



Australian Association of Musculoskeletal Medicine

Systematic Review of Randomized Trials Comparing Lumbar Fusion Surgery to Nonoperative Care for Treatment of Chronic Back Pain.

Literature Review

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Mirza, Sohail K. MD, MPH *+++; Deyo, Richard A. MD, MPH *+[S][//]

Abstract:

Study Design. Systematic review of randomized trials comparing surgical to nonsurgical treatment of discogenic back pain.

Objective. Compare research methods and results.

Summary of Background Data. Recent reports have increased debate about the role of surgery in the treatment of chronic back pain associated with lumbar disc degeneration. We conducted a systematic review of randomized trials comparing lumbar fusion surgery to nonsurgical treatment of chronic back pain associated with lumbar disc degeneration.

Methods. A literature search identified 5 randomized trials that compared fusion to nonoperative treatment for chronic low back pain. Excluding 1 trial for spondylolisthesis, we compared study participants, interventions, analyses, and outcomes in 4 trials that focused on nonspecific chronic back.

Results. All trials enrolled similar subjects. One study suggested greater improvement in back-specific disability for fusion compared to unstructured nonoperative care at 2 years, but the trial did not report data according to intent-to-treat principles. Three trials suggested no substantial difference in disability scores at 1-year and 2-years when fusion was compared to a 3-week cognitive-behavior treatment addressing fears about back injury. However, 2 of these trials were underpowered to identify clinically important differences. The third trial had high rates of cross-over (>20% for each treatment) and loss to follow-up (20%); it is unclear how these affected results.

Conclusions. Surgery may be more efficacious than unstructured nonsurgical care for chronic back pain but may not be more efficacious than structured cognitive-behavior therapy. Methodological limitations of the randomized trials prevent firm conclusions.