methods

This section responds to the question of how the problem was studied?

If your paper is proposing a New method, you need to include detailed information so reader can use the experiment.

However, do not repeat the details of Established methods; use References and Supporting Materials to indicate the previously published procedures. Broad summaries or key references are sufficient.

- **This section includes information such as:**
  - A standard operating procedure.
  - Your hospital name, address and identifying details.
  - Project start and end dates for task.
  - Sample number, inclusive and exclusive criteria.
  - A description of the work to be conducted.
  - Which statistic you used for analysis? Which version you used?

Material and method:

Description of the methods used in your study. Principle of this study. Your hospital name, address and identifying details.

⇩

Project start and end dates for task.

Sample number, inclusive and exclusive factor.

⇩

Material section with a statement of the materials used in the study, indicating the vendor and vendor contact information for each material.

(e.g.: MMP-2 ELISA GE Health Care U.K)

⇩

Each key procedure and technique used in the study.

Keep explanations brief and concise.

⇩

Describe the statistical analysis methods that were utilized to analyze the results

Step 2: Prepare the Figures and Tables

Remember that “A figure is worth a thousand words”

Figures and tables, are the most efficient way to present your results.

Your data are the driving force of the paper.

How do you decide between presenting your data as tables or figures?

Tables give the actual experimental results with value.

While figures are often used for comparisons of experimental results with calculated/theoretical values (Figure 1).

Incidence of menopausal status

Menopause status	Percentage	MMP2	MMP9
category	**%**	**Median**	**Median**
Patient	100	1200	39.00
PreM	61.90	1225	39
periM	00	00	00
PostM	38.10	1107.5	36.75
Control	100	1650.0	46
PreM	58.06	1643.75	47
PeriM	19.35	1567.5	46
PostM	22.58	1760	44.5

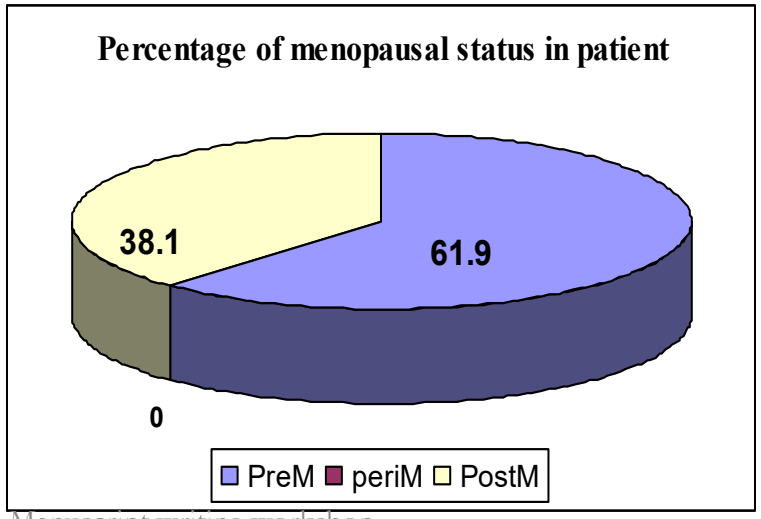
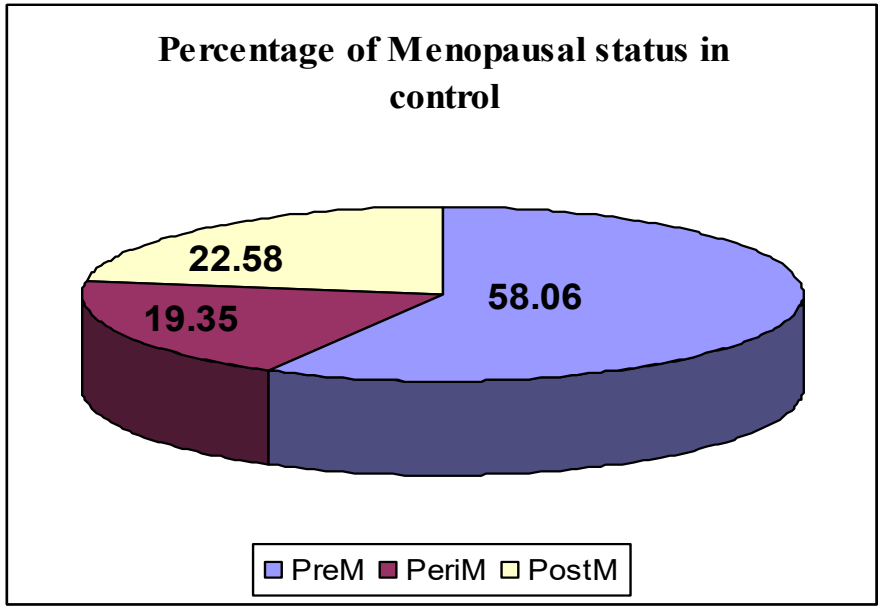


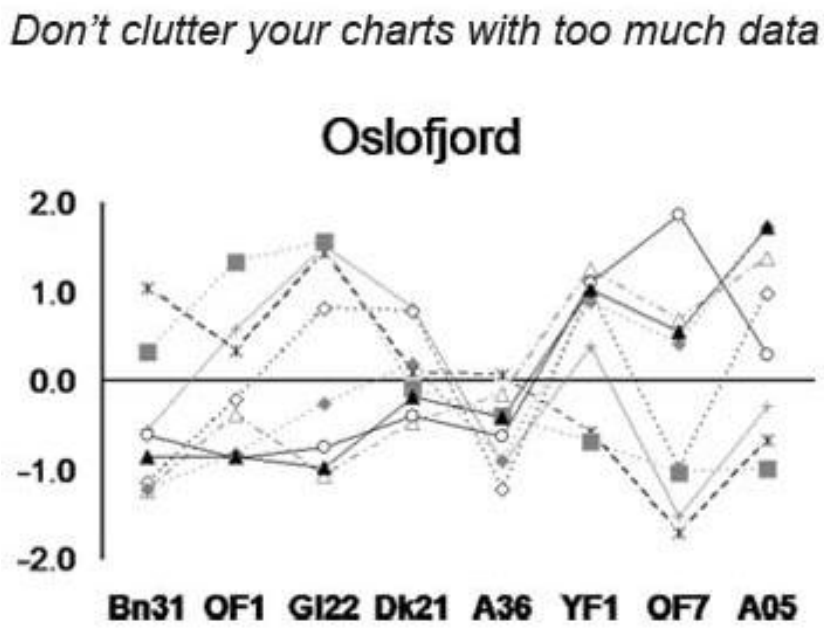
Figure 1. An example of the same data presented as table or as figure. Depending in your objectives, you can show your data either as table (if you wish to stress numbers) or as figure (if you wish to compare gradients). Note: Never include vertical lines in a table.

- Another important factor: figure and table must be self-explanatory.



When presenting your tables and figures

•Avoid crowded plots (Figure 3), using only three or four data sets per figure.

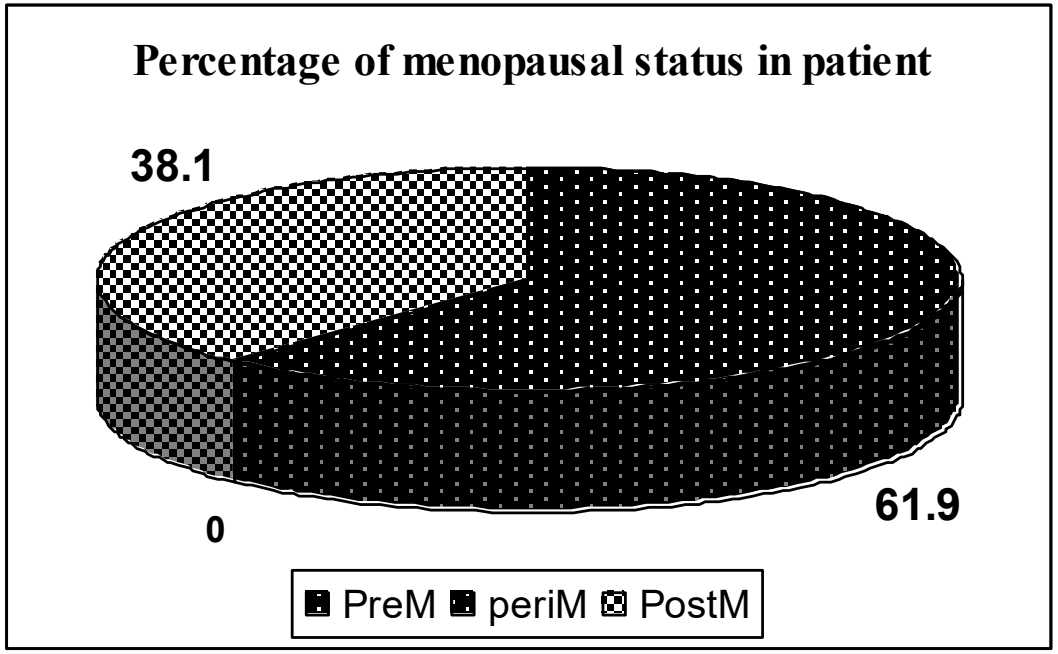


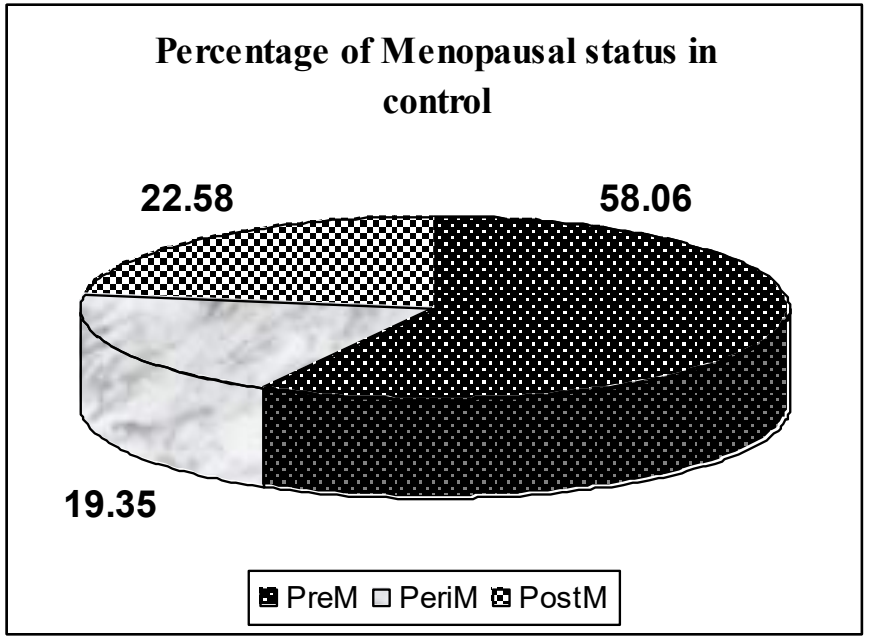
- Include clear symbols and data sets that are easy to differentiate.

- Never include long boring tables. You can include them as supplementary material.

- If you are using photographs, each must have a scale marker or good quality.
- In photographs and figures, use color only when necessary.
- If different line styles can clarify the meaning, never use colors or other thrilling effects or you will be charged with expensive fees.
- For many journals, you can submit duplicate figures: one in color for the online version of the journal and pdfs, and another in black and white for the hardcopy journal (Figure 4).
-

Figure:4


Percentage of menopausal status in patient
38.1
0
61.9
PreM
periM
PostM

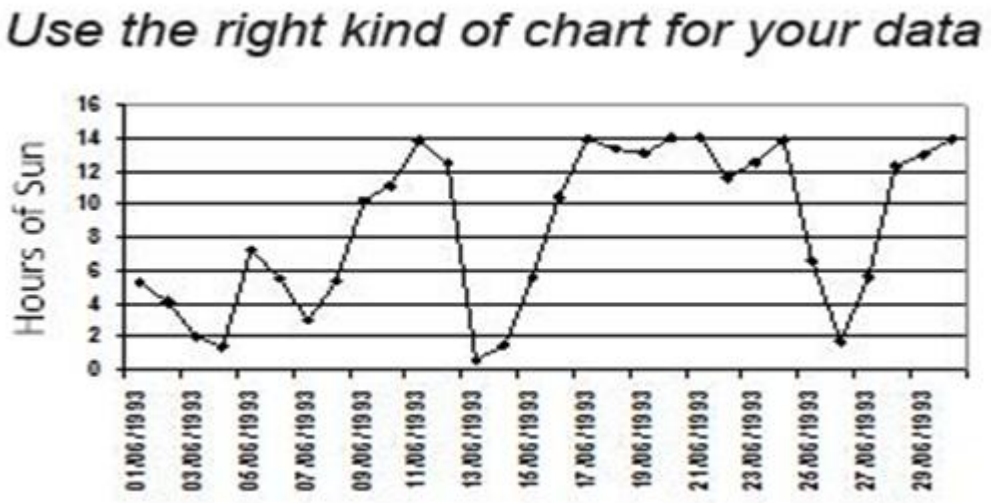

Percentage of Menopausal status in control
22.58
58.06
19.35
PreM
PeriM
PostM

- Another common problem is the misuse of lines and histograms.
  - Line joining data only can be used when presenting time series.

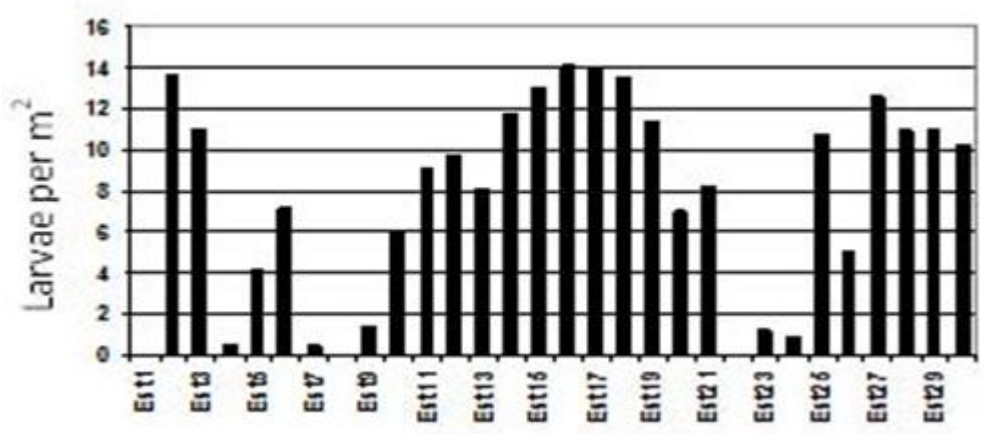
  - when there is no connection between samples or gradient, you must use histograms (Figure 5).

Figure:5

Lines joining data

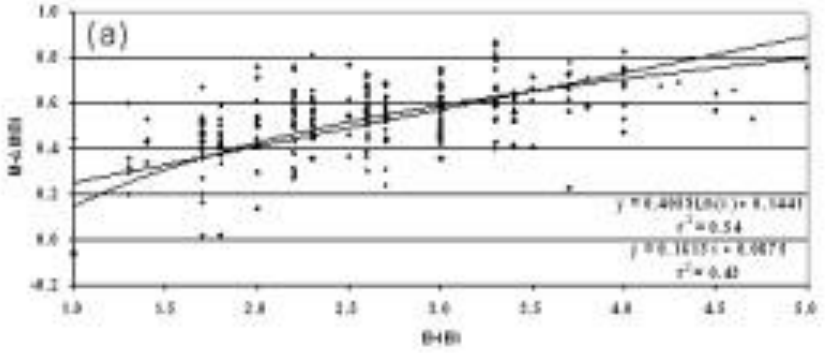


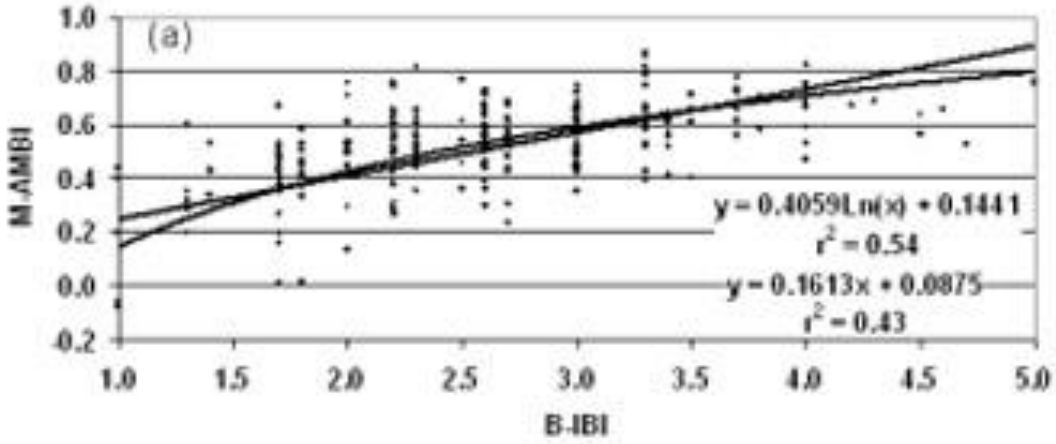
Histograms



Sometimes, fonts are too small for the journal. You must take this into account, or they may be illegible to readers (Figure 6).

Figures are not eye charts — make them large enough to read





Finally, you must pay attention to the use of decimals, lines, etc. (Figure 7)

Depth	Gravel	Sand	Mud
5 m	3,42%	81.41%	15,17%
50 m	2,5%	58.42%	39.08%
100 m	0,0%	32.5%	67.5%

Figure 7. **(above table)**

- Inadequate use of lines
- decimal separators (use always dots, not commas) and
- position of units

Water depth (m)	Gravel (%)	Sand (%)	Mud (%)
5	3.4	81.4	15.2
50	2.5	58.4	39.1
100	0.0	32.5	67.5

use **(below table)** for a more clear table.

Step 3: Write up the Results

This section responds to the question "What have you found?“

Give description of your table and figure.

Statistical rules

Indicate the statistical tests used with all relevant parameters:

e.g., mean and standard deviation (SD): 44% (±3);

Median and Interpercentile range: 7 years (4.5 to 9.5 years).

Use Median and interpercentile range to report skewed data.

For numbers, use two significant digits unless more precision is necessary (2.08, not 2.07856444).

Never use percentages for very small samples e.g., "one out of two" should not be replaced by 50%.

- Use sub-headings to keep results of the same type together, which is easier to review and read.

- Interprets data in a logical order that tells a clear story and makes it easy to understand.

Result

The data itself should be presented in table and figures.

⇩

Introduce each table and figure in separated paragraph

⇩

Key statistics such as the number of sample (n)

The index of dispersion (SD, SEM) and

The index of central tendency (Mean, Median or Mode) must be stated

⇩

Indicate specific statistical data such as P-value

Step 4: Write the Discussion

- Here you must respond to "what the results mean?"

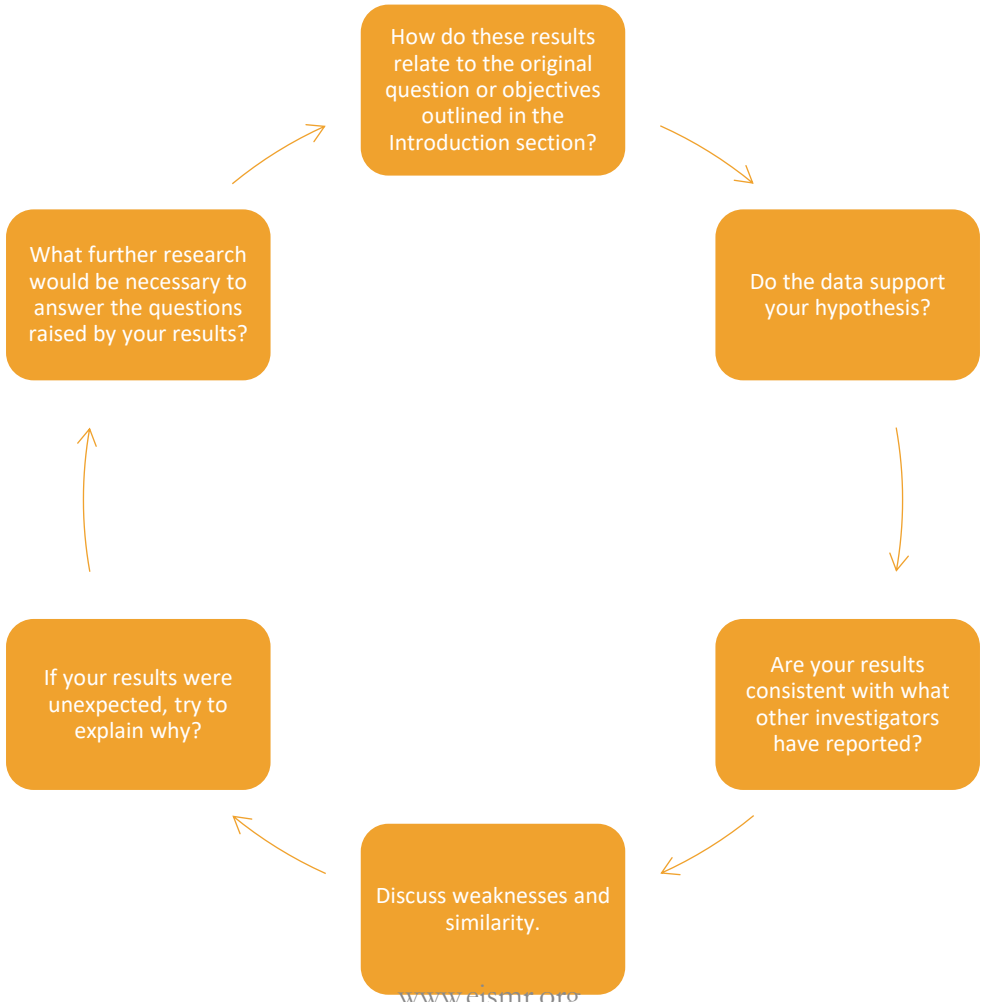
" Probably it is the easiest section to write, but the hardest section to get right."

- This is because it is the most important section of your article.
- Huge numbers of manuscripts are rejected because the Discussion is weak.
- You need to make the Discussion according to the Results, but do not repeat t results.
- Here you need to compare the published results with your result.(using some of the references included in the Introduction).
- Never ignore work in disagreement with yours, in turn, you must challenge it and convince the reader that you are correct or better.

Avoid unspecific expressions such as "higher temperature", "at a lower rate", "highly significant". Quantitative descriptions are always preferred (35ºC, 0.5%, $p<0.001$, respectively).

-Avoid sudden introduction of new terms or ideas.

To achieve good interpretations think about:



Discussion

Start with a brief paragraph that gives an overview to the work

⇩

Summarize the most important finding, accept or reject the proposed hypothesis

⇩

Identify the most interesting, significant, remarkable finding that were presented in the result section that discussed with other studies reported in the literature

⇩

Discuss weaknesses and similarity

⇩

How this work contributes to the overall field of study?

Step 5: Write a clear Conclusion

- This section shows how the work advances the field from the present state of knowledge.

In some journals, it's a separate section; in others, it's the last paragraph of the Discussion section.

- Without a clear conclusion it will difficult to judge your work.

A common error in this section is

-Repeating the abstract

-Just listing experimental results.

You should provide a clear scientific justification for your work in this section. Moreover, you can suggest future experiments and point out those that are underway.

- You can present scientific conclusions, in relation to the objectives included in the introduction.

Step 6: Write a Introduction

This is your opportunity to convince readers that you clearly know why your work is useful.

A good introduction should answer the following questions:

- What is the problem to be solved?
- Are there any existing solutions?
- Which is the best?
- What is its main limitation?
- What do you hope to achieve?

Editors like to see that you have provided a perspective consistent with the journal scope.

You need to introduce the main scientific publications on which your work is based, citing a couple of original and important works, including recent review articles.

However, editors hate improper citations of too many references irrelevant to the work, or inappropriate judgments on your own achievements. They will think you have no sense of purpose.

- **Here are some additional tips for the introduction:**
- Never use more words than necessary (be concise and to-the-point).
- Don't make this section into a history lesson. Long introductions put readers off.
- We all know that you are keen to present your new data. But do not forget that you need to give the whole picture at first.
- Hypothesis and objectives must be clearly remarked at the end of the introduction.

Introduction:

First paragraph with a short review of the literature pertaining to the research topic.

⇩

One or two paragraph that introduce the reader to the general field of the study.

⇩

Two or three paragraph that introduce the main scientific publications on which your work is based

⇩

Next describe how an aspect of this field could be improved.

⇩

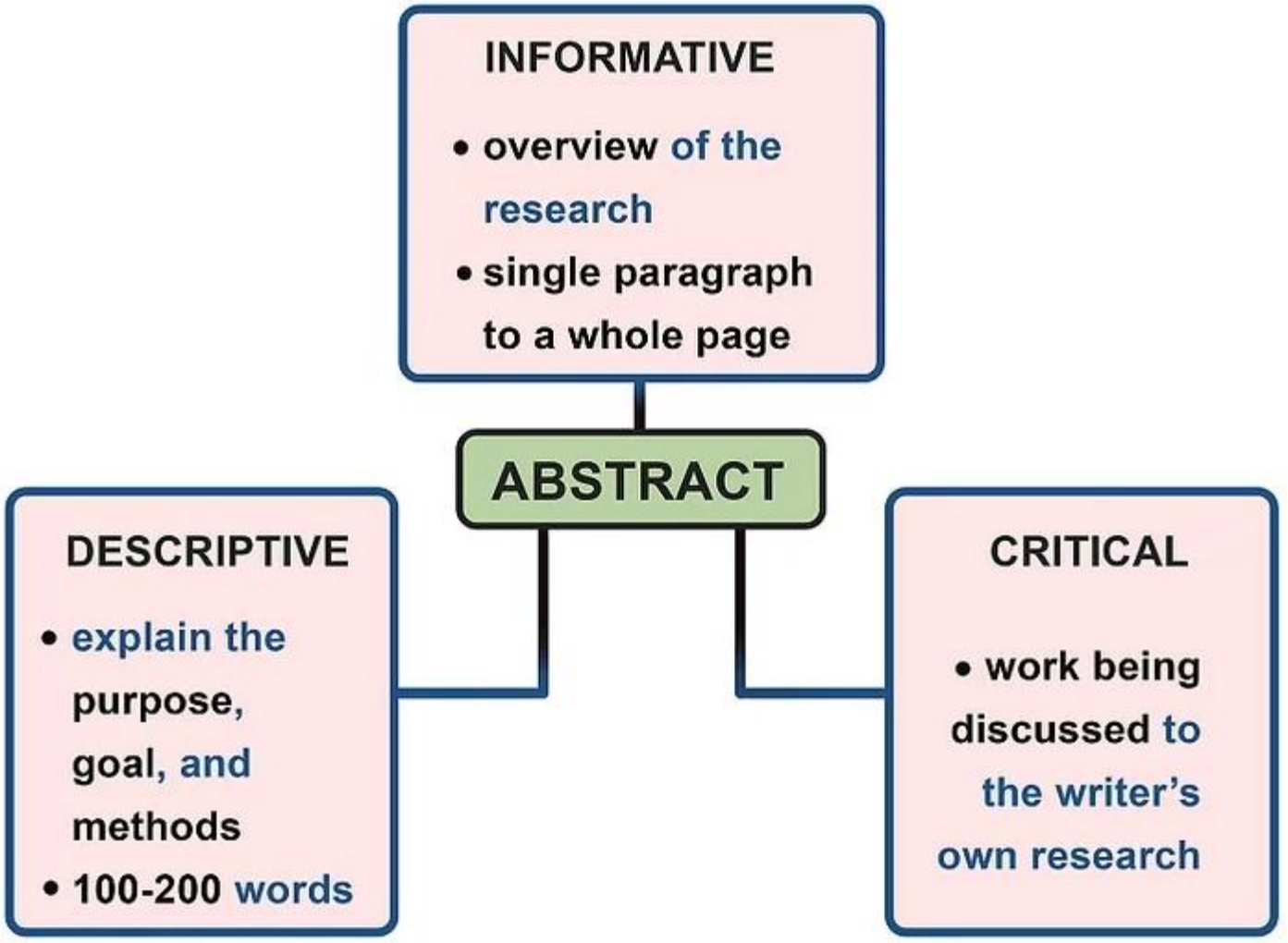
In last paragraph clearly state, what experimental question will be answered by the present study.

Step 7: Write the Abstract

The abstract tells what you did? and what the important findings in your research were.

Together with the title, it's the advertisement of your article. Make it interesting and easily understood without reading the whole article. Avoid using uncommon abbreviations and references.

- **Abstract should answer the following questions:**
- Why did you decide to do this study or project?
- How did you conduct your research?
- What did you find?
- Why is this research and your findings important?
- Why should someone read your entire essay?


INFORMATIVE
• overview of the research
• single paragraph to a whole page
ABSTRACT
DESCRIPTIVE
• explain the purpose, goal, and methods
• 100-200 words
CRITICAL
• work being discussed to the writer's own research

Abstract:

Small introduction of your topic

⇩

Objective: The first sentence should clearly state the objective of the experiment.

⇩

Method : How the investigation was carried out?

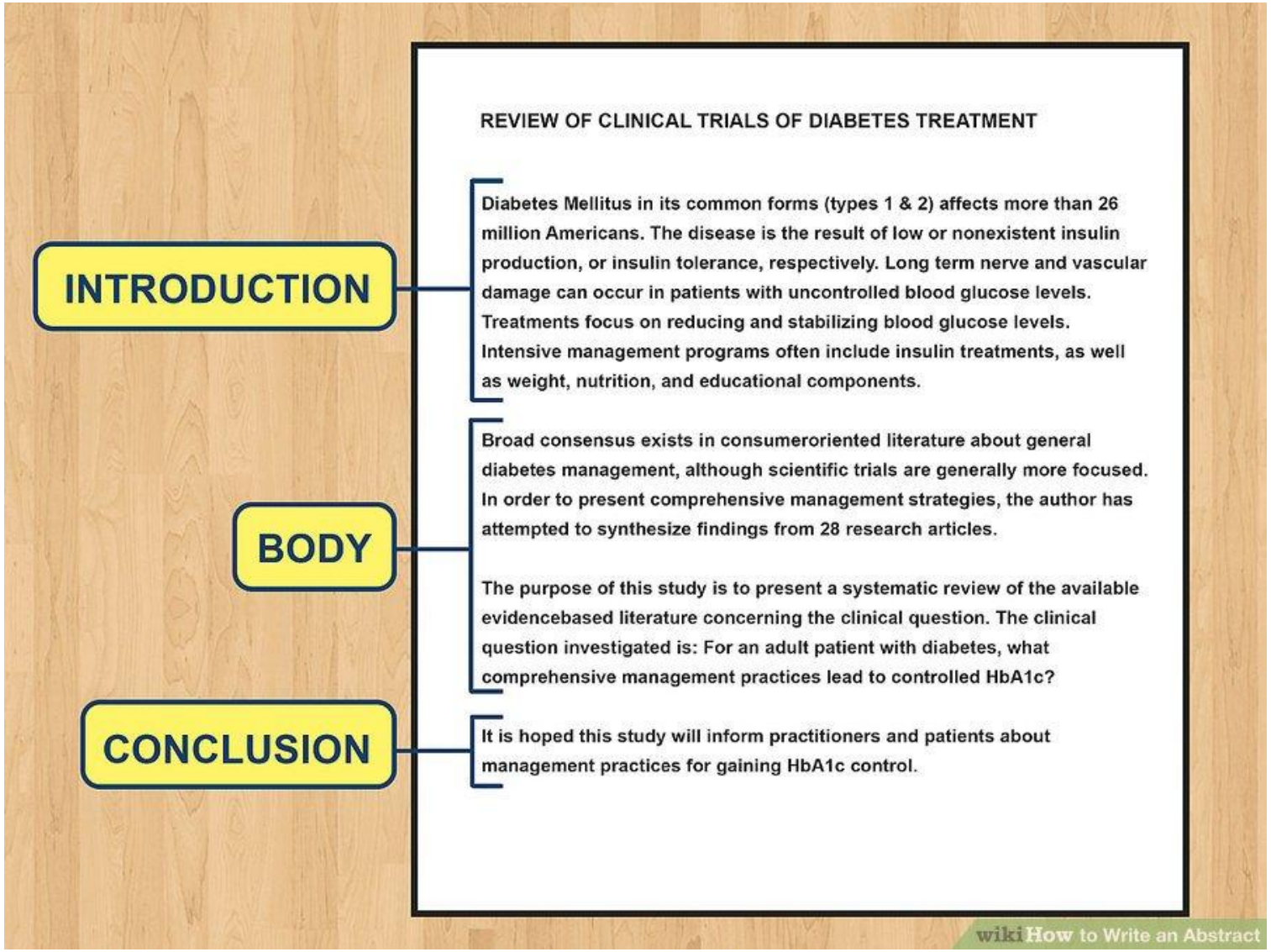
⇩

Result: The result of the experiment.

⇩

Conclusion: Final sentence describe the significance of the result and the impact of this work on the general field of study.

Keywords: 3 to 4 according to study


REVIEW OF CLINICAL TRIALS OF DIABETES TREATMENT
INTRODUCTION
Diabetes Mellitus in its common forms (types 1 & 2) affects more than 26 million Americans. The disease is the result of low or nonexistent insulin production, or insulin tolerance, respectively. Long term nerve and vascular damage can occur in patients with uncontrolled blood glucose levels. Treatments focus on reducing and stabilizing blood glucose levels. Intensive management programs often include insulin treatments, as well as weight, nutrition, and educational components.
BODY
Broad consensus exists in consumeroriented literature about general diabetes management, although scientific trials are generally more focused. In order to present comprehensive management strategies, the author has attempted to synthesize findings from 28 research articles.
The purpose of this study is to present a systematic review of the available evidencebased literature concerning the clinical question. The clinical question investigated is: For an adult patient with diabetes, what comprehensive management practices lead to controlled HbA1c?
CONCLUSION
It is hoped this study will inform practitioners and patients about management practices for gaining HbA1c control.
wikiHow to Write an Abstract


Google
keyword
research
rank
search
SEO
competition
want
find
Step
market
keywords
results
important
going
amount
business
backlinks
probably
Note
chewable
vitamin
another
like
lot
hard
likely
searches
global
much
need
term
outrank
usually
monthly
least

Step 8: Select keywords for indexing

While defining a keyword, ask yourself what your need?

What problem you are trying to resolve?

What words do you use to explain your problems?

- Keywords are used for indexing your paper.

They are the label of your manuscript

When looking for keywords, avoid words which

- Broad meaning (Bacteria, medicine etc)
- Already included in the title.
- Included in journal name.(journal name obesity surgery)
- Avoid abbreviations which are not broadly used (e.g., TOC, CTD)

Step 9: Compose a concise and descriptive title

- The title must explain what the paper is broadly about.

- It is your first opportunity to attract the reader's attention. In this way, remember that the first readers are the Editor and the referees. Also, readers are the potential authors who will cite your article, so the first impression is powerful!

- Readers don't have time to read all scientific production. They must be selective, and this selection often comes from the title.

- Reviewers will check whether the title is specific and whether it reflects the content of the manuscript.

- Editors hate titles that make no sense or fail to represent the subject. So, keep the title informative and concise (clear, descriptive, and not too long).

- Here you can see some examples of original titles, and how they were changed after reviews and comments to them:

Example 1

- **Original title:** MMP-2 in glioma.

- **Revised title:** Role of Matrix matalloproteinesis in glioma as prognostic marker.

- **Comments:** Title is too much short and it doesn’t reflect manuscript subject, Remove abbreviations.

Example 2

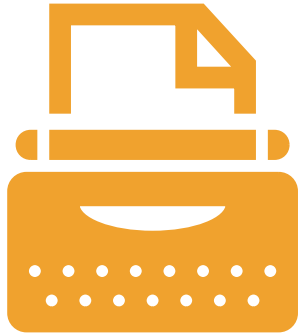
Original title: Action of antibiotics on bacteria

- **Revised title:** Inhibition of growth of Mycobacterium tuberculosis by streptomycin

- **Comments:** Titles should be specific. Think about "how will I search for this piece of information" when you design the title.

Step 10: Write the Acknowledgements

Here, you can thank people who have contributed to the manuscript but not to the extent where that would justify authorship.

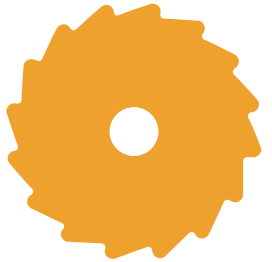


For example, here you can include technical help and assistance with writing and proofreading. Probably, the most important thing is to thank your funding agency or the agency giving you a grant or fellowship.

Step 10: Write up the References

Typically, there are more mistakes in the references than in any other part of the manuscript.

It is one of the most annoying problems, and causes great headaches among editors.



Now, it is easier since to avoid these problem, because there are many available tools.

- You can use any software, such as EndNote or Mendeley, to format and include your references in the paper.

- Most journals have now the possibility to download small files with the format of the references, allowing you to change it automatically.
-
- Also, Elsevier's Your Paper Your Way program waves strict formatting requirements for the initial submission of a manuscript as long as it contains all the essential elements being presented here.

- **Do not include**

- - Excessive citations of publications from the same region.
- Unpublished observations,
- Manuscripts submitted but not yet accepted for publication,
- Publications that are not peer reviewed,
- - Articles not published in English.

- Make the reference list and the in-text citation conform strictly to the style given in the Guide for Authors.
- Remember that presentation of the references in the correct format is the responsibility of the author, not the editor.

- **Finally, check the following:**

- Spelling of author names
- Year of publications
- Usages of *"et al."*
- Punctuation
- Whether all references are included

In general, verb tense should be in the following format

- Abstract--past tense [the summary description of what I did]
- Introduction--present tense [I am describing the study to you now]
- Literature Review--past tense [the studies I reviewed have already been written]
- Methodology--past tense [the way I gathered and synthesized data has already happened]
- Results--past tense [the findings have already been discovered]
- Discussion--present tense [I am talking to you now about how I interpreted the findings]
- Conclusion--present tense [I am summarizing the study for you now]

- **Thank you**
- **WWW.EJSMR.ORG**