



Musculoskeletal

Modalities of exercise training for treating low back pain

...is any modality of exercise superior to others?

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This review found Pilates, stabilisation/ motor control, resistance training and aerobic exercise training as most effective for adults with nonspecific chronic low back pain (NSCLBP) across the different analysed outcome measures.

However, this conclusion was only supported by low-quality evidence. On the contrary, stretching and McKenzie exercises showed no difference to control groups. The study also found that exercise training may be more effective than hands-on treatment.

Chronic low back pain (CLBP) comprises 20% of low back pain (LBP) cases, but is responsible for 80% of the direct costs of LBP.

Although it has been established that treatment based on passive modalities should be avoided, and that exercise training is effective in reducing pain in adults, the effect of specific exercise modalities in individuals with CLBP has been less explored.

Eighty-nine studies involving 5578 patients were eligible for the review, while the network meta-analysis was performed on 70 (pain), 63 (physical function), 16 (mental health) and 4 (trunk muscle strength) studies. Study quality was assessed according to the GRADE criteria.

Overall, progressive exercise interventions, where the patient is guided and actively encouraged to move (Pilates, stabilisation/ motor control, resistance/ aerobic), were most effective.

However, due to the lack of reported outcome measures, it was not possible to establish the effects of exercise modalities on trunk strength/ endurance and analgesic use. Moreover, 78% of available studies showed a high risk of bias in at least one type of bias, which limits the strength of conclusions.

Nevertheless, this review established some effective modes of exercise and that it is a better option than hands-on care for NSCLBP.

Expert opinion

The studies included in this review showed high heterogeneity, but this may not be entirely surprising given the wide range of populations affected by NSCLBP and the variety of studies and interventions published on this topic.

Nevertheless, the network meta-analysis carried out by these authors provides valuable information. Once again, conclusions lead us in the direction of active exercise treatment and away from therapist-driven care and passive modalities.

While this information is not novel, this review sheds some light on what active treatments should be avoided and that the most effective modalities share the fact that they encourage activity and are guided and progressive.

Although this was not the focus of this review, we can speculate that these forms of exercise were more effective not only by improving physical qualities but also for their effect on mood and self-efficacy, which are decisive factors in CLBP.



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