



# REVIEW FOR EXAM 1

## Block 1 *Defining Science, Research, and Epidemiology*



Lecture 2:  
*ACSM Research Methods: Chapter 1 (1-8)*

Lecture 3:  
*ACSM Research Methods: Chapter 5 (73-90)*  
*ACSM Research Methods: Chapter 7 (121-141)*  
*Epidemiology 101: Chapter 6 (105-119) (2nd Edition: Chapter 7)*

Lecture 4:  
*Epidemiology 101: Chapter 4 (65-87) (2nd Edition: Chapter 5)*  
*ACSM Research Methods: Chapter 3 (29-49)*

Lecture 5:  
*ACSM Research Methods: Chapter 6 (93-118)*

Lecture 6:  
*Epidemiology 101: Chapter 1 (1-23)*

### **Definitions:**

Science (definition? what did K.P. have to say about it?)

Research (what's the purpose?)

Experimental research

Non-experimental research

Epidemiology (what is it? what's the purpose? what *doesn't* it cover?)

Health terms: epidemic, endemic

Political arithmetic

Inferential statistics

Univariate vs multivariate analyses

Internal and external validity

Inclusion and exclusion criteria

Variance

Correlation

Random and systematic error

Apophenia or patternicity

### **Variables:**

Independent vs. dependent?

Nominal, interval, ratio, ordinal

Confounding variable

Moderator and mediator variables

Between-group and within-group variables

Binary vs. continuous?

**Research methods:**

Case study  
Case report  
Case series  
Cross-sectional study  
Ecological study  
Case-control study  
Cohort study

**Potpourri:**

Hierarchy of scientific evidence (pyramid)  
John Snow story  
How to get involved in research?  
What's a good research question?  
What's a good question for epidemiology to answer?  
What's a question that epidemiology is less good at answering?  
What does it mean to make a variable a "constant"?

I am your first mini-boss this semester.  
To defeat me, you have to know about  
everything listed above.

