Disease Investigation
Ephedra

Testing the effectiveness of a product
- Multiple advertisements
  - Consumers are bombarded with public health information, advertisement to use different products, and often given conflicting information.
  - Take a minute to look at the advertisement for Ephedra in your workbook and the videos on this product

Part 1
- The first part of this assignment involves you working in your workbook to answer some basic questions about experimental studies.
- This is not graded but it will give you the skills you need to complete the graded part of the assignment.

Defining a hypothesis
- This is the most important part of any research study.
  - You need to define a hypothesis and it needs to be clearly stated.
  - There should be an outcome and an exposure
  - You would describe a possible association between these.
  - Your outcome and exposure need to be measurable.

Poor hypothesis
- Poor diet is related to poor health.
  - What is meant by poor diet?
  - Related in what way?
  - What is meant by poor health?
  - Can it be measured?

Better hypothesis
- Eating less than 5 servings of fruits or vegetables each day results in increased body mass index (BMI)
  - Measure servings of fruits and vegetables
  - It will increase BMI
  - BMI is easy to measure if you measure height and weight.
  - This hypothesis can be tested.
### Independent and dependent variables
- **Independent** - Exposure of interest. It causes the dependent variable to occur (the outcome)
- **Dependent variable** - Outcome: “This is what results from the independent variable”

### Consider ethical issues
- You are asking people to participate in a clinical trial. What might you want them to do and how will you protect their health?
- Clinical trials are only ethical if we do not know if the treatment is better. If we knew it, then we should not do the trial.

### Comparison groups
- Prior example of smoking and headaches
- Why do we have a comparison group?
- Answer the questions on the characteristics it should have.
  - This varies by each study. Consider your exposure and outcome.

### Blinding
- Single blinding: Subject does not know what they are receiving
- Double blinding: Neither the subject nor the person administering the treatment knows who is getting which one.

### Measurement
- Think about how you would need to prove your results.
  - Learned about chi-square test
  - Consider how you will measure your variables.

### Group activity
- Using the things you just reviewed and your workbook, get together with your group and complete the design of a clinical trial. Provide sufficient details, show you have a good hypothesis, good measurement of variables. The outline should help you. Don’t forget that peer reviews are very important. I will also be reviewing your input. Good luck.
Last section

- You need to work together to answer the questions comparing the clinical trial with a cohort study. These questions are a bit complex but will help you better understand the issues.