



## Caution required with total disc replacement for chronic back pain

### Clinical question

How effective is total disc replacement (TDR) for chronic low back pain (LBP) in the presence of lumbar disc degeneration?

### Bottom line

TDR compared with conventional fusion surgery for degenerative disc disease appeared to result in a small but clinically irrelevant improvement with respect to pain relief, disability and quality of life in a selected population, in the short term (two years, with only one study extended to five years). As harm and complications may occur after years, the spine surgery community should be prudent about adopting this procedure on a large scale.

### Caveat

Although the risk of bias of five studies could be considered low, the most important items, sequence generation, allocation concealment, blinding, and comparable baseline values were not met in most studies. Currently available trials did not assess adjacent level disease and facet joint degeneration adequately.

### Context

In the search for better surgical treatment of chronic LBP in the presence of disc degeneration, TDR has received increasing attention in recent years. A possible advantage of TDR compared with fusion is maintained mobility at the operated level, which has been suggested to reduce the chance of adjacent segment degeneration.

### Cochrane Systematic Review

Jacobs W et al. Total disc replacement for chronic back pain in the presence of disc degeneration. *Cochrane Reviews*, 2012, Issue 9. Art. No.: CD008326. DOI: 10.1002/14651858. CD008326.pub2. This review contains 40 studies involving over 7,000 participants.

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