

# Ethics in Research

**KNES 510**

**Research Methods in Kinesiology**

# Ethics

- **Ethics – the discipline concerned with what is morally good and bad, right and wrong**



**ethics.** ( 2007). In *Encyclopædia Britannica*. Retrieved October 6, 2007, from Encyclopædia Britannica Online: <http://www.britannica.com/eb/article-9106054>

# Definition of Scientific Misconduct

Scientific misconduct is fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.

*(Federal Register, October, 1999)*



# Codes and Guidelines

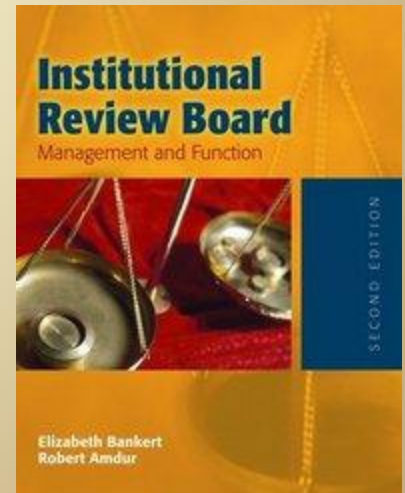
- 1974 – US Congress formed the National Commission for the Protection of Human Subjects in Biomedical and Behavioral Research
- 1979 – Belmont Report was published as a result of the commissions deliberations
- International codes also exist, for example the Code of Nuremberg International codes also exist, for example the Code of Nuremberg (1949) and Declaration of Helsinki (1974)
- Virtually every journal has a policy statement regarding obtaining informed consent, etc.

# Codes and Guidelines, cont'd

- Codes and guidelines evolved because of human subjects' rights abuses
  - Nazi experiments using war chemicals, environmental extremes, food and sleep deprivation, etc
  - Alaskan Eskimos fed radioactive iodine pellets
  - Tuskegee Alabama study where men with syphilis were “treated” with a placebo instead of a drug
    - [http://en.wikipedia.org/wiki/Tuskegee\\_syphilis\\_experiment](http://en.wikipedia.org/wiki/Tuskegee_syphilis_experiment)

# Institutional Review Board (IRB)

- IRB is a panel of research experts that pass judgment on the quality and safety of studies before they can be conducted
- Primarily responsible for protecting the rights of subjects
- Also protect researchers and institution



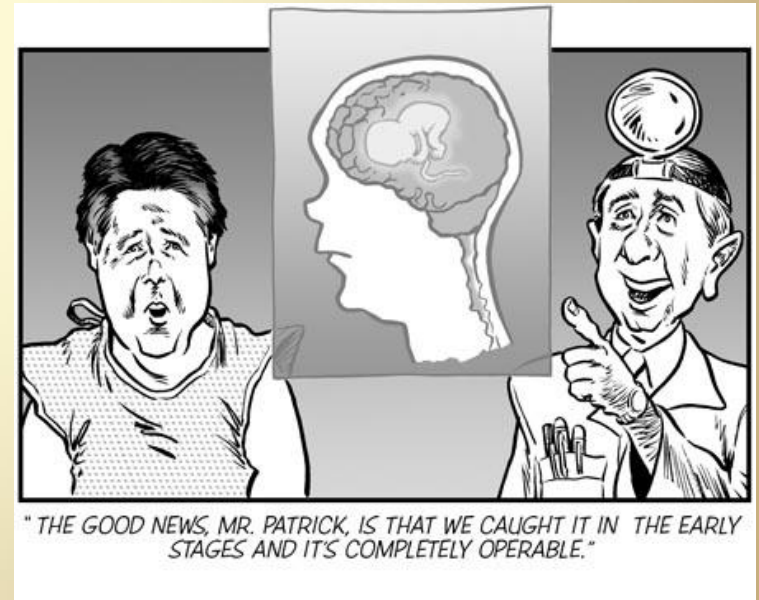
# Statement of Informed Consent

- Provides potential subject with information to make a sound decision about participating in a study
- Provides simple but comprehensive info about the study
- Cal State Fullerton guidelines may be found here:  
<http://www.ogc.fullerton.edu/IRB/irb.htm>



# Statement of Informed Consent, cont'd

- Elements of Informed Consent Document:
  - Background and invitation to participate
  - Explanation of procedures
  - Potential risks and discomforts
  - Potential benefits
  - Rights of inquiry and withdrawal
  - Signature of subject





# Statement of Informed Consent, cont'd

- Other components sometimes included in the informed consent document:
  - Confidentiality and anonymity
  - Invasion of privacy
  - Safe and competent treatment
  - Knowledge of results

# Seven Areas of Scientific Dishonesty

1. Plagiarism
2. Fabrication and falsification
3. Nonpublication of data
4. Faulty data-gathering procedures
5. Poor data storage and retention
6. Misleading authorship
7. Sneaky publication practices



# Plagiarism

- Plagiarism—using the ideas, writings, and drawings of others as your own



# Fabrication and Falsification

- Fabrication and falsification—making up or altering data

Prominent Cases in Kinesiology-related Research

[Eric Poehlman](#) – exercise physiologist at University of Vermont and University of Montreal

[http://en.wikipedia.org/wiki/Eric\\_Poehlman](http://en.wikipedia.org/wiki/Eric_Poehlman)



# Researcher Faces Prison for Fraud in NIH Grant Applications and Papers

*Science* 25 March 2005: Vol. 307. no. 5717, p. 1851

A researcher formerly at the University of Vermont College of Medicine has **admitted in court documents to falsifying data in 15 federal grant applications and numerous published articles.**

Eric Poehlman, an expert on menopause, aging, and metabolism, faces up to 5 years in jail and a \$250,000 fine and has been **barred for life from receiving any U.S. research funding.**

The number and scope of falsifications discovered, along with the stature of the investigator, are quite remarkable. **"This is probably one of the biggest misconduct cases ever,"**

Poehlman, 49, first **came under suspicion** in 2000 when **Walter DeNino, then a 24-year-old research assistant, found inconsistencies in spreadsheets** used in a longitudinal study on aging.

In an effort to portray worsening health in the subjects, DeNino tells *Science*, **"Dr. Poehlman would just switch the data points."**

# Nonpublication of Data

- Sometimes called “cooking data”
- Data not included in results because they don’t support the desired outcome
- Some data are “bad” data
- Bad data should be recognized while it is being collected or analyzed
- Outlier – unrepresentative score; a score that lies outside of the normal scores
- How should outliers be handled?





# Data Gathering

- Most important and most aggravating.
- Always drop non-compliers.
- Fix broken equipment.
- Treat subjects with respect and dignity.
- Record data accurately.
- Store data in a safe and private place for **3** years.

# Poor Data Storage and Retention

- Data should be stored in its original collected form for at least **3 years** after publication
- Data should be available for examination
- Confidentiality of participants should be maintained

# Misleading Authorship

Misleading authorship—who should be an author?

- Technicians do not necessarily become joint authors.
- Authorship should involve only those who contribute directly.
- Discuss authorship before the project!

# MSSE Information for Authors

- Medicine & Science in Sports & Exercise®

- Authorship Requirements

To be an author, each individual shall have contributed to the manuscript in at least two (2) of the following areas:

- Significant manuscript writer
- Significant manuscript reviewer/reviser
- Concept and design
- Data acquisition
- Data analysis and interpretation
- Statistical expertise



- Manuscripts with more than six (6) authors require justification for exceeding that number

More info can be found here: <http://www.icmje.org/>

# Sneaky Publication Practices

- Publication of the thesis or dissertation
  - Should be regarded as the student's work
  - Committee chair and members may be listed as secondary authors
- Dual publication – a manuscript should only be published in a single journal
  - What about studies which include a huge amount of data?



# Sanctions

- Freeze your job.
- Reduce your job.
- Lose your job.
- Loss of institution money and privileges.
- Faculty are responsible for students.

# Why do it?

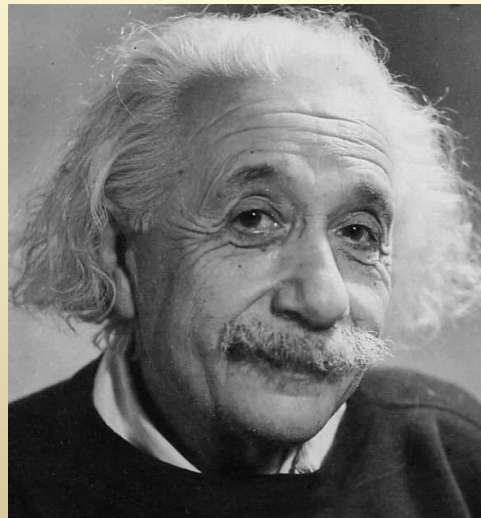
- Obtain external funding.
- Pressure of the job.
- Need to complete graduate work.
- Obtain rewards of the field.
- Adams “**This can only end in trauma**”





# Working With Faculty

- Expect to be treated with respect but not equally.
- Expect to work hard and do menial jobs.
- Choose a professor who shares like interests.
- Personality conflicts do occur.
- Ultimately you are in charge of your future.



# Case Example - Pat J. Palmer

Fabricated 6 interview records

Fabricated claim of Ph.D.  
(B.S. and M.S. also)

Falsified that she was  
co-author on 10 articles



**Did I say I have a  
Ph.D. in  
Epidemiology?**

# Next Class

- Abstract due
- Chapter 6-basic stats