

# 1 Experimental Studies and Cohort Studies Review

## 1.1 Experimental Vs Observational

### Definition 1 *Experimental*

*A study in which the conditions are under direct control of the investigator. (assign individuals to exposed or unexposed)*

- RCT
- clinical trial

### Definition 2 *Observational*

*The investigator does not determine the assignment of exposure but rather passively observe events as they occur*

- Cohort
- Case-control
- cross-sectional

## 1.2 Clinical Trial

### Categories

- with randomization
- without randomization (Simple randomization, stratified randomization, cross-over, factorial design)

### Purpose of randomization

- Achieve equality of baseline characteristics, allow for a fair comparison
- Balance all factors (known and unknown) that may bias our final results
- If we find some differences between groups, this difference can only be attributable to the exposure (and not any extraneous factors)