



Western



University of Western Ontario

HOW TO WRITE A PAPER!!

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Outline

- **Decide which journal..**
- **General preparation of the manuscript**
- **Introduction, hypotheses**
- **Methods**
- **Results – Figure or Table?**
- **Discussion – strengths & limitations**
- **Conclusions**
- **Abstract**
- **References/ Acknowledgements**
- **How to handle rejection!!**

**Requirements for manuscript writing submitted to
biomedical journals...**

www.icmje.org

<http://www.icmje.org/recommendations/>



Be prepared for rejection!!



How do you decide which journal?

Check out your reference list!!

Most popular journal in your reference list?

Check out:

Impact factor? Pub med journal?

Important message to others?

(knowledge translation?)

Time involved for decision from journal....



Decide on the highest impact factor?

Reach for the moon!!



Download instructions for authors

Start writing with correct format.....

Writing (In general):

- **For most journals no more than 15 double-spaced pages (5000 words including tables & refs)**
- **Best place to start may be methods**
- **Written in past tense**
- **Read through each sentence/paragraph to see if can be said more succinctly**
- **English?**
- **Remember statistical analyses**
- **Ethics must be stated – written consent**
- **Randomized control trial – CONSORT diagram**
- **Write abstract LAST (watch word limit!!)**



Consort flow diagram - RCT

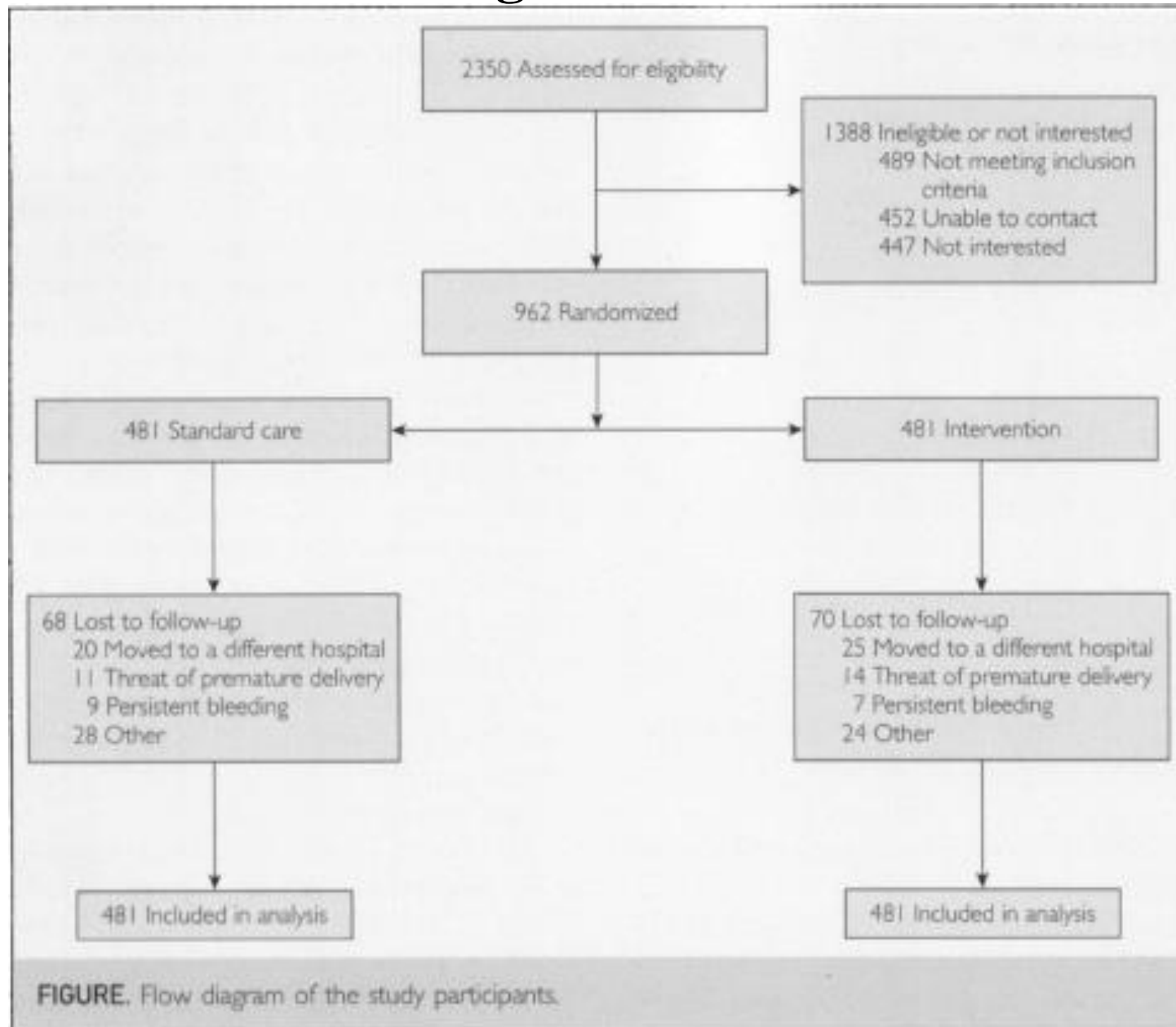


FIGURE. Flow diagram of the study participants.

Introduction – rationale and purpose

Must be concise – two paragraphs lead into purpose

Large problem (global issue) to your population to why your study is important (rationale)

What is your study adding to the scientific literature? Why is your study important?

Hypothesis driven?

What is your hypothesis?

Leads to methods/ results/ conclusions?

Do these all tie together?

Title? Maybe write last? Does it catch the eye?



Methods:

Ethics approval – written consent

Trial registration (RCT)

If methods have been done before – briefly describe with reference

Can others duplicate your results based on methods you give? Instructions....

Methods given must tie into hypotheses....



Results – most difficult to write

Start with graphs/ tables

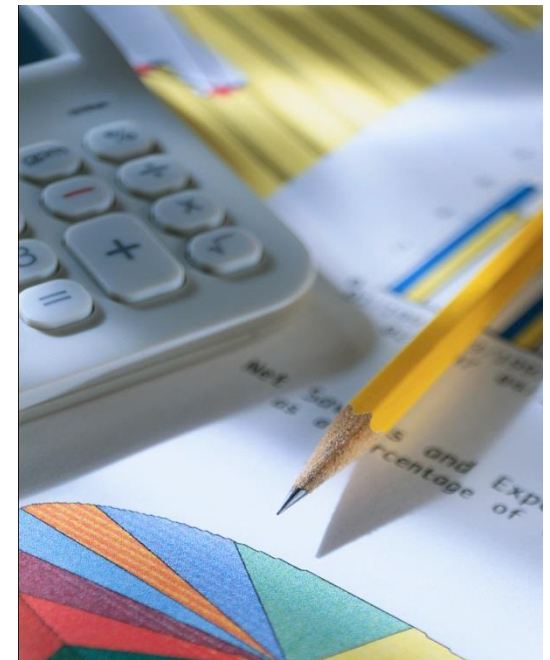
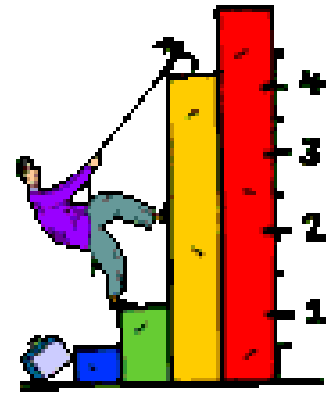
Do not duplicate

Which graph or table to show best results?

Significant - < 0.05 ; > 0.05 Not different!!

Report major results in the text

What does this mean?



Discussion:

Start with:

**“The major findings of the present study were
(do not repeat results but interpret them!!)**

What do the major results mean?

Why are these results important?

What do they add to the literature?

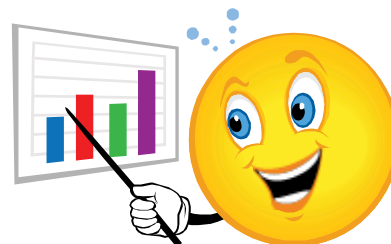
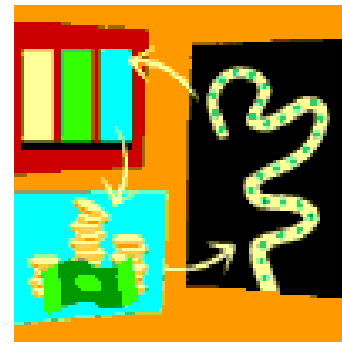
Go back to hypothesis....

Be careful of words like “proven”

Use instead – It is suggested that...

Our results showed that....

Compared to others?



Strengths and Limitations:



Every study has potential flaws...



Design is important...

Important to point them out to reviewers...

But also address them either by saying others have done the same..

Did the best you could based on

Considered confounding factors in analyses..



Confounding factors....

Things that may change your results but you have no control over.....



Conclusions

Take home message – significance of your results

Summary of the important findings of your results

What do they mean – what do they add?

Can suggest future work – lead to another paper??



Abstract..... (restricted words or characters)

One sentence for rationale (maybe)

Hypothesis/purpose/aim/objective

Methods

**Results – only important significant results
(should show data with p values)**

Conclusion

Abstract

Objective: To study the effect on maternal weight gain of a supervised light- to moderate-intensity exercise-based intervention performed from the ninth week of pregnancy.

Participants and Methods: A total of 962 healthy pregnant women were randomly assigned to a standard care or exercise intervention group conducted between September 1, 2007, and January 31, 2011. The intervention included light- to moderate-intensity aerobic and resistance exercises performed 3 days a week (50-55 minutes per session). Excessive gestational weight gain was calculated on the basis of the 2009 Institute of Medicine (IOM) recommendations. Gestational body weight gain was calculated on the basis of the weight measured at the first prenatal visit (fifth to sixth weeks of gestation) and weight measured at the last visit to the clinic before delivery. Women were categorized into normal weight or overweight or obese.

Results: Women in the intervention group gained less weight (adjusted mean difference, 1.039 kg; 95% CI, 0.534-1.545 kg; $P < .001$) and were less likely to gain weight above the IOM recommendations (odds ratio, 0.625; 95% CI, 0.461-0.847) compared with those in the standard care group. The main treatment effects according to body mass index category were that normal weight women in the intervention group gained less weight (adjusted mean difference, 1.393 kg; 95% CI, 0.813-1.972 kg; $P < .001$) and were less likely to gain weight above the IOM recommendations (odds ratio, 0.508; 95% CI, 0.334-0.774) than normal weight women who received standard care. No significant treatment effect was observed in overweight or obese women.

Conclusion: Supervised exercise of light to moderate intensity can be used to prevent excessive gestational weight gain, especially in normal weight women.

Trial registration: clinicaltrials.gov Identifier: NCT01790347

**Structured or not?
Depends on journal**

Key words (5 to 6)

Pub med



Findings from a secondary analysis indicated that the exercise intervention reduced the risk of having newborns with macrosomia in overweight or obese women by approximately 86%. Newborns with high birth weight are at increased risk because of several possible complications at delivery,²⁷ are more likely to become obese children,^{28,29} and have an increased risk of type 2 diabetes and some types of cancer (eg, endometrial, breast, or prostate) during adulthood.³⁰⁻³³ Findings from observa-

REFERENCES

1. Institute of Medicine. *Weight Gain During Pregnancy: Reexamining the Guidelines*. Washington, DC: National Academies Press; 2009.
2. Drehmer M, Duncan BB, Kac G, Schmidt MI. Association of second and third trimester weight gain in pregnancy with maternal and fetal outcomes. *PLoS One*. 2013;8(1):e54704.
3. Chung JG, Taylor RS, Thompson JM, et al. Gestational weight gain and adverse pregnancy outcomes in a nulliparous cohort. *Eur J Obstet Gynecol Reprod Biol*. 2013;167(2):149-153.

References:

Format specific to each journal

Text format plus references at end

Usually no more than 30 references

Acknowledgements:

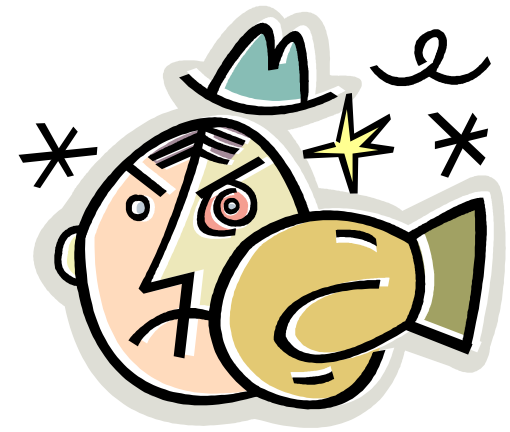
Funding sources very important

(grants and scholarship)

Translator...



Rejection!!



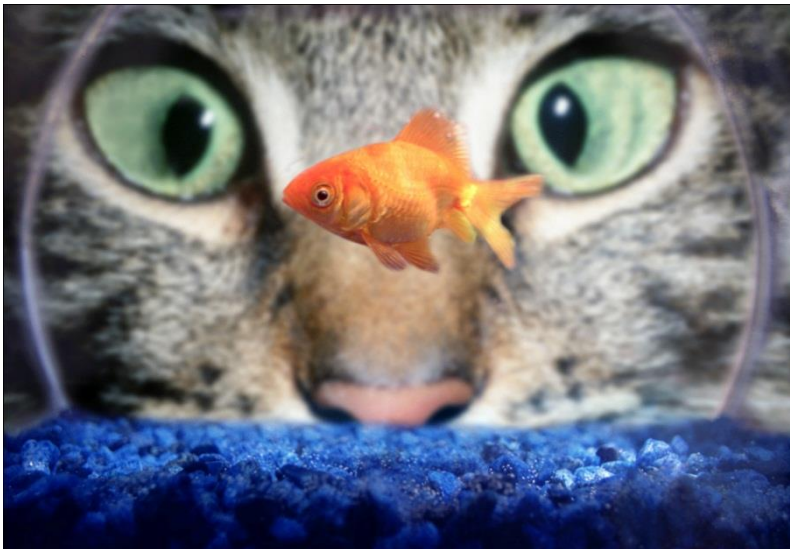
Will not be accepted the first time...

Use the reviewers comments to your advantage..

Make the revisions and resubmit to another journal

The paper will be stronger!!

The more revisions – more eyes have seen it!!





What do you think is the hardest part to write?

“Abstracted” notes on writing Abstracts

Importance – with numbers of publications Abstract is most often all that is read
- used by editors, reviewers, readers, promotions committees, grant committees and colleagues to judge your work; PUBmed and searches

General Suggestions for Abstract Writing

- specific informative title – hook target audience (ACSM – limit to 15 words)
- only 1-2 important findings
- use direct active voice sentences
- avoid unnecessary detail in Methods and Results
- limit statistics
- avoid abbreviations (common terms only)
- exclude references
- have someone peripheral to field read

Make sure you include data of important findings

May only be 200 to 300 words! 250 average

Structured or unstructured – depending on journal

Practice Assignment:

Find a published manuscript of interest to you

Do not read the abstract – ignore it, cover it up

**After reading the manuscript write “your” abstract
for the manuscript**

Make the abstract 250 words (no more!)

Make the abstract a structured or unstructured

May be easier to write a structured abstract.



**Compare with the original abstract – what did you miss,
what did they do better, what could they have improved,
who had the best choice of words?**

Abstract

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“Take home message?”

