1. Does a new supplement help people sleep better?

Two versions: old supplement vs new supplement

A sample: group of people who are taking new supplement how many hours they sleep and other do not take new supplement how many hours they sleep

Hypothesis: we expect group of people taking new supplement should sleep longer.

Outcome: will the new supplement has some side effects?

Other measured variables: Observe whether the two groups are similar in terms of age, gender, and health record (such as blood pressure or heart disease). If we observed people with new supplement having longer sleep during night. As a result, we would advocate for promoting new supplement for better sleep in future

2. Will new uniforms help a gym's business?

Two versions: old uniform vs new uniform

A sample: number of memberships of gym before wearing new uniform and after wearing new uniform

Hypothesis: we expect new uniform will increase number of memberships of gym and improve gym business

Outcome: how many people daily coming to gym from their attendance record at gym? whether number of male or female increased?

Other measured variables: If the two groups appeared similar in age, gender and anything else we measured but gym membership has increased so we conclude gym has better business

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

Two versions:old homepage vs new homepage

A sample: number of people who purchased when visited old homepage and who purchased when visited new homepage

Hypothesis: We expect new homepage will have better business as people will spend more time

Outcome: number of visits increased or reduced

Other measured variables: If the two groups appeared similar in age, gender and anything else we measured but number of people purchased after visiting new website increased so we conclude a new homepage improve my online exotic pet rental business

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

Two versions: one with 'please read' in the em ail subject vs without that

A sample: group of people who received emails with nothing soecial in their subject line and other group of people who received emails with 'please read' in the subject line

hypothesis: We expect that 'please read' in subject line of email will result in more clicks

Outcome: We can also look at whether the two different subject lines affect how quickly people open the email after receiving it as well as the click rate.

Other measured variables: If the two groups appeared similar in age, gender, and anything else we measured, but click rates were higher for 'please read' subject line emails, we would conclude that changing the subject line by adding 'please read' caused more clickthroughs. As a result, we would advocate for including 'please read' text in all future email's subject line.