Individual Analysis 3 Methods

Zach

Methods for Experiment

- For each subject (3 men and 6 women)
  - Determined we only need 2 subjects per to have statistically significant results from our power analysis
- Measure “before” blood pressure for subject (measure value twice and take average)
- Have subject run up and down the stairs twice
- Wait for a specified and consistent period of time (around 15-30 seconds will determine tomorrow)
- Measure “after” blood pressure for subject (measure value twice and take average)
- Compare mean before and after values for blood pressure for men and women
- Calculate difference in blood pressure for each subject and take the average for mean and women
- Use a confidence interval (CI) test to compare the difference in change in blood pressure for men and women

How We Will Statistically Analyze

- Do not have data yet, so can not provide preliminary data or a figure, we will get this done tomorrow
- After we calculate the mean differences in blood pressure for men and women (after-before values), we will construct confidence intervals for this change in blood pressure for both men and women and perform a t test for the before and after blood pressure numbers for both groups
- We will also analyze the difference between the men group and the women group, using a t test to evaluate the difference depending on gender, we will also construct a confidence interval for this data
- In the end, we will have data concerning change (before vs after) for both groups, and data concerning the difference in change between the two gender groups

Why did we Choose these Methods of Analysis?

- Same ways as similar studies we looked at
- Best ways of showing statistical significance of difference of groups
- Need to compare before vs after as well as men vs women groups
- Why a t test? Sample size is less than 30 and variance is unknown, so can not use z test, must use t test