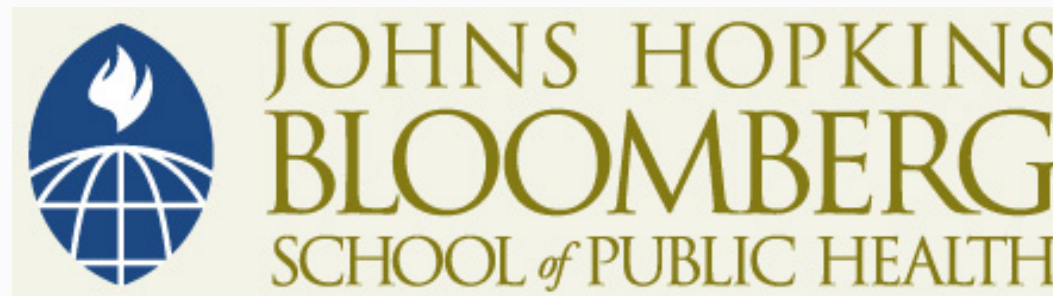


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JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Lecture 5b: Practice Problems

John McGready
Johns Hopkins University

Practice Problems

1. In a high school in the United States, dietary counseling is being tested to measure the program's long-term impact on student's fat intake. Of the three hundred students at the school, 150 are randomized to receive five one-hour sessions of dietary counseling; the other 150 students receive no counseling.
 - Six months after the last counseling sessions, all students are asked to keep a food diary for one week
 - Each student's average fat intake in grams, is calculated at the end of this week
 - The results of this exercise are as follows:

Practice Problems

- Intervention group
 - $\bar{x}_1 = 54.8$ grams , $s_1 = 28.1$ grams, $n_1 = 146$
- Control group
 - $\bar{x}_2 = 62.8$ grams, $s_2 = 34.7$ grams, $n_2 = 142$
 - (Please note—follow up sample sizes differ slightly from initial sample size because of loss to follow up)
- The public-health question of interest is whether there is a difference in mean fat intake between the two groups, six months after the intervention ended. You are going to help answer this question:
 - Compute a p-value for testing the null of no association between counseling and average fat intake. Is this consistent with the confidence interval estimated in the section A problems?