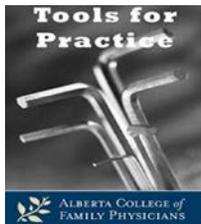


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Exercise for osteoarthritis pain: how strong is the evidence?

Clinical Question: Is exercise effective for pain management in hip/knee osteoarthritis?



Bottom Line: In adults with knee or hip osteoarthritis, exercise can lead to ~30% pain improvement for 47% of patients versus 21% with no exercise at 6-104 weeks, benefiting one additional person for every 4 treated. The type of exercise does not significantly affect the results, however most included trials utilized physiotherapy.

Evidence:

- Focusing on systematic reviews of randomized, controlled trials (RCTs) in hip or knee osteoarthritis that compared exercise to a non-exercise control group; results statistically significant unless otherwise stated.
 - Systematic review (11 RCTs), 1367 participants.¹ RCTs included various types of exercise programs (examples Tai Chi, aquatic/hydrotherapy, and muscle strengthening programs); the majority (91%) involved physiotherapy. After 6-104 weeks:
 - Proportion achieving a meaningful pain response (~30% improvement on pain scale):
 - 47% versus 21% (control), number needed to treat (NNT)=4.
 - Three systematic reviews (9-54 RCTs), 549-2991 participants:²⁻⁴
 - Mean improvement on pain scale:
 - Pain: “small effect” based on standard mean difference=0.33-0.49.
 - Function: “small to moderate effect” based on standard mean difference=0.27-0.52.
 - Systematic review (103 RCTs), 9134 participants.⁵ Relative efficacy of different types of exercises:
 - All types demonstrated significant benefit on pain compared to usual care.
 - No significant difference between types (except “mixed exercise”, which included various types of exercise, and was less effective).
 - Function: similar improvements as seen with pain.

Context:

- Guidelines recommend exercise such as walking, strengthening, neuromuscular training and aquatic exercise for osteoarthritis management. Type of exercise is based on patient preference and accessibility.^{6,7}
 - Similar efficacy seen regardless of osteoarthritis severity.⁸
- Participants in control groups of RCTs who receive any intervention (usual care or education) achieve greater improvement in pain compared to those assigned to wait-list or no intervention.¹
- Qualitative data suggests that people are confused about the cause of their pain and its variability and do not know what they can safely do. Providing reassurance and clear advice may encourage greater exercise participation.⁴

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Disclosures:

Authors do not have any conflicts of interest to declare.

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