Urology CHEAT SHEETS

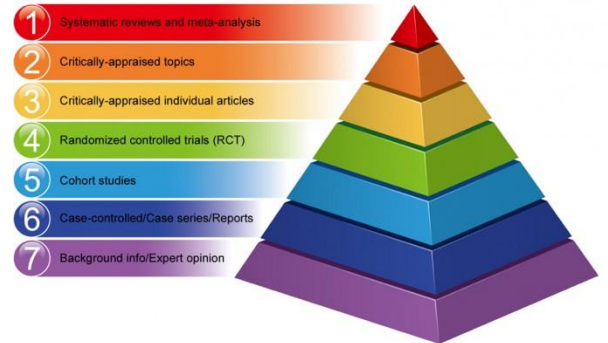# SYSTEMATIC REVIEW: MAKE IT EASY!

DEFINITION

A **review of the evidence** on a **clearly formulated question** that uses **systematic and explicit methods** to identify, select and critically appraise relevant **primary research**, and to extract and analyze data from the studies that are included in the review

The **Cochrane Database of SRs** is the leading journal and database for SRs in health care

Cochrane Library

EVIDENCE PYRAMID

1. Systematic reviews and meta-analysis
2. Critically-appraised topics
3. Critically-appraised individual articles
4. Randomized controlled trials (RCT)
5. Cohort studies
6. Case-controlled/Case series/Reports
7. Background info/Expert opinion

ESSENTIAL STEPS AND PRATICAL TIPS

Identify the issue and determine the question

Research, selection, extraction, and quality assessment of studies should be performed by at least **two authors** under the supervision of a **third senior** author

Write a plan for the review *(protocol)*

Search for studies

Sift and select studies

Extract data from the studies

Assess the quality of the studies

Combine the data *(synthesis or meta-anlysis)*

Discuss and conclude overall findings

Systematic Review

Search for similar SRs published in literature and ongoing SRs in the **PROSPERO** database. You may find that someone else has already stolen the idea from you

Submit the SR protocol in the **PROSPERO database**. The aims and methodology of an SR should be **defined a priori** and submission to PROSPERO is proof of this (registration number should be reported in the Methods)

Define a **precise search query**. Searching in **multiple databases** is methodologically more correct (e.g., MEDLINE, Embase, Cochrane Library, Scopus, Web Of Science, Google Scholar).
Look for **further articles in the references** of the selected studies. Specify the **time of search**. Avoid **chronological restrictions** whenever possible. If a long time has passed since your submission, **repeat the search** to include new studies

Follow the **PRISMA 2020 statement** (checklist and flow diagram) for the study identification process
Use the Population, Intervention, Comparison, Outcomes and Study (**PICOS**) design as a framework to formulate **eligibility criteria.**

Main characteristics of studies, **baseline patients' characteristics**, and **previously selected outcomes** must be extracted with great care. **Validated** scores and questionnaires should always be preferred. Create **readable and not too extensive tables**

The **assessment of quality** and risk of bias must be performed with validated tools according to the primary studies designs (e.g., NOS scale, Jadad scale, RoB2, Robins-I, etc.)

Extracted data can be combined without (qualitatively) or with a quantitative analysis (**meta-analysis**). The decision to perform a meta-analysis should be based on the **quality and heterogeneity** of the extracted data, not on the ability to perform the meta-analysis.

Explain the results by comparing them (if possible) with those of previous SRs. Mention **strengths and limitations** of SR. Give indications about **future perspectives** for research. Make **clear conclusions** (and give **recommendations** when possible)

PRISMA Flow Diagram

EASY!

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