

Frequently Asked Questions: Systematic Reviews

What is a Systematic Review?

A review that identifies and evaluates all of the evidence with which to answer a specific, narrowly focused clinical question

What are the hallmarks of a Systematic Review?

- Exhaustive search for studies (the evidence)
- Elaborate procedures to maximize objectivity and minimize bias
- Identification, presentation, and consideration of the best available evidence (the strongest studies)
- Quality of each included study explicitly evaluated using standard criteria
- If possible, statistical combination of available evidence for a single estimate of effect
- Interpretation of the evidence for clinicians and researchers

Why is a Systematic Review better than a traditional review?

- Specific clinical question is addressed, rather than a general topic
- All information is considered, not just that favored by the reviewer
- The quality of each study, and overall quality of the evidence are objectively assessed
- Information is organized so that comparison across relevant studies is facilitated

What would you expect to see in a Systematic Review?

- A stated clinical question, preferably in “PICO” format that identifies:
 - Population (the individuals or groups for whom an answer is sought)
 - Intervention (the treatment or clinical condition of interest, i.e. patient type, disease)
 - Comparison (an alternative treatment or control group for comparison to intervention)
 - Outcome (the measure(s) used to assess the effects of the intervention)

(Example: “In persons with adult periodontitis, how does scaling and root planing combined with local antimicrobial therapy affect bleeding and pocket depths compared to scaling and root planing alone?”)
- A search strategy that uses several databases as well as additional searching of specific journals, references in included articles, and unpublished data
- Selection criteria for inclusion and exclusion in the review of studies identified in the search
- Application of the selection criteria to produce groups of included and excluded studies that are fully identified
- Assurances that the application of selection criteria at every stage of the search was performed independently by more than one individual, with all differences resolved after discussion
- An evidence table that summarizes key features and results from all included studies
- A narrative summary of the highlights of the evidence table
- If possible, a statistical combination of the results for the studies in the evidence table
- An interpretation of the evidence, including discussions of:
 - The overall strength of the evidence available to apply to the question
 - The implications of the evidence for clinicians
 - The implications for any additional research that will address the question
 - Any limitations of the search strategy and review methods