



MuscleHub A/B Test

Introduction to Data Analysis

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Goal of A/B Test

MuscleHub is an elite gym located in Brooklyn, NY trying to grow its membership base.

I was hired to find out if their fitness test affects how often people choose to sign up for a membership. In such a hotly contested area, MuscleHub can't afford to leave matters to chance.

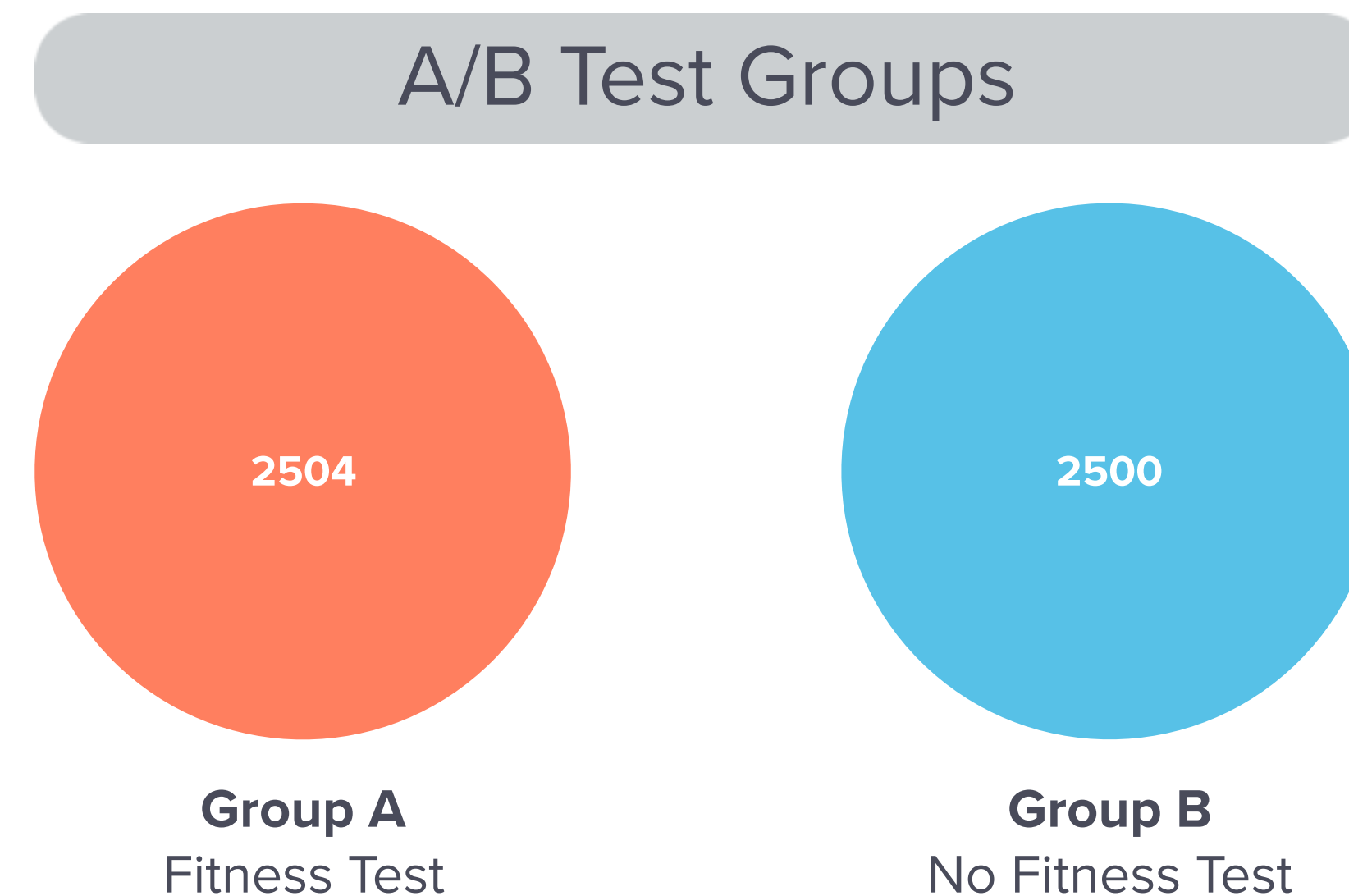
“I’d been hearing rumors that LiftCity wasn’t doing so hot because of their fitness test.”

- Janet, MuscleHub Manager

Summary of Data

MuscleHub collects the following information:

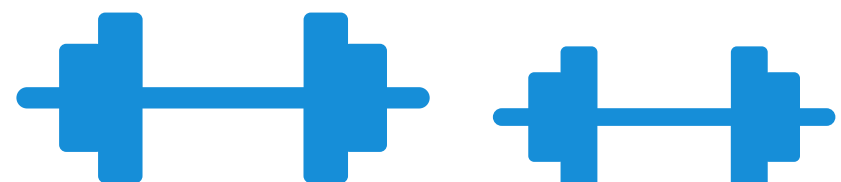
- First Name
- Last Name
- Email Address
- Gender
- Visit Date
- Fitness Test Date
- Application Date
- Purchase Date



The A/B test ran from July 2017 to October 2017.

Hypothesis Tests: Visits to Application

Visitors from Group B turned in more applications than those who took the fitness test in Group A. This is **statistically significant**.



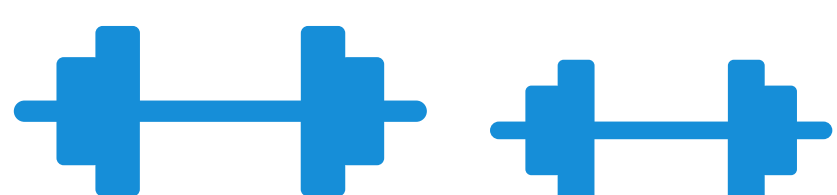
AB Test Group	Application	No Application	Total	Percent with Application
A	250	2254	2504	9.98%
B	325	2175	2500	13.00%

Choosing the hypothesis test.

I chose a Chi Square Test because we are comparing two categories: Those who took a fitness test before applying and those who were not given a fitness test. This particular test was for which group had the most applicants.

Hypothesis Tests: Just Applications to Purchase

Although it appears as though Group A applicants are more likely to become members, the results are **not statistically significant**.



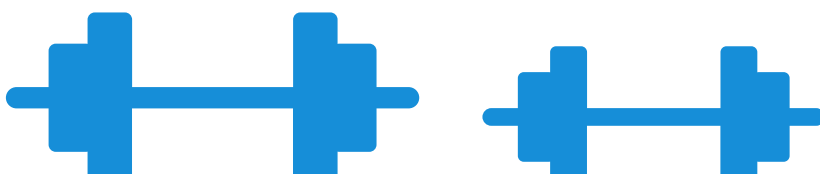
AB Test Group	Member	Not Member	Total	Percent Purchase
A	200	50	250	80.00%
B	250	75	325	76.92%

Choosing the hypothesis test.

I chose a Chi Square Test because we are comparing two categories: Those who took a fitness test before applying and those who were not given a fitness test. This particular test was for which group had the most signups among applicants only.

Hypothesis Tests: All Visitors to Purchase

When we look at those who become members out of all those who visit the gym, Group B is **statistically more successful**.



AB Test Group	Member	Not Member	Total	Percent Purchase
A	200	2304	2504	7.98%
B	250	2250	2500	10.00%

Choosing the hypothesis test.

I chose a Chi Square Test because we are comparing two categories: Those who took a fitness test before applying and those who were not given a fitness test. This particular test was for which group had the most signups among all visitors.

Qualitative Data Summary

We conducted interviews with potential gym-goers. What we found out wasn't all that surprising. Unless you are very motivated with a specific goal, a fitness test is just seen as an unnecessary barrier to entry. Interviewees often mentioned that a competitor, LiftCity, and always in a negative light as a result of their overly aggressive style and fitness test.

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

— Sonny “Dad Bod”,
26, Brooklyn

Takeaways

Group B won out!

MuscleHub should ***not*** ask visitors to take a fitness test.

Janet should instead focus on making the entire experience feel extremely friendly, accessible, and easy. For those who appreciate the guidance of a trainer, that can be an offering for *after* signup, just don't push it on newcomers prior to them becoming members.