

Specific Question:

Does the addition of a knee brace, restricting range of movement, provide improved outcomes compared to rehabilitation alone in meniscal repairs?

Clinical bottom line

There was one small randomised control trial to answer the question posed.

As a result of this we are not able to argue in support or against the use of knee braces to restrict range of knee movement as part of the rehabilitation of meniscal repairs post-operatively. We shall therefore continue to follow the post-operative instructions given by each Orthopaedic surgeon in the medical notes for this group of patients.

Why is this important?

Anecdotally, variation exists in the post-operative care of patients undergoing meniscal repair surgery. Currently, this depends on the individual orthopaedic surgeon managing their care.

The preferred option of agreed care pathways to ensure consistent and evidenced based care for patients would be the gold standard. It is therefore important to explore the research to inform clinical care.

There is no beneficial outcome as we don't have any evidence and the cost effectiveness of the using the knee brace is still unknown, so we are unable to comment if it is an unnecessary cost.

Getting Evidence into Clinical Practice:
Musculoskeletal Research Facilitation Group (CAT Group)
Date: March 2017

Search timeframe (e.g. 2006-2016)
5 years 2011 to 2016

Inclusion Criteria

	Description	Search terms (In the final document this should be a combination of your clinical and librarian search terms)
Population and Setting Adults undergoing meniscal repairs of the knee in the acute setting.		exp MENISCAL INJURIES. OR ; *MENISCAL INJURIES SURGERY OR ("meniscal tears" OR menisc*) or exp KNEE INJURIES/
Intervention or Exposure Knee braces restricting range of movement		AND exp ORTHOSES or (brac* OR braces or orthoses)
Comparison, if any Usual care rehabilitation		
Outcomes of interest Return to work, return to sport, Quality of life		AND exp QUALITY OF LIFE OR PATIENT SATISFACTION OR exp JOB RE-ENTRY/ OR exp SPORTS RE-ENTRY OR ("quality of life" OR return adj4 work. OR (return adj4 sport).
Types of studies Randomised Controlled Trials, Systematic reviews		

Routine Databases Searched

Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discuss and Pub med

Date of search- 14th November 2016

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Results of the search

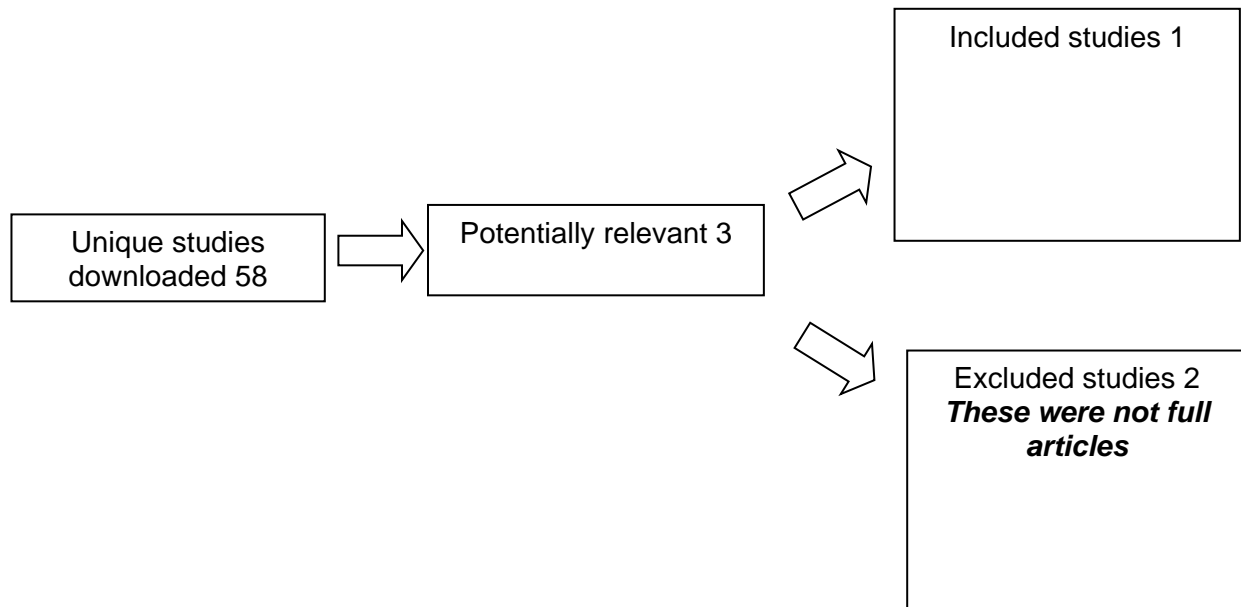


Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
<i>Lind M, 2013 RCT</i>	<i>Young adults with isolated meniscus injury suitable for repair. Post-surgical repair.</i> <i>Division of Sports Trauma, University Hospital of Aarhus, Denmark.</i>	<i>Restricted rehabilitation. Using a knee brace to restrict knee flexion: 0' to 90' over a 6 week period. With progression from none weight bearing to full at 5 weeks</i>	<i>60 patients randomised into free rehabilitation (32) and restricted rehabilitation (28)</i> <i>There was a significant increase in KOOS scores between baseline and 1 year and 2 years follow up, but no significant difference between groups.</i> <i>Tegner showed a significant improvement at 1 year follow up but no</i>	<i>Low numbers of sample size however a statistical power calculation was performed and numbers were met.</i> <i>The study was not based in an NHS setting in the UK. Blinding impossible for the treating physiotherapists.</i>

			<p>significant difference between groups.</p> <p>Follow ups at 1 and 2 years.</p> <p>At 1 year there was a higher rate of none healing in the restricted group; similar numbers at 2 years</p> <p>No significant differences between the 2 groups</p>	<p>Differing meniscal tear sites and surgical procedures; not including larger tears.</p> <p>No detail was provided around the content of the physiotherapy programme.</p>
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Summary

One RTC was found that addressed the question. Lind *et al.* (2013) investigated the optimal programme of rehabilitation for post meniscal repair in adults aged 18-50 years old. Isolated meniscal injuries were included only. Outcome measures used were the validated knee osteoarthritis outcome score (KOOS) and the Lysholm Tegner function score. Patient satisfaction was also gathered but not reported on. Results showed a significant increase in KOOS and Tegner function scores, but no significant difference between groups. The free rehabilitation programme did not demonstrate higher failure rates therefore equal outcomes can be achieved with both methods. However, it should be noted that this only applies to smaller meniscal tears. Furthermore, it should also be considered that this trial was carried out in Denmark, therefore lacks external validity.

Implications for Practice/research

At present there are clinical inconsistencies amongst the surgeons some including knee braces and others not as part of the post- operative rehabilitation plan. At two year follow up there was no significant difference between patients managed with a knee brace to those not. Further research is required for patients with larger meniscal tears and preferably multicentre trials within the UK to consolidate the evidence for the wider population and provide more robust evidence.

It should also be consider that isolated meniscal tears are rare and more commonly associated with other significant ligament injuries that also require intervention such as ACL reconstruction. Therefore research reflective of clinical practice needs to be investigated.

What would you tweet? (140 characters)

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Limited evidence shows no brace is as effective as bracing in post-operative meniscal repair rehabilitation.

References

Lind M et al. Free rehabilitation is safe after isolated meniscus repair. A prospective randomised trial with restricted rehabilitation regimes. *The American Journal of Sports Medicine*. 2013; 41 (12): 2753 – 2758