

# MuscleHub AB Test: Effectiveness of Fitness Tests on New Membership Acquisitions

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# Overview

## Acquisition Pipeline and Customer Feedback

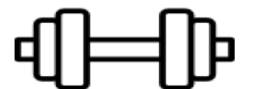
- Currently, all members who visit MuscleHub follow the same pipeline and take a fitness test to assess their current condition and goals prior to filling out an application and signing up for membership (see below)
- We have recently received some feedback that questions if this traditional route is as effective as we think:

*"I always wanted to work out like all of the shredded people on the fitness accounts I see on Instagram, but I never really knew how to start. MuscleHub's introductory fitness test was super helpful for me! After taking the fitness test, I had to sign up and keep coming back so that I could impress my trainer Rachel with how much I was improving!" - Cora, 23, Hoboken*

*"When I walked into MuscleHub I wasn't accosted by any personal trainers trying to sell me some mumbo jumbo, which I really appreciated. Down at LiftCity they had me doing burpees 30 seconds after I walked in the door and I was like "woah guys slow your roll, this is TOOOO much for Jesse!" I still ended up not signing up for a membership because the weight machines had all those sweat stains on them and you know, no thanks." - Jesse, 35, Gowanes*

*"I took the MuscleHub fitness test because my coworker Laura recommended it. Regretted it." - Sonny "Dad Bod", 26, Brooklyn*

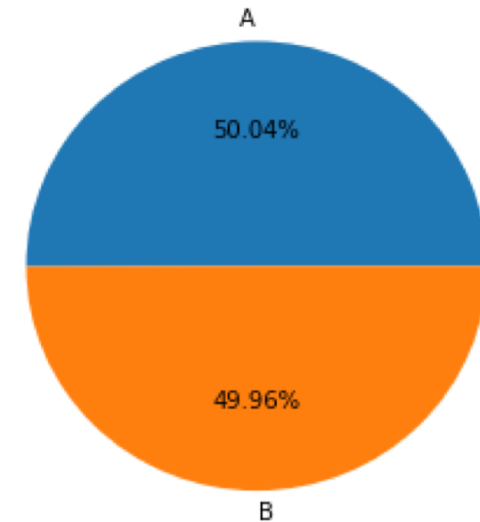
*"I saw an ad for MuscleHub on BookFace and thought I'd check it out! The people there were suuuuper friendly and the whole sign-up process took a matter of minutes. I tried to sign up for LiftCity last year, but the fitness test was way too intense. This is my first gym membership EVER, and MuscleHub made me feel welcome." - Shirley, 22, Williamsburg*



# AB Test: Is There a Significant Difference In The Number of Memberships Being Purchased Between Groups A & B?

## AB Test Description

- As depicted in some of the customer feedback, the fitness test has a potential adverse effect on new member acquisition, as it potentially intimidates potential clients
- To test this theory, an **AB test** was conducted on customers who visit MuscleHub after July 1:
  - **Group A** will follow the traditional pipeline (see below) and will be asked to take the fitness test prior to filling out an application
  - **Group B** will bypass the fitness test and proceed directly to the application
- The entire test included **~5k visitors**, split amongst groups A and B according to the chart on the right. As we can see, both groups were well represented by this test

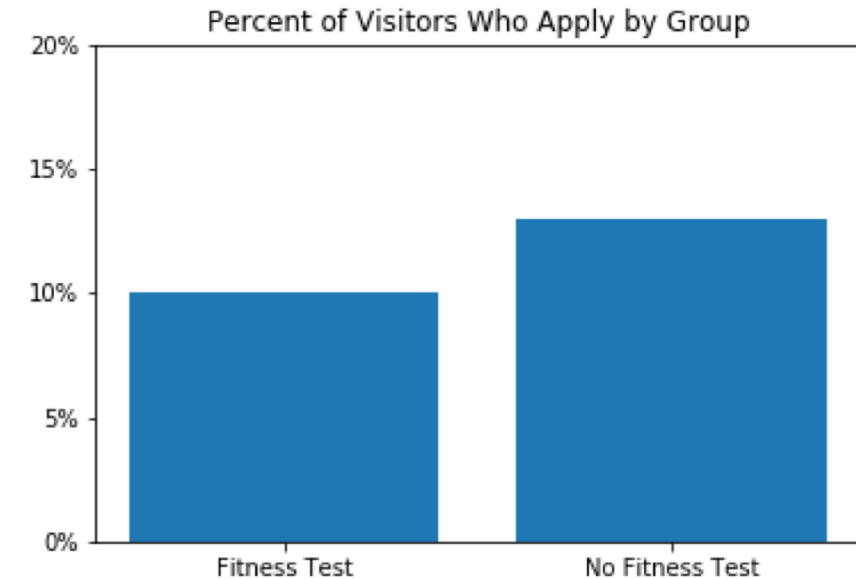


- Customer Engagement: Applications by Group

### Customers Who Fill Out Application by Group

- First, we look at the distribution of customers who took an application within each test group
- From here, we see customers within group B (bypassing the fitness test) are filling out more applications
- To determine if this difference is significant, a Chi-Squared Test was used and yielded a **p-value of < 0.001**
- Using an alpha of 0.05, we reject the null hypothesis using that there is no difference, and conclude **there is a significant difference between the number of customers who fill out applications between groups A and B**

Test Group	Application	No Application	Total	Application %
A	250	2254	2504	10%
B	325	2175	2500	13%

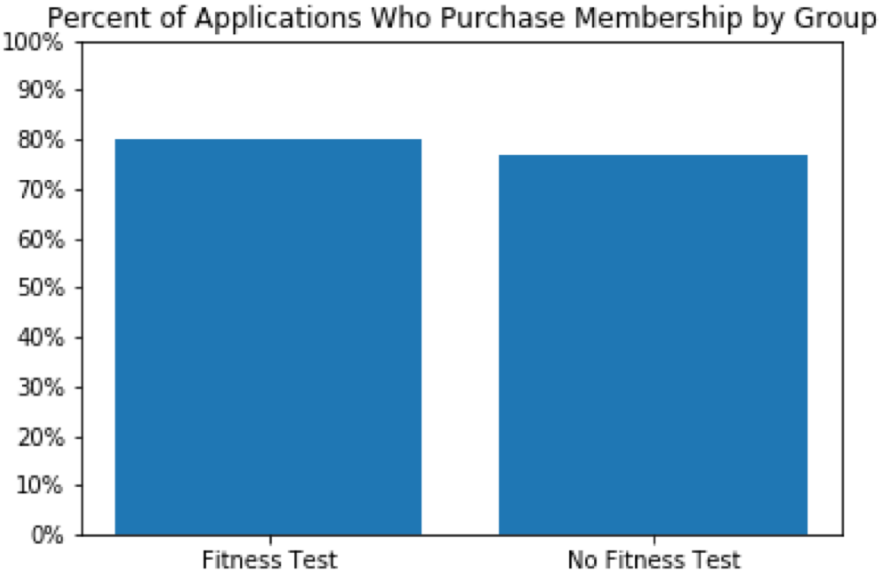


# Customer Engagement: Membership Purchases for Visitors Who Picked Up Application

## Customers Who Purchase Membership by Group

- After determining that Group B fills out significantly more applications, we are now interested in knowing if there is a difference in the number of memberships purchased between the groups if they picked up an application
- In the table below, it appears Group A signs up for more memberships, but is this difference significant?
- Similar to before, a Chi-Squared Test was conducted to determine significance, which yielded a **p-value of 0.43**
- Again using an alpha of 0.05, **we fail to reject the null hypothesis, and conclude there is no difference in the number of memberships if an application was picked up**

Test Group	Member	Not Member	Applications	Member %
A	200	50	250	80%
B	250	75	325	77%

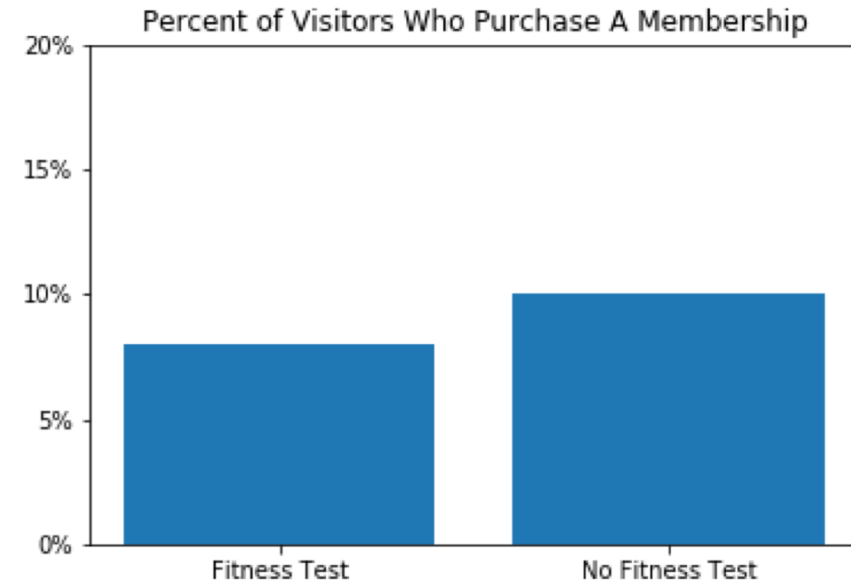


# Customer Engagement: Membership Purchases For All Visitors

## Customers Who Purchase Membership by Group

- Before, we looked at the difference between customers who purchased a membership if they picked up an application. What we are really interested in is the difference between membership purchases of all visitors
- When looking at the groups through this lens, we see a difference that suggests Group B signs up for more memberships. But is it significant?
- Once again, a Chi-Squared Test was conducted to determine significance, resulting in a p-value of 0.01
- Again using an alpha of 0.05, **we reject the null hypothesis, and conclude there is difference in the number of memberships purchased between groups A & B**

Test Group	Member	Not Member	Applications	Member %
A	200	2304	2504	8%
B	250	2250	2500	10%



## Recap

### Recommendation

- After analyzing numerous statistical tests, we conclude the fitness test does in fact have a hindrance on not only the number of applications we get, but also the number of memberships purchased
- With that being said, there were a few customers with positive feedback on the fitness test
- Our recommendation is to make the fitness test optional. If we offered the test, but did not make it mandatory, we would allow people who are interested in the test to take it, but also allow people who may be intimidated to simply bypass
- In addition, we would recommend making the fitness test based on fitness experience. We should not have everyone doing the same test, since some customers may be a little more advanced/amateur than others.

