

Health & Nutrition Sciences

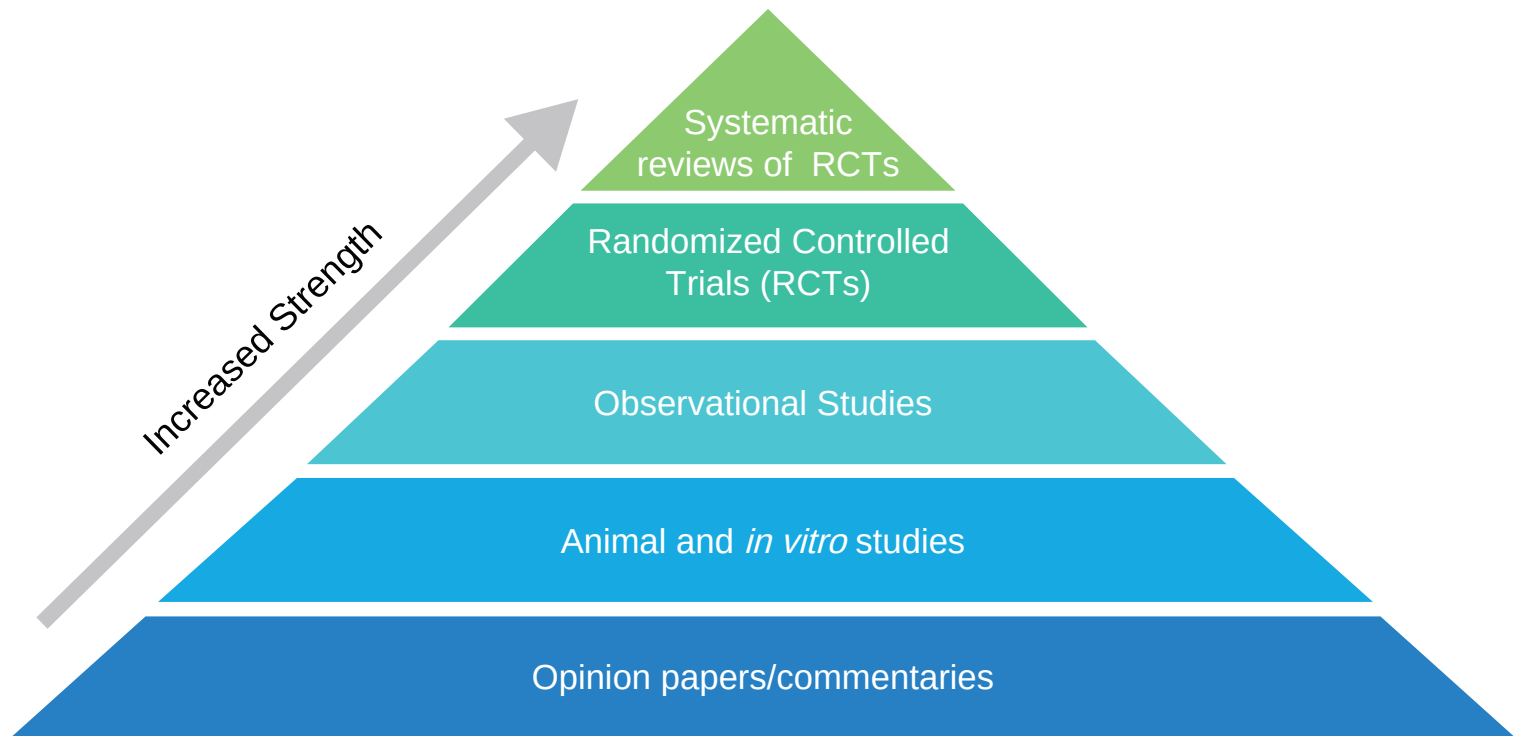
The hierarchy of scientific evidence is critically important for determining the health effects of dietary components



Public health recommendations should be based on the best- quality scientific evidence. Evaluating the strength of available evidence is key to sound decision making

Systematic reviews of Randomised Controlled Trials (RCTs) are positioned at the highest level in the hierarchy of evidence and should be considered as a primary source of information in science- based public health decisions

Hierarchy of scientific evidence



- 1 Systematic reviews of RCTs are the strongest form of evidence because they combine and synthesize all available evidence from studies on a particular topic to help understand the totality of evidence
- 2 Randomized controlled trials (RCTs) measure the efficacy of an intervention by randomly assigning participants to an experimental treatment or control group. They are the gold standard of scientific evidence and higher in quality than observational studies because there are stronger measures taken to control bias
- 3 Observational studies identify associations between factors such as diet and health outcomes in large groups of study participants. These studies cannot determine cause and effect and are limited by reverse causality and other factors, thus putting them lower on the pyramid
- 4 Animal and *in vitro* studies are useful for early exploration of hypotheses but their results are not directly translatable to humans
- 5 Opinion papers/commentaries are not considered in evidence-based practice as they do not provide an objective view