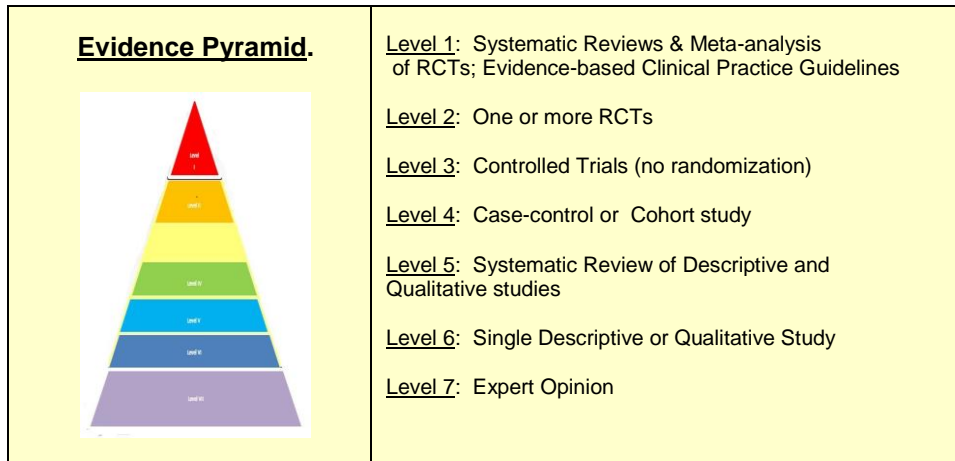


# Evidence Pyramid - Levels of Evidence



## **Level I Evidence**

- **Systematic Review or Meta-Analysis of Randomized Controlled Trials:** See box below for more information about systematic reviews and meta-analysis.
- **Clinical Practice Guidelines:** Systematically developed statements to assist clinicians and patients in making decisions about care; ideally the guidelines consist of a systematic review of the literature, in conjunction with consensus of a group of expert decision-makers, including administrators, policy makers, clinicians, and consumers who consider the evidence and make recommendations.

### **The level of evidence of systematic reviews and meta-analyses depends on the types of studies reviewed.**

**Systematic Review:** A summary of evidence, typically conducted by an expert or expert panel on a particular topic, that uses a rigorous process (to minimize bias) for identifying, appraising, and synthesizing studies to answer a specific clinical question and draw conclusions about the data gathered.

**Meta-Analysis:** A process of using quantitative methods to summarize the results from multiple studies, obtained and critically reviewed using a rigorous process (to minimize bias) for identifying, appraising, and synthesizing studies to answer a specific question and draw conclusions about the data gathered. The purpose of this process is to gain a summary statistic (i.e., a measure of a single effect) that represents the effect of the intervention across multiple studies.

## **Level 2 Evidence**

- **Randomized Controlled Trial (RCT):** A true experiment (i.e., one that delivers an intervention or treatment in which subjects are randomly assigned to control and experimental groups); the strongest design to support cause and effect relationships.

## **Level 3 Evidence**

- **Controlled Trial:** experimental design that studies the effect of an intervention or treatment using at least two groups: one that received the intervention and one that did not; participants are **NOT randomly assigned** to a group.

## **Level 4 Evidence**

- **Cohort Study:** A longitudinal study that begins with the gathering of two groups of patients (the cohorts), one that received the exposure (e.g., to a disease) and one that does not, and then following these groups over time (prospective) to measure the development of different outcomes (diseases).
- **Case-Control Study:** A type of research that retrospectively compares characteristics of an individual who has a certain condition (e.g. hypertension) with one who does not (i.e., a matched control or similar person without hypertension); often conducted for the purpose of identifying variables that might predict the condition (e.g., stressful lifestyle, sodium intake).

## **Level 5 Evidence**

- **Systematic Review of Descriptive and Qualitative Studies:** See box to the left for more information about systematic reviews.

## **Level 6 Evidence**

- **Single descriptive or qualitative study**  
**Qualitative research:** method that systematically examines a phenomenon using an inductive approach & exploration of meaning of phenomenon; purpose is to understand & describe human experience, explore meanings & patterns; data are often narrative.

## **Level 7 Evidence**

- **Expert opinion:** Recommendations from persons with established expertise in a specific clinical area often based on clinical experience; not considered a research method because systematic (*or critical*) inquiry is lacking.