



Q/ Is nonoperative therapy as effective as surgery for meniscal injuries?

EVIDENCE-BASED ANSWER

A | YES. There is no significant difference in symptom or functional improvement between adult patients with symptomatic meniscal injury who are treated with operative vs nonoperative therapy (strength of recommendation: **A**, consistent randomized controlled trials [RCTs]).

Both approaches resulted in function and pain improvement

A 2013 multicenter RCT evaluated 351 adults, 45 years and older, with a meniscal tear and mild to moderate osteoarthritis confirmed by imaging, for functional improvement by physical therapy alone compared with arthroscopic partial meniscectomy and physical therapy.¹

At the beginning of the study and 6 and 12 months after treatment, researchers assessed symptoms using the Western Ontario and McMaster Universities (WOMAC) Osteoarthritis Index physical-function score (0-100, with higher scores indicating more severe symptoms), the Knee Injury and Osteoarthritis Outcome Score (KOOS) for pain (0-100, with higher numbers correlating with less pain), and the 36-item Short Form Health Survey (SF-36) for physical activity (0-100, with higher scores indicating greater physical activity).

Modified intention to treat analysis showed no significant difference in function and pain improvement at 6 and 12 months between patients with meniscal injury who underwent arthroscopic repair and physical therapy and patients who underwent physical therapy alone (TABLE¹). A limitation of the study

was the crossover of 30% of patients from the nonoperative group to the operative group.

No differences found in Tx outcomes for nontraumatic tears

A 2007 prospective RCT evaluated 90 adults ages 45 to 64 with nontraumatic meniscal tears confirmed by magnetic resonance imaging for improvement in knee pain and function with arthroscopic treatment and supervised exercise (AE) or supervised exercise (E) alone.² Knee pain and function were assessed before intervention, after 8 weeks, and after 6 months of treatment using 3 surveys: the KOOS, the Lysholm Knee Scoring Scale (LKSS; 0-100, with higher scores correlating with good knee function), and the Visual Analogue Scale (VAS) for knee pain (0-10, with 0 indicating no pain and 10 indicating maximum pain).

The KOOS revealed that at 8 weeks and 6 months both groups had significant improvement from the initial evaluation in all subscale scores. In the AE group, the 8-week pain score increased from a baseline of 56 to 89 ($P<.001$) and remained at 89 at 6 months ($P<.001$). For the E group, the 8-week pain score improved from a baseline of 62 to 86 ($P<.001$) and continued at 86 after 6 months ($P<.001$).

The LKSS score for both groups showed significant improvement from baseline at 8 weeks: 34% of the AE group and 42% of the E group scored higher than 91 ($P<.001$).

VAS scores showed a significant decrease in pain at 8 weeks for both the AE and E groups: beginning median value for both groups was 5.5 and decreased to 1.0 at 8 weeks

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TABLE

Outcomes for arthroscopic surgery and physical therapy for meniscal injuries in osteoarthritic knees¹

Assessment tool	Improvement from baseline		Between-group difference in improvement from baseline
	Arthroscopic partial meniscectomy	Physical therapy	
6 months—mean (95% CI)			
WOMAC	21 (18-24)	19 (16-22)	2.4 (-1.8 to 6.5)
KOOS	24 (21-27)	21 (18-24)	2.9 (-1.2 to 7.0)
SF-36	24 (20-28)	23 (19-27)	1.1 (-4.4 to 6.6)
12 months—mean (95% CI)			
WOMAC	24 (21-27)	23 (20-26)	0.7 (-3.5 to 4.9)
KOOS	27 (24-30)	27 (24-30)	-0.4 (-4.8 to 4.0)
SF-36	25 (21-29)	28 (24-32)	-3.0 (-8.8 to 2.7)

CI, confidence interval; KOOS, Knee injury and Osteoarthritis Outcome Score for pain (0-100, with higher numbers correlating with less pain); SF-36, 36-item Short Form Health Survey for physical activity (0-100, with higher score indicating greater physical activity); WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index physical-function score (0-100, with higher scores indicating more severe symptoms).

and 6 months ($P < .001$).

The authors concluded that both groups improved significantly from initial evaluation

regardless of treatment method and that no statistically significant difference existed between treatment results. **JFP**

References

1. Katz JN, Brophy RH, Chaisson CE, et al. Surgery versus physical therapy for a meniscal tear and osteoarthritis. *N Engl J Med.* 2013;368:1675-1684.

2. Herrlin S, Hallander M, Wange P, et al. Arthroscopic or conservative treatment of degenerative medial meniscal tears: a prospective randomised trial. *Knee Surg Sports Traumatol Arthrosc.* 2007;15:393-401.

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