MuscleHub A/B Test

The actual process

For visitors considering buying a membership

1. Take a fitness test with a personal trainer
2. Fill out an application for the gym
3. Send in their payment for their first month's membership

“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

“I took the MuscleHub fitness test because my coworker Laura recommended it. Regretted it.”

- Sonny "Dad Bod", 26, Brooklyn

The hypothesis

It may be that the fitness test intimidates some prospective members, so we have set up an A/B test.

Visitors have been randomly be assigned to one of two groups:

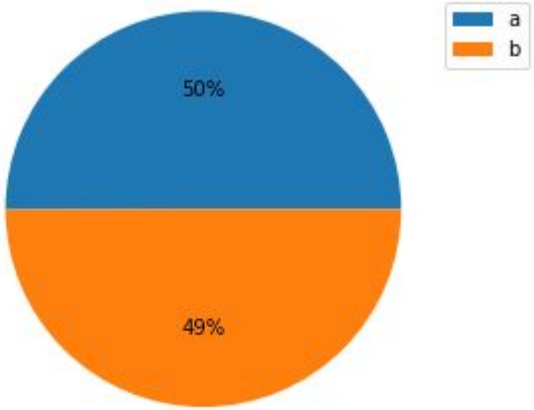
- **Group A** will still be asked to take a fitness test with a personal trainer
- **Group B** will skip the fitness test and proceed directly to the application

Janet's hypothesis is that visitors assigned to Group B will be more likely to eventually purchase a membership to MuscleHub

The data

Starting from 7-1-17 we've set up the experiment and analysed the results based on this data:

- anagraphic data
- first visit date
- fitness test date (only applicable to group A)
- application date
- purchase of "first month membership" date

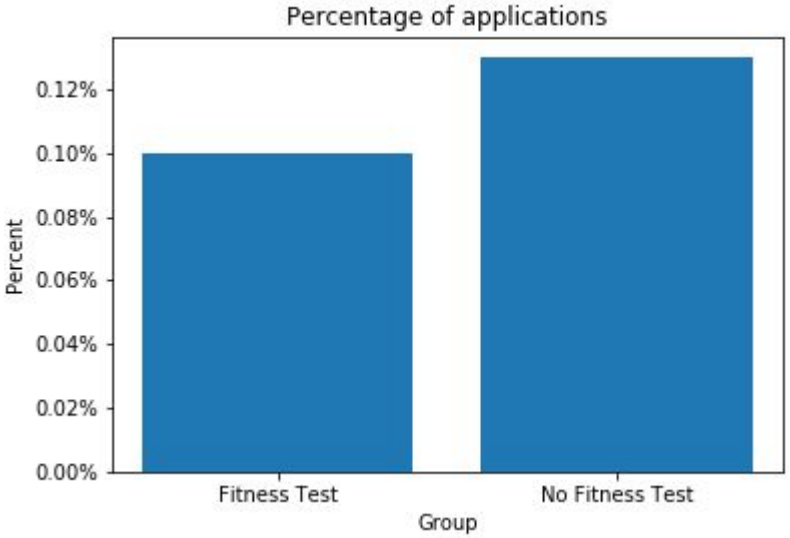


We've chosen a sample of 5004 participants equally split

Percent of visitors who apply

We've calculated the percent of people in each group who complete an application and noticed a significant leaning in the application rate for those who didn't participate in the fitness test.

Using a Chi Square test to validate the significance, we reject the hypothesis that there's no significant difference between datasets.

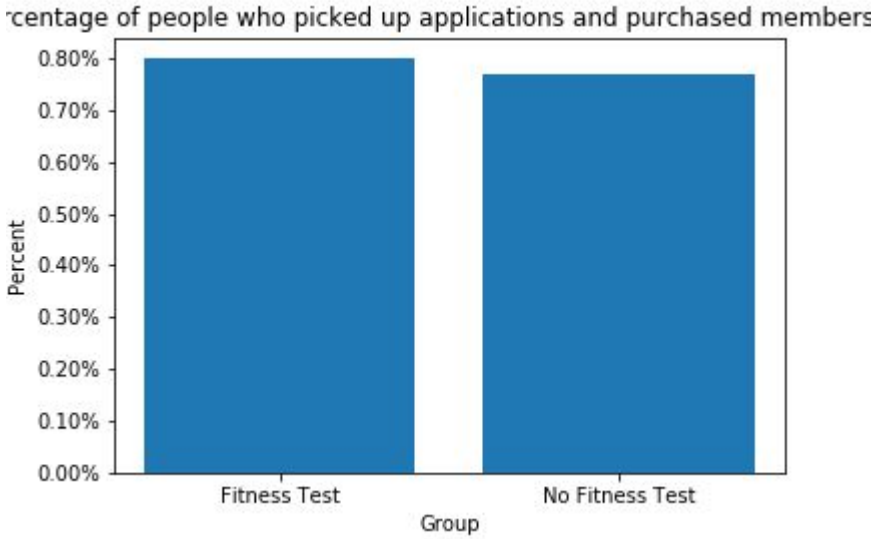


3% more people applied without taking the fitness test.

Percent of applicants who purchase a membership

Between those who have applied it look like that those who have take the fitness test are more inclined towards a membership subscription.

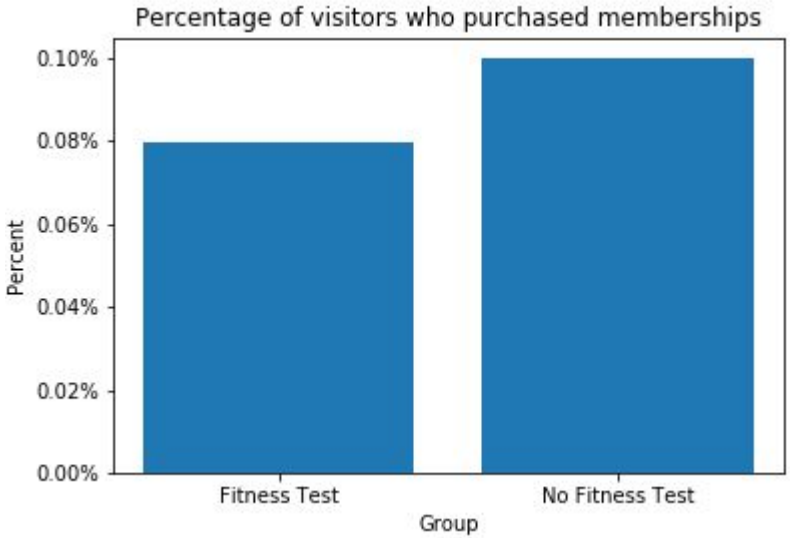
However, based on the p-value (the output of the Chi Square test) this is not statistically significant and it shouldn't influence the decision on the validity of the hypothesis.



Percent of visitors who purchase a membership

What we need to look at is the percentage of **all** visitors who purchased a memberships. In this case we can see a difference in the signup rate.

Based on the Chi Square test, these results are statistically significant.



Those who didn't took a fitness test are more inclined to purchase a membership

Customer interview

Several qualitative interview have been taken during the experiment. The human contact is valued, but, if too aggressive it may take to the abandonment of the process.

This can be a lead for future experiments, maybe the fitness test could be replaced with a dedicated session, where the goals are defined in order to offer a tailored experience for the customer.

Recommendation for MuscleHub

Based on the results of the A/B test we recommend **to abolish the preliminary fitness test.**

Further analysis and experiments could be made on the available data. Even if the improvement on the membership rate are not astounding they should be compared to historical data.

Future experiments should aim to reduce the almost 90% drop off between visit and membership signup.