How important are comprehensive literature searches and the assessment of trial quality in systematic reviews? Empirical study
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Record Status
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Citation

Authors' objectives
The aims of this study were:

- To examine the characteristics of clinical trials that are difficult to locate (unpublished trials, trials published in languages other than English, trials published in journals not indexed in the MEDLINE database) and of trials of lower quality (inadequate/unclear concealment of treatment allocation, not double-blind).

- To compare within meta-analyses the treatment effects reported in trials that are difficult to locate with trials that are more accessible, and of trials of lower with trials of higher quality.

- To assess the impact of excluding trials that are difficult to locate and of trials of lower quality on pooled effect estimates, p-values and the shape of funnel plots.

Authors' conclusions
Systematic reviews that are based on a search of English language literature that is accessible in the major bibliographic databases will often produce results that are close to those obtained from reviews based on more comprehensive searches that are free of language restrictions. We recommend that when planning a review, investigators should consider the type of literature search and the degree of comprehensiveness that are appropriate for the review in question, taking into account budgetary and time constraints.

The finding that trials which are difficult to locate are often of lower quality raises the worrying possibility that rather than preventing bias through extensive literature searches, bias could be introduced by including trials of low methodological quality. We believe that in situations where resources are limited, thorough quality assessments should take precedence over extensive literature searches and translations of articles.

Our results confirm that the funnel plot and the regression method to assess funnel plot asymmetry are useful to detect small-study effects, the tendency for smaller studies in a meta-analysis to show larger treatment effects.

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