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Alli: The Best Choice for Weight Loss Alternative?
Professor Snyder
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Hypothesis Testing with One Sample Project

Part I: The Claim

Claim- For every 2 pounds you lose through diet and exercise, alli® can help you lose 1 more. Just stick with a reduced-calorie, low-fat diet - and alli® can help maximize your efforts.

https://www.myalli.com/about/?google=b_&rotation=71700000010573124&banner=58700000482689710&kw=6953228903&gclid=CJr-mM2oy skCFcKWgQodiyQL_A&gclsrc=aw.ds

This claim came directly from the Alli website. This claim is posted on the official Alli website along with a few other claims to advertise their drug. This claim is interesting to me because I would like to know if the claim is a valid claim on the drug. The drug also claims to be the only FDA approved weight loss pill. I am interested in finding out if this claim is a true statement.

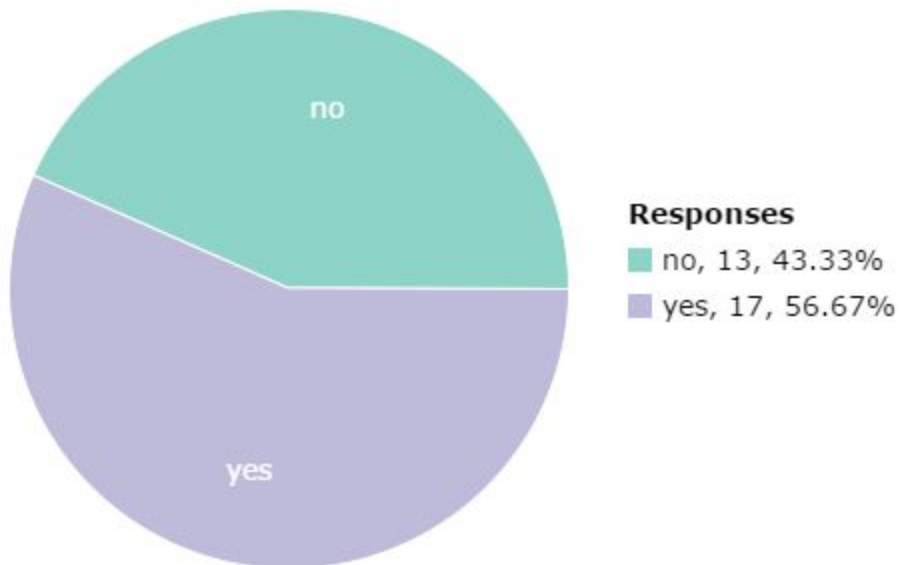
Part II: Data Collection

You can find these weight loss pills at any CVS, Walgreens, Walmart, Target and Rite Aid. Also, these pills can be ordered online through Amazon and Drugstore.com. I selected 30 of the stores listed above and called each of them individually. Out of the five stores that were listed above, I called 6 of each of these stores, all in different areas. These areas included Charlotte, Monroe, Waxhaw, and Gastonia. I called each of these stores and asked to speak to their pharmacist. The same question was asked to each pharmacist who answered the phone: "Do you think that with every 2 pounds lost, Alli helps shed one more?" Their answers were recorded and put into a chart below.

Answers From Thirty Pharmacists

no	yes	no	yes	no
yes	yes	yes	no	yes
yes	no	yes	no	yes
yes	no	yes	yes	yes
no	yes	no	no	no
no	yes	yes	yes	no

Pharmacists Responses



Part III: The Hypothesis Test

Null Hypothesis:

Alternative Hypothesis:

$$H_0 : p = 0.5$$

$$H_A : p > 0.5$$

n=30; 17 successes; 30 observations

The significance level is .01. I wanted to be 99% confident.

P-value: 0.2326

Hypothesis test results:

p : Proportion of successes

$H_0 : p = 0.5$

$H_A : p > 0.5$

Proportion	Count	Total	Sample Prop.	Std. Err.	Z-Stat	P-value
p	17	30	0.56666667	0.091287093	0.73029674	0.2326

Part IV: Conclusion

I chose to fail to reject the null hypothesis based on the results.

There is sufficient evidence to support the claim that for every two pounds lost, Alli helps shed one more. I am 99% confident that what the site claims is true.