Review: exercise helps relieve pain in patients with hip osteoarthritis

Michael Yelland

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Notes

Review: exercise helps relieve pain in patients with hip osteoarthritis

QUESTION

In patients with hip osteoarthritis (OA), does exercise help to relieve pain?

REVIEW SCOPE

Included studies compared an exercise intervention (strengthening or aerobic) with no exercise in patients with hip OA (with or without knee OA). The exercise interventions involved ≥1 session/week (median 3) for ≥4 weeks, with each session lasting ≥30 minutes (median 53 min). Trials involving passive mobilisation or postoperative exercise therapy were excluded. Outcome was pain assessed using an accepted measure.

REVIEW METHODS

Medline (to Jul 2007), EMBASE/Excerpta Medica, PEDro, Cochrane databases, abstracts of scientific meetings, and references were searched for randomised controlled trials (RCTs) with ≥60% of participants completing the study. 9 RCTs (n = 1234) met the selection criteria. In 7 trials that included patients with knee OA, data on patients with hip OA were obtained from the authors. 5 RCTs reported adequate concealment of allocation, but because of the nature of the interventions, no trial was blinded.

MAIN RESULTS

Meta-analysis of 9 trials showed reduction in pain with exercise (table). However, heterogeneity in treatment effect was present. Most trials showed no difference or a decrease in pain with exercise, except for the largest one (n = 741), which showed an increase in pain. This trial differed from the others in that it was cluster randomised, had no personal instruction or supervision from a physical therapist (exercises were taught by videotape), and had poor adherence. When this trial was excluded from the meta-analysis, the effect size of pain reduction increased, and heterogeneity was eliminated (table). The effect size was slightly larger when only patients with hip OA as the index joint were included (table).

CONCLUSION

Exercise interventions taught by a physical therapist help relieve pain in patients with hip osteoarthritis.

ABSTRACTED FROM

Hernández-Molina G, Reichenbach S, Zhang B, *et al*. Effect of therapeutic exercise for hip osteoarthritis pain: results of a meta-analysis. *Arthritis Rheum* 2008;**59**:1221–8.

Correspondence to: Dr G Hernández-Molina, Clinical Epidemiology Research and Training Unit, Boston, MA, USA; gabyhm@yahoo.com

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Exercise interventions v no exercise for hip osteoarthritis (OA)

Outcome	Type of OA	Number of trials (n)	Standardised effect size at median 8 weeks (95% CI)*
Hip pain	Hip ± knee	9 (1234)	−0.38 (−0.68 to −0.08)
		8 (493)†	−0.47 (−0.65 to −0.28)
	Hip only	8 (1063)	−0.43 (−0.80 to −0.06)
		7 (322)†	−0.58 (−0.81 to −0.35)

*CI defined in glossary. A negative effect size favours exercise.

†Omitting 1 cluster-randomised trial (n = 741) with no personal exercise instruction and poor adherence.

The review by Hernández-Molina *et al* claims to be the first to specifically examine the role of strengthening and/or aerobic exercises for hip OA. A moderate effect size was achieved in patients with the hip as the index joint compared with a small effect in those with OA in the hip and knee. The key features of effective exercise programmes included duration ≥4 weeks, completion by ≥60% of participants, and personal supervision with tailoring of the programme to individuals. The key features of the largest and only negative trial were that instruction was done via videotape, adherence to exercise was low, and both the intervention and control groups were on rofecoxib.¹ However, that trial did have longer follow-up (24 wks) compared with

only 6–12 weeks for all but 1 of the other 8 trials. Therefore, the long-term benefits of exercise remain uncertain.

Hernández-Molina *et al* compared the benefits of exercise with those of medication, noting that exercise is more effective in reducing pain than paracetamol and less effective than non-steroidal anti-inflammatory drugs. The results of the review are very similar to those reported in a Cochrane review of exercises for knee OA, with the same effect size and greater benefits with increasing levels of supervision.²

Hernández-Molina *et al* could only conclude that exercise *may* be safe because adverse event reporting was not comprehensive. Nonetheless, the key message for clinicians is that supervised

strengthening and/or aerobic exercise programmes with good adherence are likely to offer small-to-moderate benefits for the pain of hip OA.

Michael Yelland, MBBS, PhD
Griffith University
Logan, Queensland, Australia

1. **Ravaud P**, Giraudeau B, Logeart I, *et al*. Management of osteoarthritis (OA) with an unsupervised home based exercise programme and/or patient administered assessment tools. A cluster randomised controlled trial with a 2x2 factorial design. *Ann Rheum Dis* 2004;**63**: 703–8.
2. **Fransen M**, McConnell S. Exercise for osteoarthritis of the knee. *Cochrane Database Syst Rev* 2008;(4): CD004376.