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Unit 6: Designing Experiments

Experiments: intervenes by imposing some treatment.

Subject: individuals studied in an experiment.

Clinical Trial: experiment that studies the effectiveness of medical treatments on actual patients.

Treatment: any specific experimental condition applied to the subjects.

Placebo: a dummy treatment with no active ingredients.

Placebo effect: When patients respond favorably to the placebo.

Randomized Comparative Experiment: subjects are randomly assigned treatment(s).

Pg. 264 Stopping drunk drivers - Figure 6.3

Control Group: allows us to control the effects of lurking variables. Sometimes receives a placebo or in clinical studies often given product already out on the market.

Statistical Significance: an observed effect so large that it would rarely occur by chance.

Principles of experimental design

1. **Control** - the effects of lurking variables. Use a placebo or a control group.
2. **Randomize** - use chance to assign subjects to treatments.
3. **Use enough subjects** - in each group to reduce variation in the results.

EXAMPLE PG. 266 #6.10

Practice:

PG. 261 #6.1, 6.2(a,b), 6.6

PG. 266 #6.7, 6.9

PG. 269 #6.14, 6.15