"It has not escaped our notice that the specific pairing we have postulated immediately suggest a possible copying mechanism for the genetic material"

-Watson and Crick in Nature 1953

"The shortest way to do many things is to only do one thing at once" – Samuel Smiles (1812-1904)

- •Issac Newton was a reluctant publisher
- •Yury Struchkov one paper very 3.9 days for 10 years

"Seeing your name in print is such an amazing concept: you get so much attention without having to actually show up somewhere.... There are many obvious advantages to this. You don't have to dress up, for instance, and you can't hear them boo you straight away"

-Anne Lamott 1994

Getting Started

- Uniform requirements (ICMJE) www.icmje.org
- Instructions for many journals via Central Medical College of Ohio website www.mco.edu/lib/instr/libinsta.html
- ICMJE recommends the use CONSORT guidelines for RCTS and STROBE for observational studies
- Lots of literature on "How to write papers"
 - Scientific Writing easy when you know how. BMJ Books,. Peat J et al

Authorship

- Vancouver Guidelines
- Author Order
- Formal Policy
 - "The money, fame and happiness document"

Order of Writing

- Write
- Methods and Results first

Introduction

- Introduction (1-1.5 pages only)
 - Paragraph 1: What we know
 - Use best evidence/best studies/most relevant/most valid
 - Paragraph 2: What we don't know?
 - Paragraph 3: Why we did this study?
 - Aims and Hypothesis
 - DO NOT put results of study here
- Examples

- Avoid Textbook knowledge
 - "Asthma is the most common disease of childhood"
- Avoid defining the problem
 - "Asthma is a condition in which the airway narrowing in response to community occurring....."
- Better "House dust mite is thought to be important in
- exacerbating symptoms of asthma...."
- Quote the science and not the scientist
 - A study by Smith et al, reviewed the medical records of older people with....
 - Better: The incidence of XX was found to be ZZ in a review of hospital medical records

Methods

- Where the study was conducted
- Every measurement reported in the results section must have a description of the methods used to obtain it
- Ethics approval and whether informed consent obtained
- Study design
- Participants
 - Inclusion/exclusion criteria

Methods II

- Sample Size
- Questionnaires
 - mode of administration
 - show that validated
- Interventions- CONSORT Guidelines
- Clinical Assessments measurement bias

Statistical Methods

- what stats tests and stats program
- state p value used to determine stats significance
- info about distribution of variables and tests used
- reference if not simple or well known stats test

Template for Results

Paragraph 1

• Describe the study sample • Who did you study?



Paragraph 2

• Univariate analyses • How many participants had what?



Paragraph 3 to n-1

- Bivariate Analyses
- What is the relationship between variables?



Last Paragraphs

- Multivariate Analyses
- What is the result when the confounders and effect modifiers have been taken into account

From: Scientific Writing – Easy when you know how. Peat et al. BMJ Books

Results

- Topic sentences to begin each paragraph
- Interpretation of Results (don't repeat numbers in text)
 - The active group had a larger change from baseline than the control group, although the difference did not reach statistical significance

Results 2

- baseline characteristics in table
 - percentage, mean and standard deviation or median and interquartile range
- there is a statistical significance between groups or there isn't

Rules for Reporting Numbers

- Numbers < 10 report as words
- Words not numbers begin sentences
- no space number and its per cent sign eg: 35%
- % to only one decimal place is sample > 100 eg: 10.4%
 - If sample size < 100 do not use decimal place
- Ranges use "to" or comma not "-"

Tables and Figures

- avoid multiple borders and grids
- People read left to right so groups in columns and outcomes variables in rows
- Show most important info in a figure but as long as figure does not take up more space than reporting the data would

Statistics

- Mean versus Median (interquartile range)
- SD versus SE
 - SE as a measure of distribution (wrong!)
 - SE error bar (avoid)
 - CI better for group comparison
- P values 95% CI may tell the story
- Give P value rather than "NS"

Template for Discussion

Paragraph 1

- What did this study show?
- Address the aims stated in the introduction



Paragraph 2

• Strengths and weaknesses of methods



Paragraph 3 to n-1

• Discuss how the results support the current literature or refute current literature



Final Paragraph

- Future Directions
- "So what?" and "Where next?"
- Impact in current thinking or practice

From: Scientific Writing – Easy when you know how. Peat et al. BMJ Books

Writing Style

- Short words and short paragraphs
- Simple rather than complex
- Stick to nouns and verbs