

A Critical Review of Reviews on the Treatment of Chronic Low Back Pain

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Study Design. Systematic literature review.

Objective. To critically appraise the methodology of systematic reviews of conservative therapies for chronic nonspecific low back pain and to study the relation between the methodologic quality and other characteristics of these reviews.

Summary of Background Data. Systematic reviews offer a concise summary of the evidence on treatment effectiveness, but flaws in their methodology can lead to invalid conclusions with serious implications for quality of patient care.

Methods. Searches of MEDLINE, EMBASE, Psychinfo, and the Cochrane Library were conducted. Titles, abstracts, and articles were reviewed by two blinded authors using three inclusion criteria: 1) chronic nonspecific low back pain, 2) systematic review, and 3) conservative treatment intervention. Data were extracted from each review by three authors.

Results. The search strategy retrieved 1102 titles and abstracts; 109 met inclusion criteria. A review of the full text of these articles excluded an additional 73 articles. Data abstraction and methodologic assessment were conducted on 36 articles reviewing 19 discrete interventions. The average quality score was 4.1, ranging from 1 (low) to 7 (high). There was a trend for recent reviews to be of higher quality. Fifty-six percent of the reviews had positive conclusions, but they had lower quality scores compared with those that had negative or uncertain conclusions. There were 27 (73%) qualitative and 10 (27%) quantitative summaries of results.

Conclusions. Although the overall quality of systematic reviews was satisfactory, the quality of the individual papers included in the reviews varied considerably. The reviews often provided contradictory evidence on the effectiveness of a wide range of commonly used conservative interventions for chronic nonspecific low back pain. These findings illustrate the pitfalls of systematic reviews where there are a number of low-quality trials and underscore the need for high-quality primary trials that will allow for more conclusive reviews.