

### Does a new supplement help people sleep better?

Two versions: We have supplement "A" which is considered the long used one that people have used to attain sleep and is the control. We have the new supplement "B" which is the new one that we want to test. This is the "treatment".

A sample, divided into two groups: We have two randomly, double blinded sample populations that are optimally as much as possible like each other.

A hypothesis: The hypothesis would be "New supplement B does help people sleep much better than supplement A.

Outcome(s) of interest: The expectation is that the new supplement will help people sleep better. The key metric here would be length of sleep time achieved.

Other measured variables: Sleep quality, sleep length, restful vs non-restful, restorative vs non-restorative

### Will new uniforms help a gym's business?

Two versions: old uniform vs new uniform. New uniform is the treatment.

A sample: One group composed of the workers wearing the old uniform.

The other group composed of workers wearing the new uniforms.

Hypothesis: The new uniform will increase business.

Outcome of interest: Total revenue of the gym. The expectation is that the new uniforms will generate new total revenue and profit for the gym. The key metric would be profit attained with new uniforms onboard.

Other measured variables: revenue generated monthly, quarterly and annually, gym patron satisfaction, membership totals, new memberships attained, recurring memberships attained, gym membership cancellations

### Will a new homepage improve my online exotic pet rental business?

Two versions: old homepage vs the new homepage. New webpage is the treatment.

A sample: One sample composed of how the online exotic pet rental business was doing with the old homepage, and the other sample composed of how it is doing with the new homepage.

Hypothesis: The new homepage will improve the online exotic pet rental business by increasing sales, revenue, and profit.

Outcome of interest: Profitability of the online exotic pet rental business.  
The key metric would be profit of the online business with the new homepage vs the old homepage.

Other measured variables: Revenue, profit margin, website visits, time on website, revenue generated from website activity, total website activity.

If I put 'please read' in the email subject will more people read my emails?

Two versions: One email without "please read" in the subject line, and another email with "please read" in the subject line.

A sample: One group of emails that were sent out with "please read" in the subject line and another group of emails that were sent without "please read" in the subject line.

Hypothesis: The group of emails that were sent out with "please read" in the subject line are going to have a higher "open" rate than those without the "please read" in the subject line.

Outcome of interest: "open and read" rate of the emails that were sent out with "please read" in the subject line. The key metric would be the "read" metric.

Other measured variables: spammed vs non-spammed rate, read vs not-read, trash vs non-trashed.