

Critical Appraisal: Systematic Reviews

Definition:	Scientific evaluation of several studies (mostly RCTs) that have been conducted on a specific clinical question. Gold standard source of research evidence.
Methodology:	<ol style="list-style-type: none">1. Definition and refinement of clinical problem.2. Formation of protocols on how SR is conducted.3. Comprehensive literature search on subject.4. Application of inclusion and exclusion criteria.5. Data extraction using validated methods.6. Weighting procedure (optional).7. Meta-analysis calculation.
Forest plot:	Midline corresponds to OR = 1, meaning "no effect". OR represented as dots/squares on chart. Weighting represented by size of dot/square. Lines either side represent confidence interval for that OR. If lines cross midline, not significant.
Funnel plot:	To address publication bias by identifying missing studies. X axis is: Treatment effect size Y axis can be: SE or Precision (1/SE) Sample Size or 1/Sample Size Log(Sample Size) or Log(1/Sample Size)
Homogeneity:	Similar and consistent results, observed differences ascribed to random variation. Fixed-effects model used to calculate effect size.
Heterogeneity:	Dissimilar or inconsistent results, variation ascribed to clinical or statistical factors. Random-effects model used to calculate effect size.