# RAPID RESEARCH


@physicaltherapyresearch

**October 2022**

## Inside This Week:

## Joint Traction Treatment Effectiveness

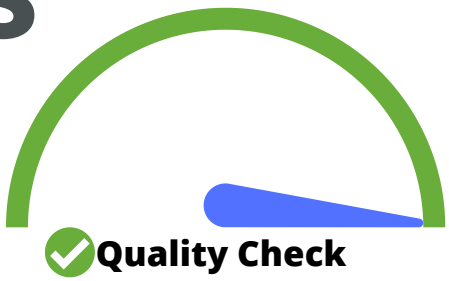
- Joint Distraction to Treat Osteoarthritis
- MWM Joint Treatment for Lateral Ankle Sprains
- Joint Mobilization for Chronic Ankle Sprain

# JOINT DISTRACTION TO TREAT OSTEOARTHRITIS

OCTOBER 2022

Click for Full Text (Jansen et al. 2021)

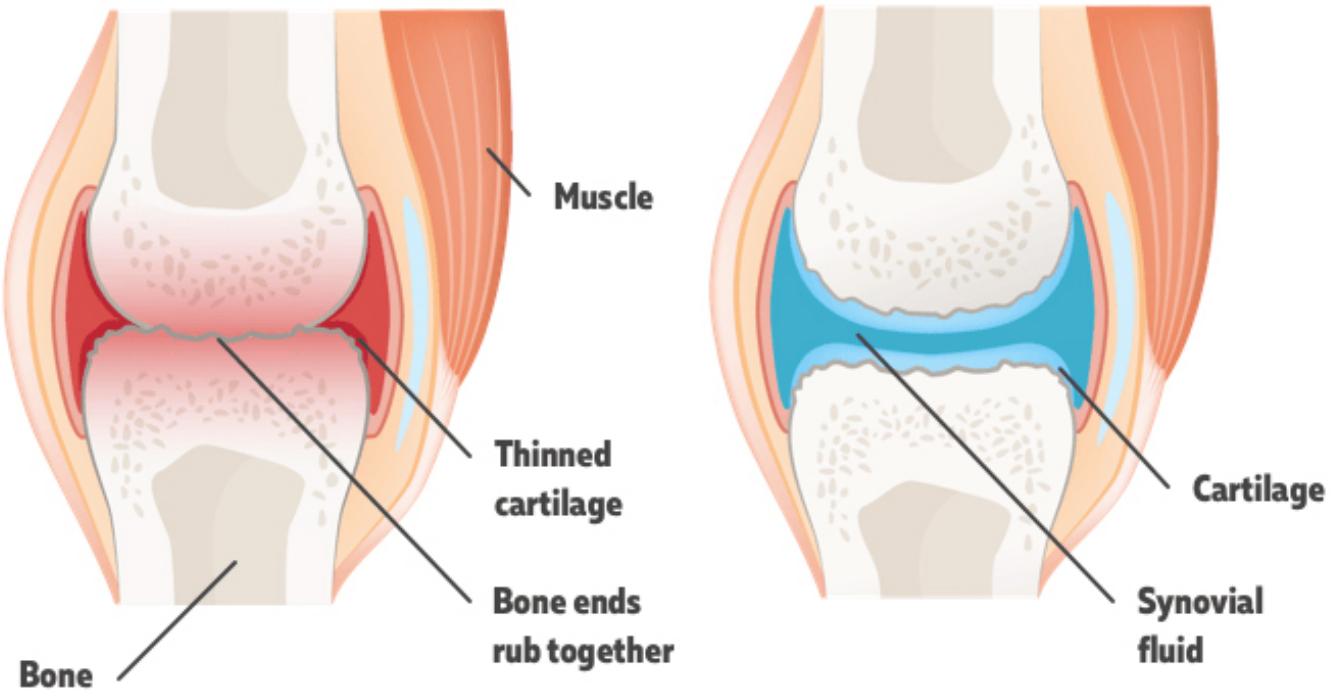
JBI 11/11 [100%]



Quality Check

*see appx

This systematic review and meta-analysis evaluated short- and long-term clinical benefit and tissue structure changes after Knee Joint Distraction (KJD) treatment for knee Osteoarthritis (OA)



# KEY FINDINGS

**11 studies included, totaling 127 patients, 5 control groups, 2 RCTs**

WOMAC | VAS-pain | WOMAC sub-scales:
All significantly increased compared with pre-treatment at all time points (between 5-9 years)

KOOS | EQ5D | KOOS sub-scales:
All significantly increased up to 2 years.

MRI cartilage thickness:
After 1 year & 2 years, there was a statistically significant increase compared to pretreatment, but after 5 years, the increase was no longer significant.

# MAIN TAKEAWAYS

Significant improvements in all primary parameters were found and benefit lasted up to at least 9 years.

Overall, this review shows that KJD induces cartilaginous tissue regeneration and clinical improvement on short- and intermediate long-term.

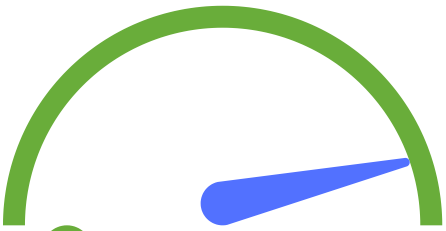
It is shown that prolonged treatment effect results in 75% of patients after 5 years and half of patients after 9 years still not undergoing TKA.

# MWM JOINT TREATMENT FOR LATERAL ANKLE SPRAINS

OCTOBER 2022

**Click for Full Text (Weerasekara et al. 2020)**

**JBI 10/11 [90%]**



**Quality Check**
*see appx

This systematic review investigated the evidence for the effectiveness of Mobilization With Movement (MWM) in isolation for ankle sprains

# KEY FINDINGS

**6 studies included; 208 participants**

Outcomes:
ROM, Balance, Pain

Weight-bearing MWM:
Dorsiflexion ROM: Significant immediate improvements

Balance:
Insufficient data to permit analysis for evaluation of immediate or short-term benefits of MWM

Pain:
Insufficient data to permit analysis for evaluation of immediate or short-term benefits of MWM

# MAIN TAKEAWAYS

**Weight-bearing MWM appears to clinically benefit individuals with chronic ankle sprains, improving weight-bearing DF-ROM immediately.**

**Effectiveness of MWM on other clinical outcomes was unable to be evaluated due to insufficient data and research on them.**

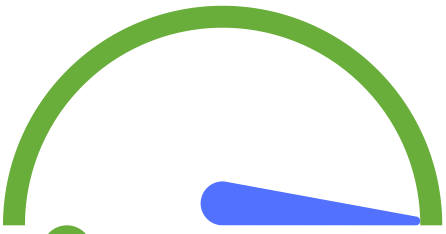
**MWM can help improve range of motion in the ankle, following ASI.**

# JOINT MOBILIZATION FOR CHRONIC ANKLE SPRAIN

OCTOBER 2022

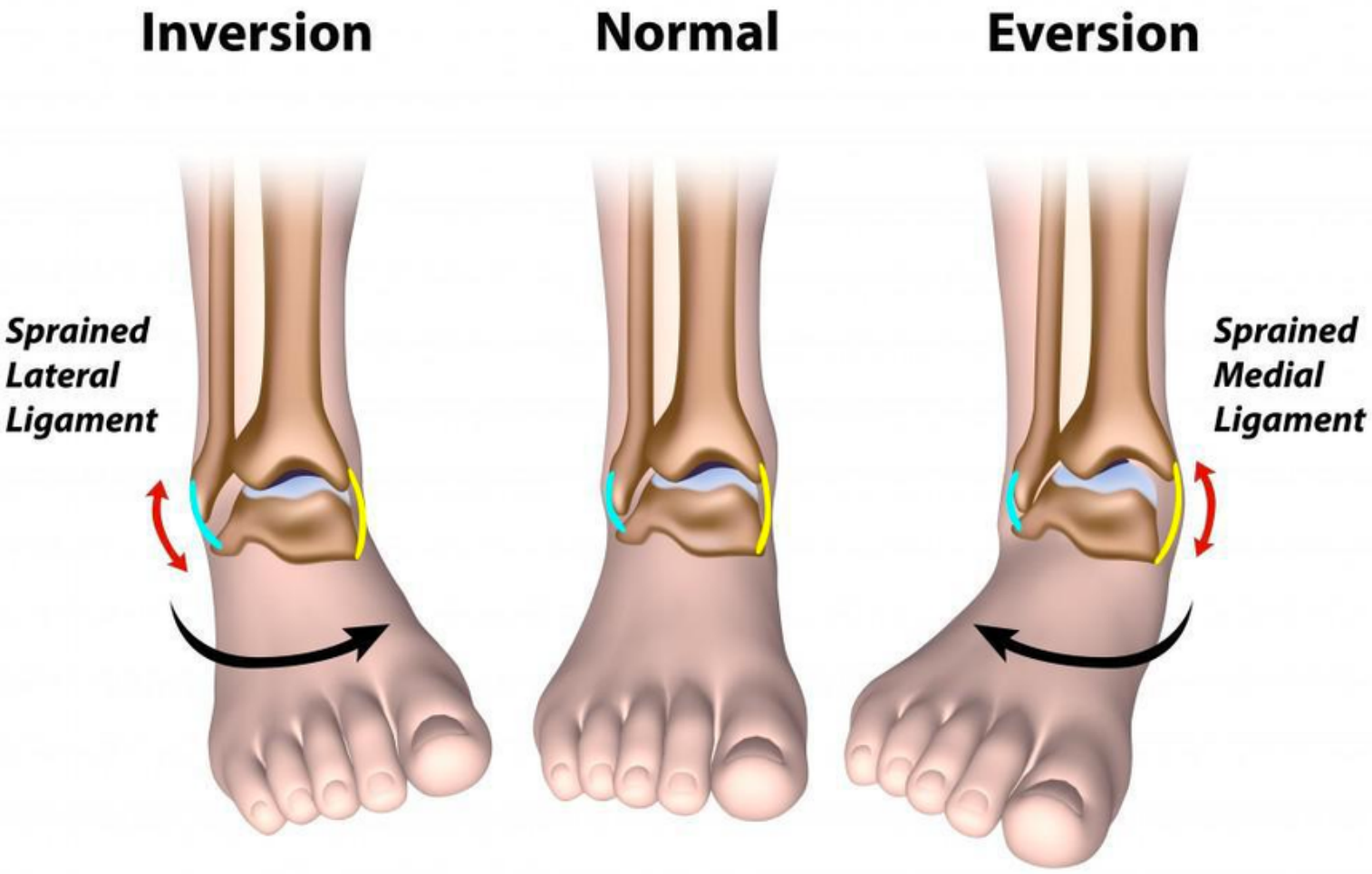
Click for Full Text (Kim & Moon 2022)

JBI 11/11 [100%]



Quality Check
*see appx

This systematic review evaluated randomized controlled trials (RCTs), and synthesized the data to investigate the effect of Joint Mobilization (JM) on individuals with Chronic Ankle Instability (CAI).



# KEY FINDINGS

**9 studies included; 364 participants**

Interventions included JM and its sub-techniques (manipulations, non-weight-bearing and weight-bearing mobilization) in manual therapy.

Joint Mobilization for Range of Movement:
Significant improvement overall.

Joint Mobilization for Dynamic Balance:
Significant improvements for both voluntary and in-voluntary movements.

Joint Mobilization for Function:
No significant improvement in function (patient-oriented outcomes).

# MAIN TAKEAWAYS

For individuals with chronic ankle instability, joint mobilization has a limited function (patient-oriented outcome).

However, has positive benefits in the immediate effects on dorsiflexion and dynamic balance without any difference in voluntary movement with or without.

# GIVE US YOUR FEEDBACK!

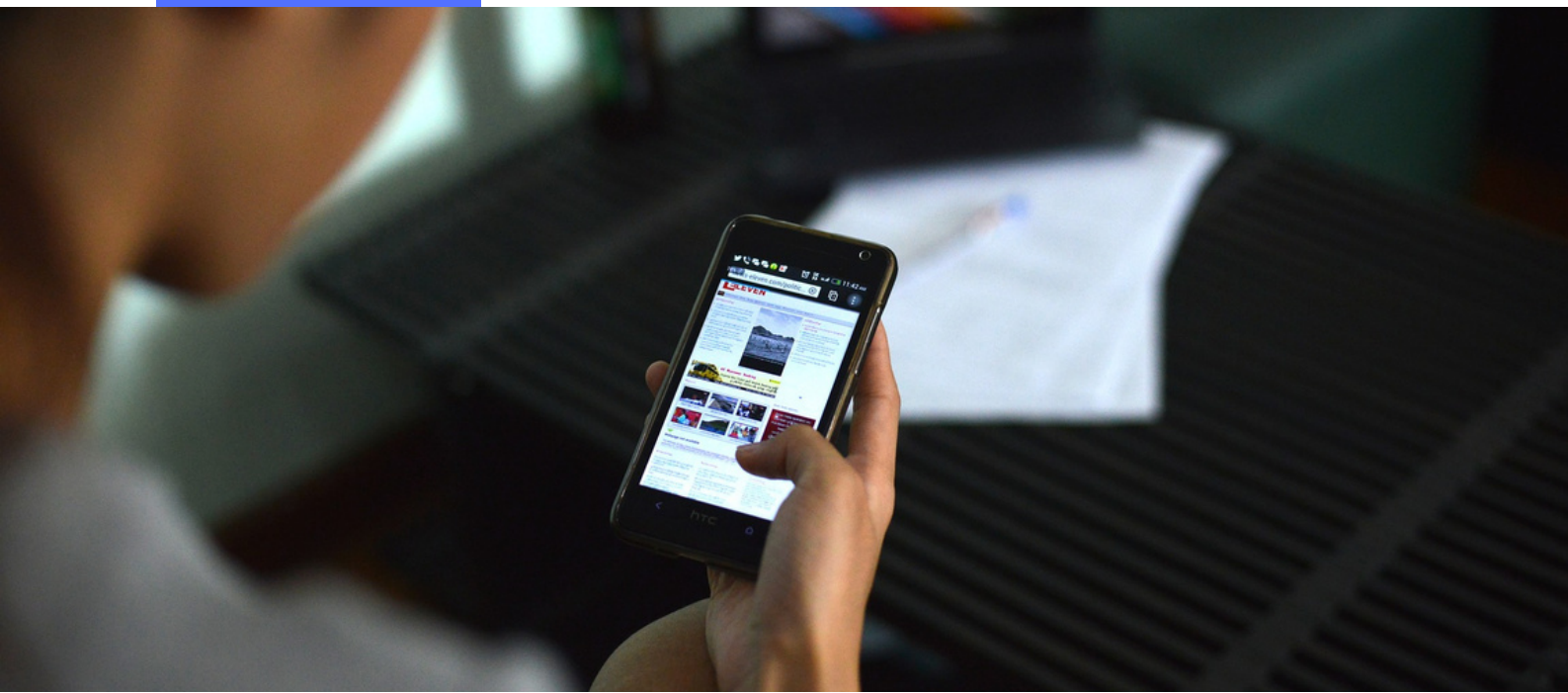
MEMBERS

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 syntheses

Author: Jansen et al. Year: 2021

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

### Overall appraisal: 11/11 (100%)

Comments:

Overall, this study found very promising results for knee traction as an alternative treatment to TKA, however the procedure is still very invasive and creates a 6-week immobilization period for the patient. With the positive outcomes, further studies would be beneficial to investigate traction techniques which are non invasive.

# JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Weerasekara et al. Year: 2020

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

## Overall appraisal: 10/11 (90%)

Comments:

Overall, this article looked at very specific research investigating MWM for lateral ankle sprain outcomes. The research showed improved ROM, however not enough data was present to analyze pain or balance outcomes. For lateral ankle sprains, MWM can be an effective part of a plan to regain full function, by opening up potential joint movement. FUrther research should look at long-term outcomes, especially when combined with end-of-range loading.

# JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Kim and Moon Year: 2022

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

## Overall appraisal: 11/11 (100%)

Comments:

Overall, this was a well done systematic review and analyzed different effects of mobilization on ankle joints. The results were promising and show a positive effect, which should be followed up with other treatment factors to improve long-term effects. More research should follow-up on these effective techniques, then coupled with an exercise basis and long-term outcomes.