

HOW TO REVIEW AN SYSTEMATIC REVIEW

GUIDE	COMMENTS
Deciding whether the results are valid	
1. Is this a systematic review of randomized trials?	<ul style="list-style-type: none"> • Systematic reviews (SRs) may go by other names including overview and meta-analysis. A meta-analysis is really a subset of SR where the results of many studies are statistically combined. • A SRs is like any other research – it has a focused question. It's data are the results of other studies instead of 'generating new data'. • While most SRs will only include randomized trials, some will include high quality studies, such as cohort studies. If the SR includes studies other than randomized trials, they should be analyzed separate. In other words a meta-analysis should not combine data from both randomized and non-randomized studies.
2. Does it include a methods section that describes: <ol style="list-style-type: none"> finding and including all the relevant trials? assessing their individual validity? 	<ul style="list-style-type: none"> • A good SR will examine many sources for evidence including standard bibliographic databases, hand-searching journals, conference proceedings, theses, databanks of pharmaceutical firms and contacting 'experts' or authors of published articles. Really good SRs will also search the European literature and/or foreign language literature. • Each study that meets the inclusion criteria (or doesn't fail exclusion criteria) should be independently assessed by at least two reviewers. If there is a disagreement between reviewers, there should be some mechanism to resolve the differences. There are published criteria for reviewing and numerically rating studies.
3. Were the results consistent from study to study?	<ul style="list-style-type: none"> • While different studies may show differing quantitative effects, the studies should be consistent (homogeneous) with respect to overall benefit or harm. Beware of the SR that has some studies that show benefit, some no benefit and some clear-cut harm. These results would be very heterogeneous. • If the results are heterogeneous, the author should explain why such as differing study populations (by race, gender, age), doses of medication, or duration of therapy.
4. Were individual patient data used in the analysis or aggregate data? (may important in meta-analysis)	<ul style="list-style-type: none"> • Combining individual patient data is preferable. It allows you to examine subgroups. Combining summary data does not offer the same flexibility. To use individual patient data you would need to go back to the original source of the data and obtain permission to use it.
Are the valid results of the systematic review important?	
1. What is the magnitude of the treatment effect?	<ul style="list-style-type: none"> • Many SRs are beginning to report their results with NNT. However, the reporting of Odds Ratio (OR) or Relative Risk (RR) is still very common. Both OR and RRR can be converted into NNT.
2. How precise is the treatment effect?	<ul style="list-style-type: none"> • Look for 95% confidence intervals. Confidence intervals are the measure of precision • The wider the confidence intervals, the less precise the measurement. This is relative.
Will the results help me in caring for my patients?	
1. Is our patient so different from those in the study that its results cannot apply?	<ul style="list-style-type: none"> • Our patient does not have to fit all the inclusion criteria of this study. • Consider whether our patient's sociodemographic features or pathobiology are so different from those in the study that its results are useless to us and our patient.
2. Is the treatment feasible in our setting?	<ul style="list-style-type: none"> • Is the treatment economically feasible and available in our geographic region?
3. What are our patient's potential benefits and harms form the	<ul style="list-style-type: none"> • There is always constant weighing of the treatment's potential benefits and harms.

therapy?	harms.
4. What are our patient's values and expectations for both the outcome we are trying to prevent and the treatment we are offering?	<ul style="list-style-type: none"><li data-bbox="609 199 1511 262">• We must elicit our patient's preferences for both the outcome we are trying to prevent and the treatment we are offering.