

### New low back pain management research

*Furunes et al. (2017) "Total disc replacement versus multidisciplinary rehabilitation in patients with chronic low back pain and degenerative discs: 8-year follow-up of a randomised controlled multicentre trial"*

A Norwegian study randomised 173 patients aged between 25 and 55 years old with 12 month history or more of low back pain and localised degenerative changes at L4-5 or L5-S1 or both to either surgery (total disc replacement) or multidisciplinary rehabilitation (MDR). Key exclusions were those had nerve root involvement, disc degeneration in more than two levels and symptoms of spinal stenosis, amongst others. MDR was an intensive 3-5 week program consisting of a cognitive approach and supervised physical exercise. Primary outcome was pain and disability measured on the Oswestry Disability Index (ODI). At 8 year follow up, while there were subtle differences favouring surgery, these were not found to be clinically significant. 50% in the rehabilitation group and 70% in the surgery group improved by 15 ODI points.

***"Considering the risk of surgical complications and the significant number of patients who achieve a clinically important improvement after rehabilitation, the first choice of treatment should be multidisciplinary rehabilitation."***

Other things to consider about the article....

21 patients (24%) randomised to rehabilitation had crossed over and had undergone back surgery since inclusion, whereas 12 patients (14%) randomised to surgery had undergone additional back surgery. One serious adverse events after disc replacement was registered (<1%)

Weaknesses of the study include the patients could not be blinded, there are no studies comparing TDR with sham surgery, we do not know the natural course of LBP over 8 years, the exclusion criteria of nerve root involvement or presence of generalised disc degeneration, a relatively high crossover rate, high reoperation rate. Patients reoperated on were excluded, probably removing the most inferior results of surgery from analysis.