



# MUSCLEHUB



Fitness Test Experiment



# BACKGROUND & METHODOLOGY

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Currently MuscleHub requires customers to go through the following process to purchase their membership:

1. Take a fitness test with a trainer
2. Fill out Application for the Gym
3. Send in payment for the first month of payment

Our firm conducted an experiment from July through September to determine whether or not the fitness test had a negative effect on the eventual membership of visitors.

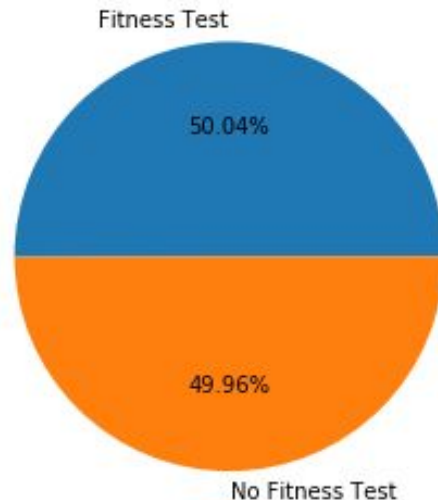
To do this, 50% of customers who came in to MuscleHub were taken through the current process, while another 50% skipped the fitness test and proceeded directly to the application.

# TEST GROUPS

Evaluating customers from July through September of 2017, we confirmed that 50.04% of MuscleHub's visitors went through the Fitness Test process, while 49.96% were taken straight to the application instead.

Based on this data, we can conclude that the test was conducted appropriately throughout the period.

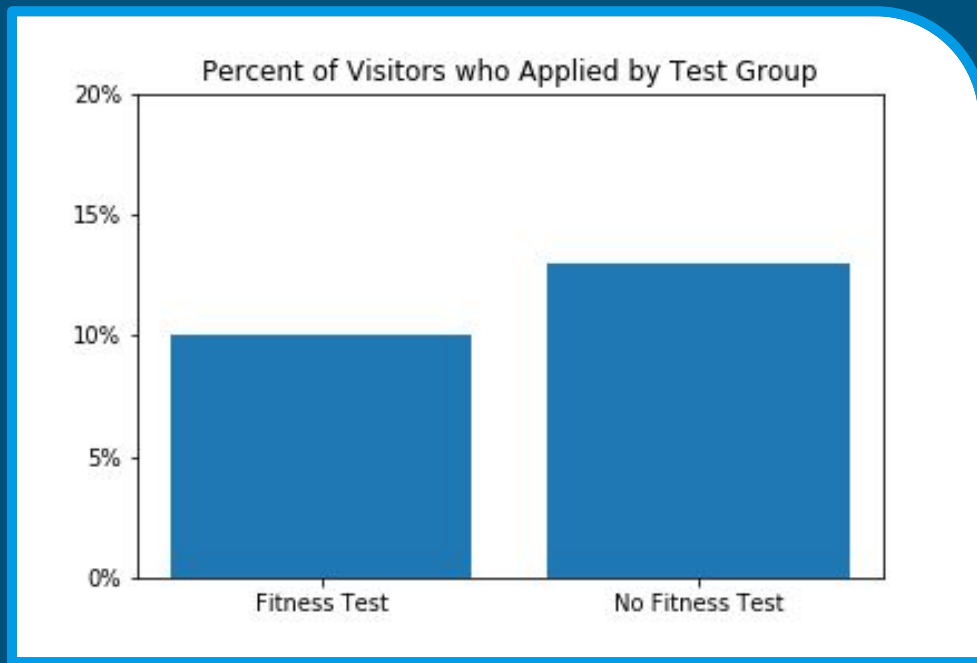
Each of these groups consists of ~2500 visitors to MuscleHub.



# More visitors applied when there was no fitness test.

13% of visitors who did not have to go through the fitness test completed an application, while 10% of visitors who did go through the application process.

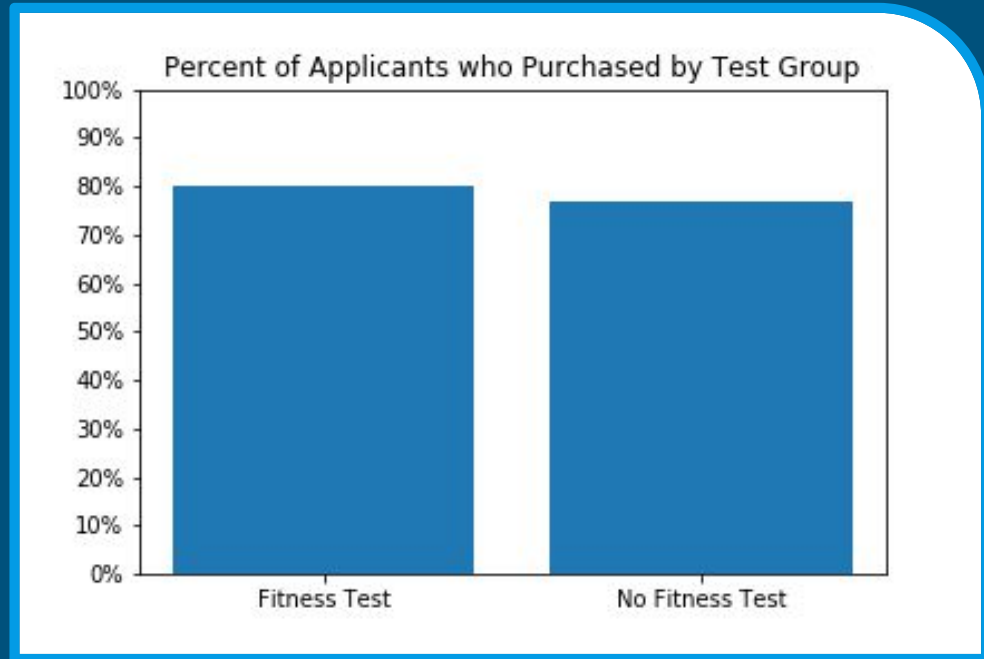
These results were statistically significant at a 95% confidence level.



# More applicants purchased a membership when there was a fitness test, though these results were not significant.

80% of applicants purchased a membership when they went through the current fitness test process, while 77% of applicants who did not.

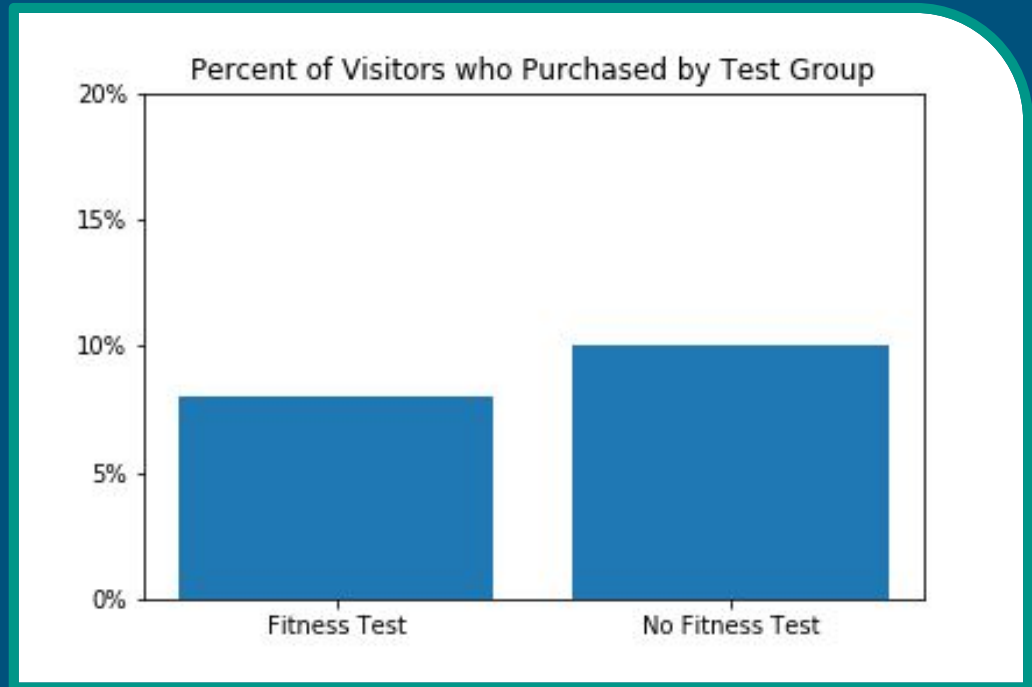
These results were not statistically significant though, meaning that there is a high probability this difference is the result of margin of error rather than an actual difference between the groups.



# More visitors purchased a membership when there was no fitness test.

10% of the visitors who did not go through the fitness test process eventually purchased a membership, while only 8% of visitors who went through the fitness test eventually purchased a membership.

These results were statistically significant at a 95% confidence level.



# HYPOTHESIS TESTS

To confirm that our results were true differences between both groups, and not merely a result of a margin of error, we ran a Chi Squared Hypothesis test. We chose this test because it compares the results of two or more different groups to determine the probability that the difference between the results is due to margin of error. Since we had two different groups (Fitness Test vs No Fitness Test) this was the most appropriate hypothesis test to prove out our results. Below are the results of our Hypothesis tests:

Hypothesis	P-Value	Meaning
There is no difference in application rate between visitors in Group A and Group B.	0.0009	There is only a 0.09% probability that there is no difference between the Groups.
There is no difference in Purchase of Membership between applicants from Group A and Group B.	0.4325	There is a 43.25% probability that there is no difference between the Groups.
There is no difference between Purchase of Membership between Visitors in Group A and B.	0.0147	There is only a 1.47% probability that there is no difference between the Groups.

While most visitors reported a dislike of MuscleHub's fitness test or other gym's fitness test, some still enjoyed it.

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Interviews were also collected from the different visitors participating in the test. Based on this data, most customers reported that they disliked the fitness test, or that they enjoyed not having to take one like they did when they visited LiftCity.

One visitor did report that they actually enjoyed the Fitness Test, and that this was their motivation to join the gym.



# RECOMMENDATIONS

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- Discontinue the fitness test as a requirement to apply for membership.
  - This should help increase membership purchase rate by 2%, or approximately 34 more members per month!
- Test offering the fitness test as an optional step after the application.
  - Since some customers reported enjoying the fitness test, and that this was a large motivator for their eventual purchase of membership, MuscleHub should test whether offering the fitness test as an optional step could help generate more membership purchase than no fitness test at all.