

The **individuals** studied in an experiment are often called **subjects**, particularly when they are people.

The explanatory variables in an experiment are often called **factors**.

A **treatment** is any specific experimental condition applied to the subjects. If an experiment has several factors, a treatment is a combination of specific values of each factor.

An experiment that uses both comparison of two or more treatments and chance assignment of subjects to treatments is a **randomized comparative experiment**.

In a **completely randomized** experimental design, all the subjects are allocated at random among all the treatments.

An observed effect so large that it would rarely occur by chance is called **statistically significant**.

In a **double-blind** experiment, neither the subjects nor the people who interact with them know which treatment each subject is receiving.

A **block** is a group of individuals that are known before the experiment to be similar in some way that is expected to affect the response to the treatments.

In a **block design**, the random assignment of individuals to treatments is carried out separately within each block.

A **control** is a situation in which no treatment is administered. It serves as a reference mark for an actual treatment (e.g., a group of subjects does not receive any drug or pill of any kind).

A **placebo** is a fake treatment, such as a sugar pill. It is used to test the hypothesis that the response to the treatment is due to the actual treatment and not to how the subject is being taken care of.

The "placebo effect" is an improvement in health due not to any treatment but only to the patient's belief that he or she will improve.

Matched pairs: Choose pairs of subjects that are closely matched—e.g., same sex, height, weight, age, and race. Within each pair, randomly assign who will receive which treatment.