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ERRATUM

# Surgical versus non-surgical treatment of chronic low back pain: a meta-analysis of randomised trials

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## Introduction

In the original article [3], the mean difference in the Oswestry Disability Index (ODI) change from baseline to follow-up of patients undergoing surgery versus those undergoing non-surgical treatment from the Brox et al. [1] was interpreted incorrectly and an error was detected. A repeat meta-analysis has been performed with modified results.

## Results

### Quantitative results of the meta-analysis

Figure 1 displays the cumulative meta-analytic comparison. The mean overall difference in the ODI between the surgical and non-surgical groups was −4.87 in favour of surgery and statistically significant (95% CI: −1.62 to −8.12, p=0.0003). There was no evidence of heterogeneity between the studies, and the $I^2$ was 0%.

### Results of sensitivity analyses

Sensitivity analyses were performed that included the study by Ekman et al. [2]. This study recruited patients with chronic low back pain caused by isthmic spondylolisthesis and was the only study to do so. Analyses including this study, showed a mean overall difference in the ODI of −4.53 (95% CI: −1.48 to −7.59, p=0.004, $I^2$=0%) in favour of surgery (Fig. 2).

## Discussion

The pooled results showed a trend in favour of surgery with a mean ODI difference of −4.87 (p=0.003; 95% CI: −1.62 to −8.12). There is currently no consensus on what should be considered to be the clinically significant difference in the ODI from baseline to end point.

## Conclusion

We found that surgical fusion may improve the ODI compared to non-surgical intervention at the two-years follow-up for chronic low back pain. This improvement in the ODI compared to the original article (−4.87 compared to −4.13) was statistically significant and is of minimal clinical importance; consequently, surgeons should recommend spinal fusion cautiously to patients with chronic low back pain. The improvement in ODI compared to the original article is slightly different despite being statistically significant. Further long-term follow-ups of the studies

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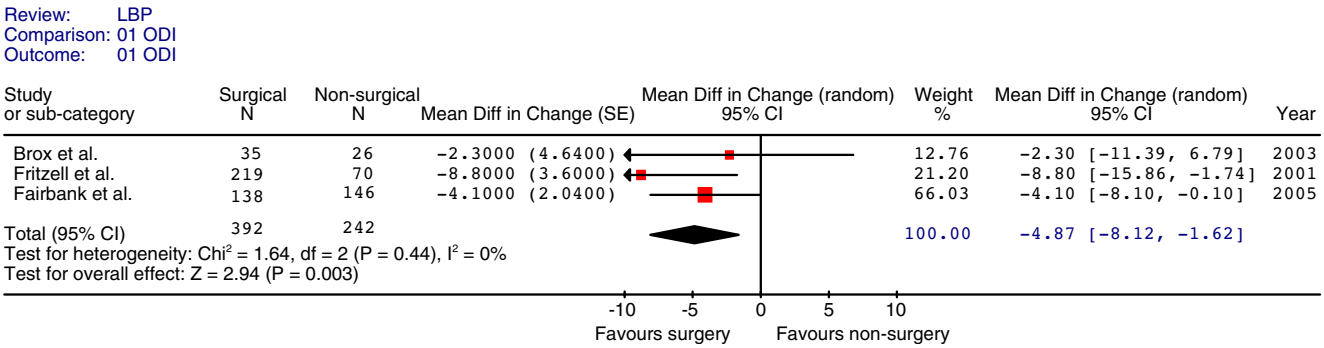


**Fig. 1** Forest plot: mean difference in ODI and 95% CI for surgical versus non-surgical treatment

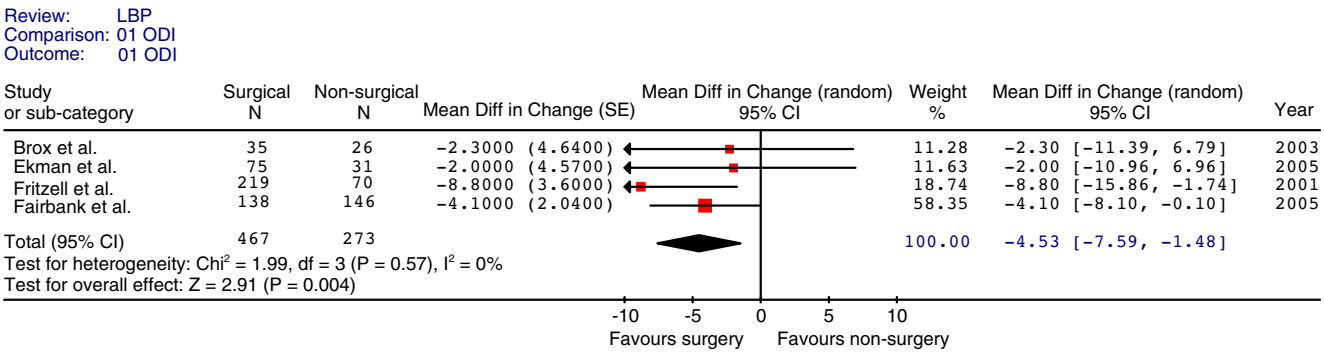


**Fig. 2** Forest plot: mean difference in ODI and 95% CI for surgical versus non-surgical treatment sensitivity analysis

reviewed in this meta-analysis are required to provide more conclusive evidence in favour of either treatment.

## References

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