



# The Effects of Manual Therapy on Functional Outcomes and Pain in Patients with Hip Osteoarthritis: A Systematic Review

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## Background and Objectives

The purpose of this systematic review is to determine whether manual therapy has a positive effect on functional outcomes or pain when treating hip osteoarthritis. Hip osteoarthritis (OA) is a condition that has been shown to produce pain and affect physical functioning in patients, becoming more debilitating as the condition progresses. With these difficulties, patients struggle with productivity as well as the cost burden of conservative and surgical treatments. While there is no cure for hip OA, manual physical therapy may be a viable treatment.

## Methods

The following databases were searched: CINAHL Complete, SPORTDiscus with full text, MEDLINE, MEDLINE with full text, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews, and Cochrane Methodology Register. The keywords were related to hip osteoarthritis and manual therapy. The search yielded 126 articles which were then filtered by peer revision and duplicates were excluded, 78 articles were left for title search. After an abstract search and reference search, five articles were chosen for this review. All five of the articles were deemed high quality using the PEDro scale.

## Results

Five studies looking at patients with hip osteoarthritis were included in this review. Two studies utilized the WOMAC to measure improvement in function and showed benefits when using manual therapy. A third study that utilized the WOMAC did show improvements in function, but the results were not significant. The final two studies utilized pain as a functional outcome measure, both of these studies showed benefits in patient functional levels when utilizing manual therapy.

## Discussion and Conclusion

Manual therapy, especially when combined with other treatment, improves functional outcomes and pain in patients with hip OA. Physical therapists should incorporate manual therapy within their comprehensive treatment program to improve functional outcomes and reduce pain in patients with hip OA. While manual therapy has been shown to improve outcomes, it should not be used in isolation, but rather as a supplement to other treatments such as exercise and patient education.

## Summary of Studies

Study	Subjects	Intervention	Control Intervention	Outcome Measures	Results
2016 Beselga	40 participants age > 65 years, OA according to ACR criteria	Two types of MWM	Sham group (simulated MWM)	Numerical Rating Scale for pain	MWM group decreased pain levels, increased hip flexion, & increased hip internal rotation. No significant differences in sham group
2013 French	131 participants age 40-80 years, OA according to ACR criteria	ET or ET+MT	Yes	WOMAC	No significant difference in primary outcome
2004 Hoeksma	109 participants 60-85 years, OA according to ACR criteria, unilateral hip symptoms	MT or ET	Yes	Numerical Rating Scale for pain, Physical Function	Increased primary outcome (general perceived improvement) in the MT group and increased secondary outcomes (pain, hip function, stiffness, ROM) in the MT group
2013 Poulsen	118 participants age 40-80, OA according to radiographic finding, unilateral hip pain > 3 months duration	PE, PE+MT, or MCI	Yes	Numerical Rating Scale for pain	PE+MT group had clinically relevant reduction in pain levels. No difference between the MCI and PE groups.
2013 Abbott	206 participants (average age = 66 years) with either knee or hip OA, OA according to ACR criteria	MT, ET, or MT+ET	Yes	Numerical Rating Scale for pain, Physical Function, WOMAC	MT group had greatest improvements in WOMAC, ET group had greatest improvements in physical performance

Key: OA: Osteoarthritis, ACR: American College of Rheumatology, MWM: Mobilization with Movement, ET: Exercise Therapy, MT: Manual Therapy, PE: Patient Education, MCI: Minimal Control Intervention, WOMAC: Western Ontario and McMaster Osteoarthritis Index

## References

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2. French H, Cusack T, McCarthy G, et al. Exercise and Manual Physiotherapy Arthritis Research Trial (EMPART) for Osteoarthritis of the Hip: A Multicenter Randomized Controlled Trial. *Archives Of Physical Medicine & Rehabilitation* [serial online]. February 2013;94(2):302-314.

Additional references available upon request

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