



@physicaltherapyresearch

RAPID RESEARCH

November 2022

Inside This Week: Meniscus Injury: Should You Suggest Surgery or Rehab?

- ✓ Rate of Meniscus Repair Failure
- ✓ Partial Meniscectomy vs. Physical Therapy: Degenerative Tears
- ✓ Meniscus Repair Surgery Healing Rates



RATE OF MENISCUS REPAIR FAILURE

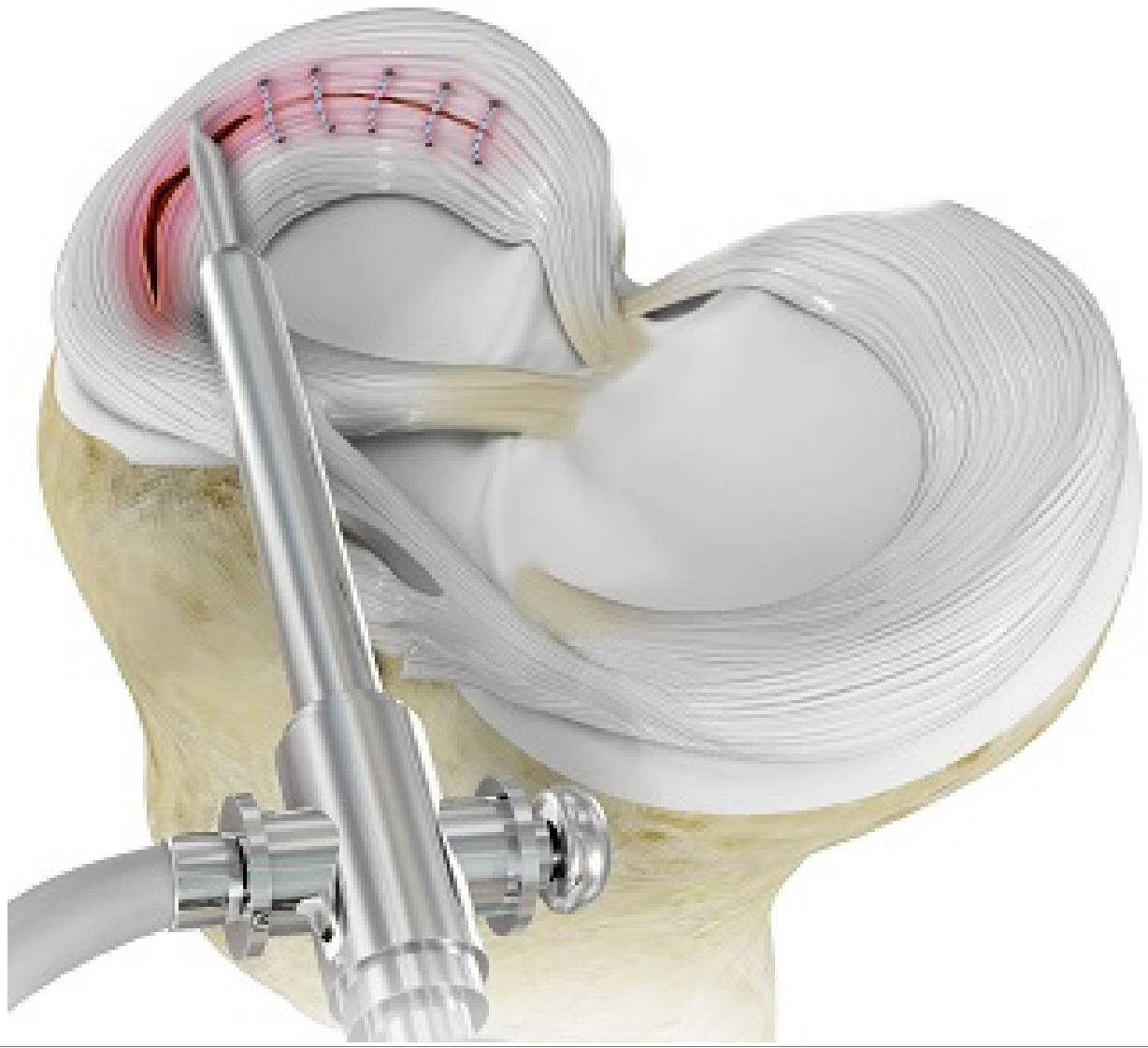
NOVEMBER 2022

[Click for Full Text
\(Schweizer et al. 2022\)](#)

JBIR 10/11 [90%]



This systematic review evaluated the overall failure rate of meniscus repair with a minimum follow-up of 5 years. Additionally, possible factors influencing meniscus repair outcome were assessed.



KEY FINDINGS

12 studies included, totaling 864 patients

*Revision surgery was used as failure definition in all included studies.

Overall failure rate:

Average of 86 months

Failure rate = 19.1%.

No significant difference of meniscus repair failure rates:

In combination with ACL reconstruction vs. isolated meniscus repair.

Lateral meniscus compared to the medial meniscus (19.5% vs. 24.4%).

Vertical/longitudinal tears vs bucket-handle tears.

36% of meniscus repair failures occur after the 2nd post-operative year.

Significant difference of meniscus repair failure rate:

Inside-out repair vs. all-inside repair (5.6% vs. 22.3%) at 5 years.

MAIN TAKEAWAYS

Overall meniscus repair failure rate of 19.1%

36% of failures occur after the second postoperative year.

A significantly better meniscus repair outcome could be demonstrated for the inside-out repair technique compared to all-inside repair.

The cause of failure is poorly documented, and it remains unclear whether failure of the meniscus repair itself or additional adjacent tears lead to revision surgery.

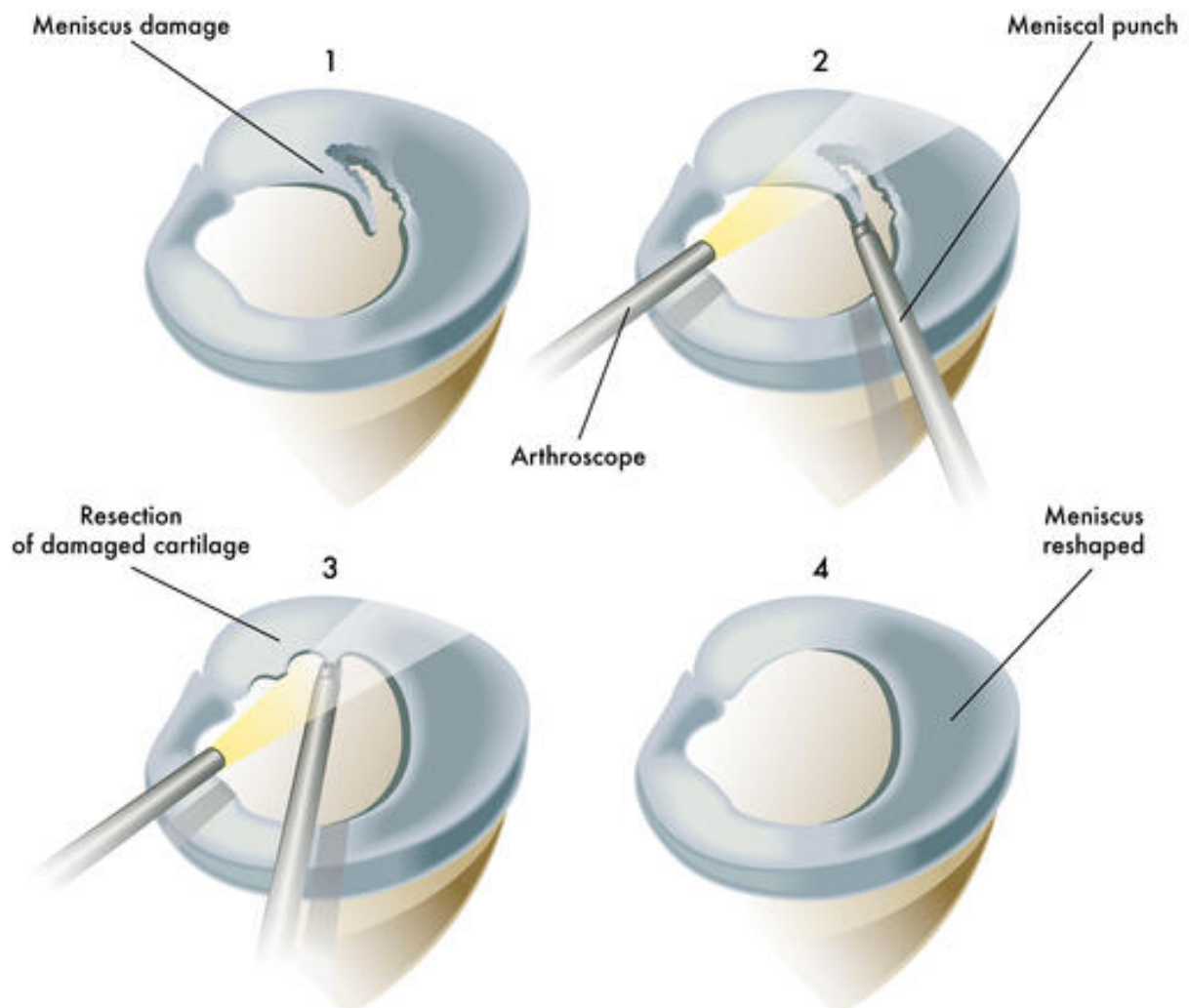
PARTIAL MENISCECTOMY VS. PHYSICAL THERAPY: DEGENERATIVE TEARS

[Click for Full Text \(Li et al. 2020\)](#)

JBIR 10/11 [90%]



This systematic review compared the effectiveness of arthroscopic partial meniscectomy (APM) and physical therapy (PT) for degenerative meniscus tears



KEY FINDINGS

6 Randomized Controlled Trials; Including 1006 Patients

[495] Arthroscopic Partial Meniscectomy (APM) group
[511] Physical Therapy (PT) group.

Functional outcomes:

Small benefit in the APM group until the 12 months follow-up time point.
No significant differences in function between groups at 24-months

Pain:

Small benefit in the APM group until the 12 months
No significant difference in pain between groups at 24 months

Other Outcomes:

General Health - Significantly better in APM group
Cross-over - 26% of PT group ultimately underwent APM.

MAIN TAKEAWAYS

Small but statistically significant effect favoring APM over PT for physical function and pain outcomes up to the 12-month follow-up time point.

However, APM and physical therapy yielded comparable results at the 24-month follow-up time point.

26% of patients in the PT group underwent APM.

Overall, adverse events were similar.

MENISCUS REPAIR SURGERY HEALING RATES

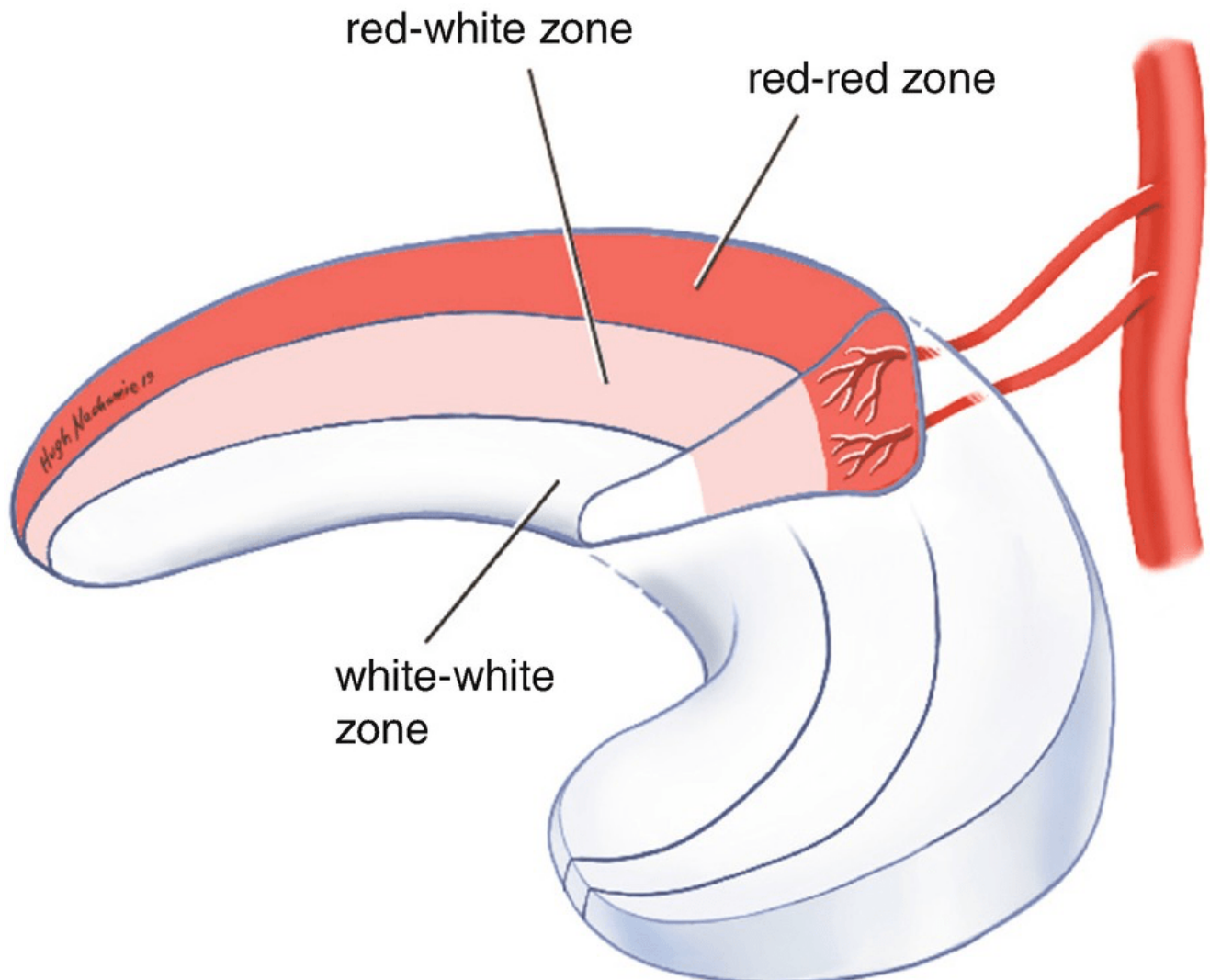
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[Click for Full Text
\(Dai et al. 2021\)](#)

JBI 11/11 [100%]



This systematic review identified the healing rates after arthroscopic repair of meniscal tears via second-look arthroscopic evaluation.



KEY FINDINGS

WEEK 1: NOVEMBER 2022

41 Studies Included; 1,908 patients

Complete Healing Rate:

74% (67%-80%)

Partial Healing Rate:

10% (6%-16%)

Failure Rate:

12% (10%-15%).

Higher Meniscal Healing Rates in Patients With:

Age <40 years, Male, Body mass index <26, Red-Red Tear Location
Posterior Horn Tear, Vertical Tear, Outside-in Technique, Repair with ACL,
Weight-restricted Rehab, and Time interval >12 months.

MAIN TAKEAWAYS

No individual study affected the overall healing rate by >1%.

Healing rates were better after 1 year.

Overall, 74% healed and 12% failed.

Characteristics identified, which improve healing rates, should be considered when informing clinical recommendations for successful surgical outcomes.

GIVE US YOUR FEEDBACK!

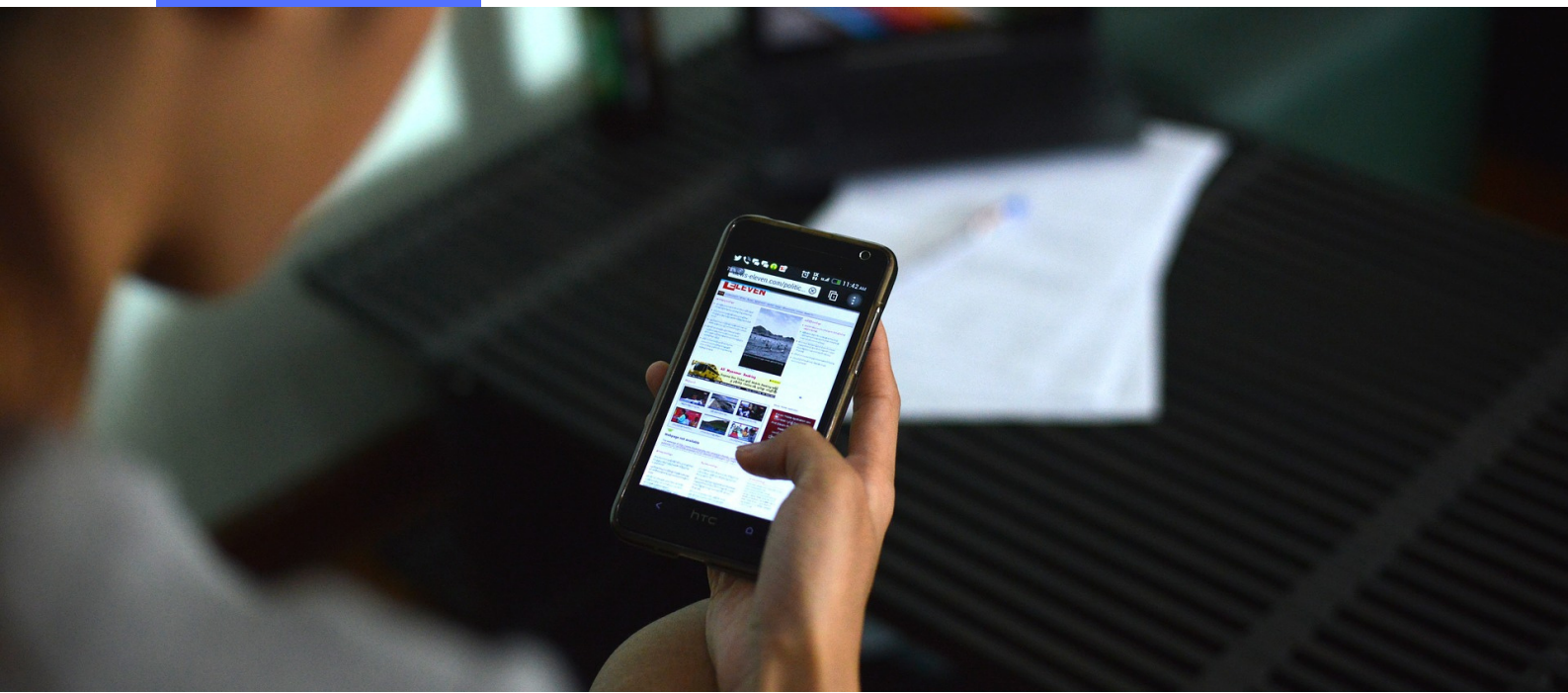
MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

[Leave Review](#)



JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Schweizer et al Year: 2022

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the likelihood of publication bias assessed?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: 10/11 (90%)

Comments:

Overall, this was a well conducted study, which used quality evidence to find failure rates of meniscus repair surgeries within a 5 year timeframe. The majority of failures happen in year 0-2 post-operatively. This may better inform clinical practice and giving caution to patients for up to 2 years on their meniscus repair. Further questions may include any post-operative rehab performed for patients with a failed repair vs not.

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Li et al Year: 2020

	Yes	No	Unclear	Not applicable
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11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: 10/11 (90%)

Comments:

Overall, this was a quality study and assessed the difference in pain and function between surgical repair and PT. The overall bias was low and the data interpreted appropriately to show results. A useful impact showing similar outcomes from surgery at 2 years vs PT.

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Dai et al Year: 2021

	Yes	No	Unclear	Not applicable
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Overall appraisal: 11/11 (100%)

Comments:

Overall, this study included moderate to high quality evidence and effectively found healing rates via secondary arthroscopic investigation. The findings show similar rates to previous studies on overall effectiveness of repair surgery and failure rates. A big takeaway were the characteristics which tended to improve healing rates. These should be considered when clinically recommending a surgical route for meniscus injury.