RAPID RESEARCH

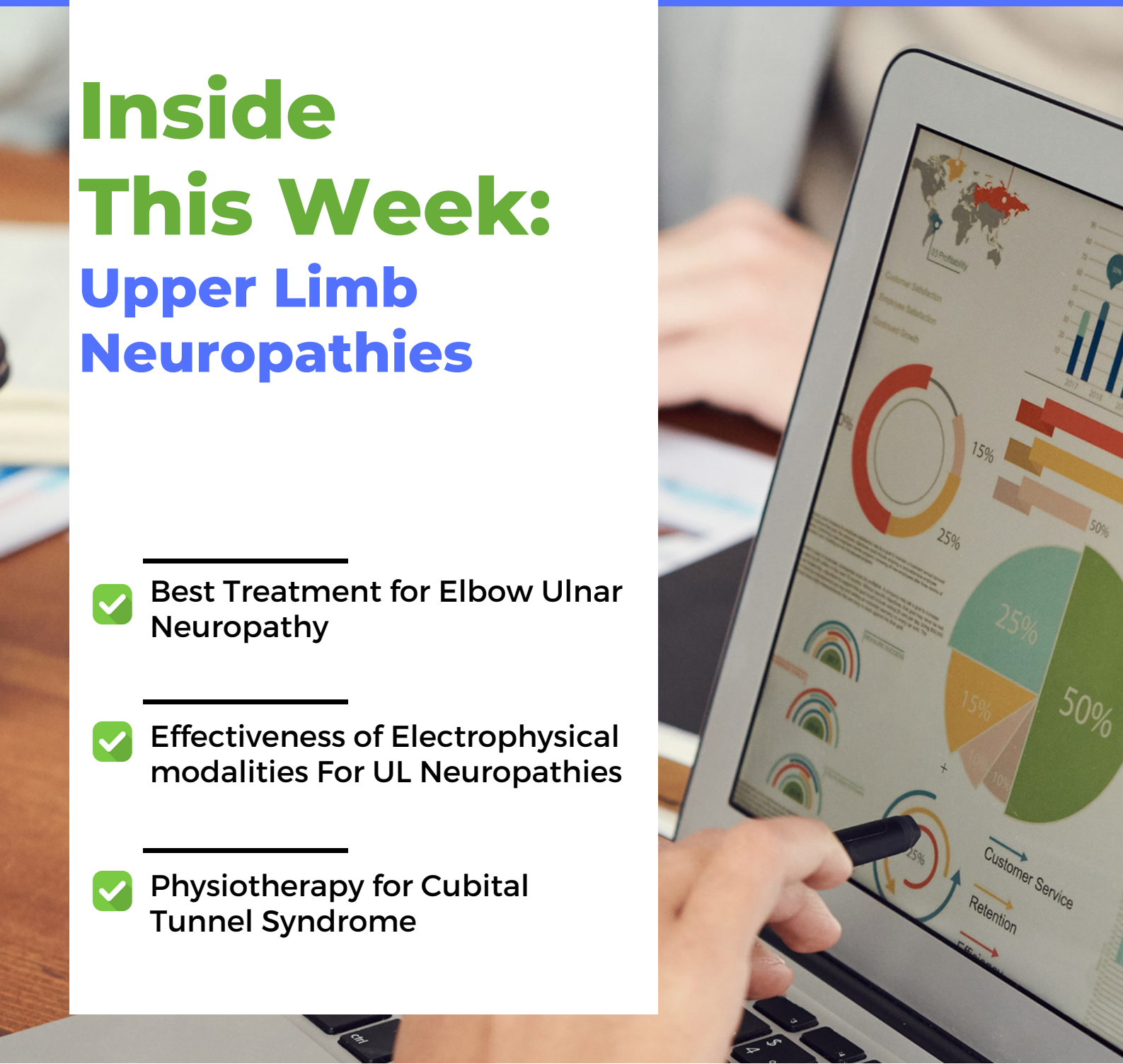
@physicaltherapyresearch

March 2023

Inside This Week:

Upper Limb Neuropathies

- Best Treatment for Elbow Ulnar Neuropathy
- Effectiveness of Electrophysical modalities For UL Neuropathies
- Physiotherapy for Cubital Tunnel Syndrome

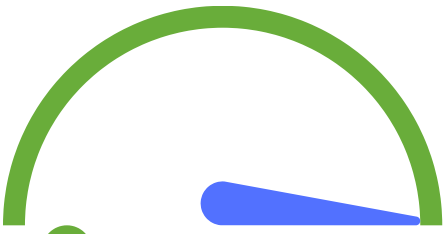


BEST TREATMENT FOR ELBOW ULNAR NEUROPATHY

MARCH 2023

Click for Full Text (Caliandro et al. 2016)

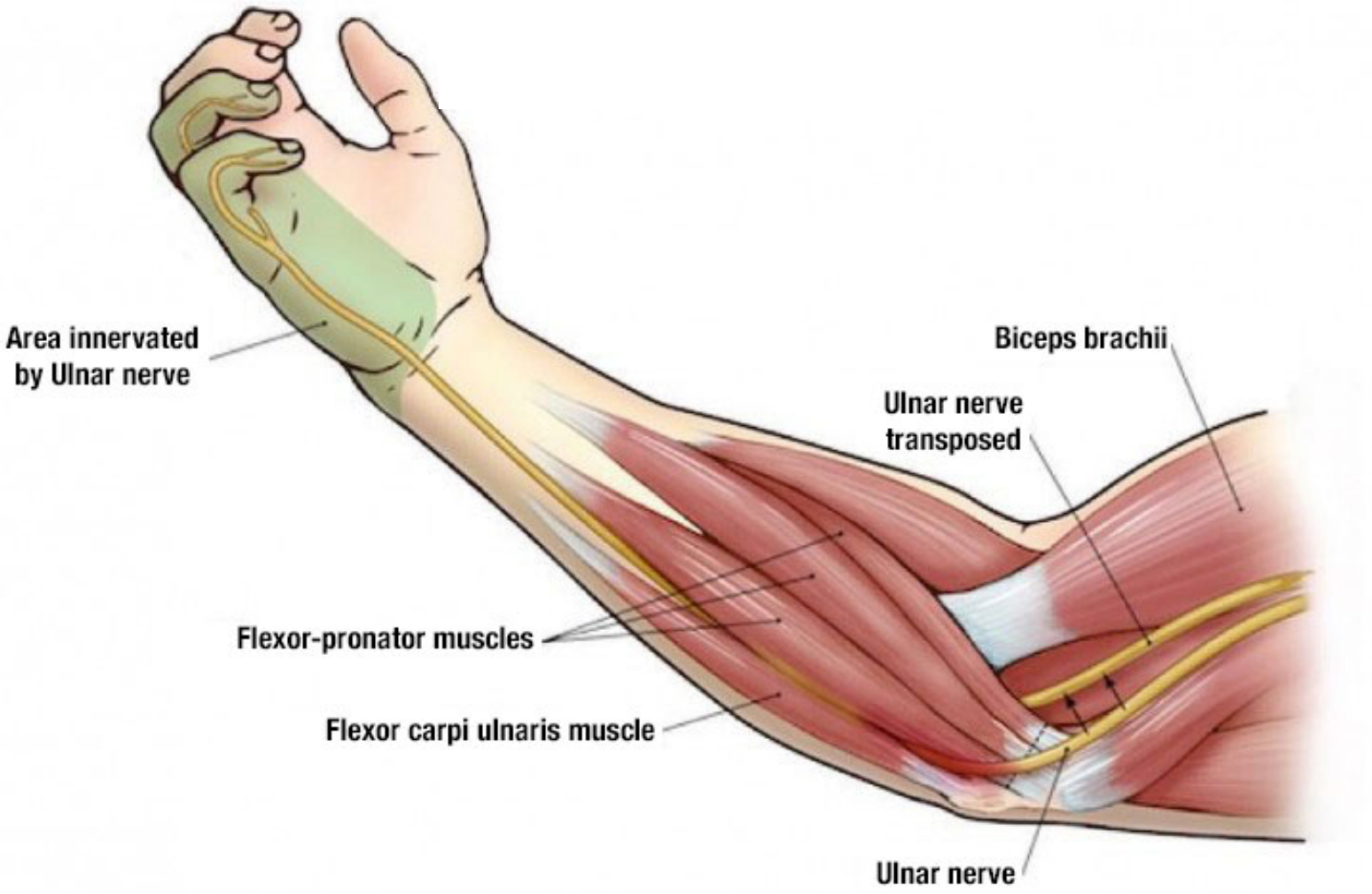
JBI 11/11 [100%]



Quality Check

*see appx

This systematic review determined the effectiveness and safety of conservative and surgical treatment in ulnar neuropathy at the elbow (UNE).



KEY FINDINGS

9 RCT's, 587 participants

SURGICAL TREATMENT FINDINGS:

No difference between simple decompression and transposition of the ulnar nerve for clinical improvement or neurophysiological improvement.

- Simple decompression (91/131 improved)
- Transposition group (97/130 improved). **Higher number of wound infections*

Of all surgical techniques compared, no significant differences were found.

CONSERVATIVE TREATMENT FINDINGS:

**Low-quality evidence*

Avoiding prolonged movements or positions: Improved subjective discomfort.
Night splinting & nerve gliding exercises + education: No further improvement.
Corticosteroid injection vs placebo: No effective improvement at 3 mo follow-up.

MAIN TAKEAWAYS

The available evidence is insufficient to identify the best treatment for idiopathic ulnar neuropathy at the elbow.

We do not know when to treat a person with UNE conservatively or surgically.

Moderate quality evidence suggests that simple decompression and decompression with transposition are equally effective.

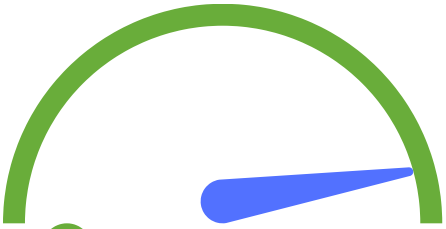
In mild cases, providing information on movements or positions to avoid may reduce subjective discomfort.

EFFECTIVENESS OF ELECTROPHYSICAL MODALITIES FOR UL NEUROPATHIES

MARCH 2023

Click for Full Text (Buyla-Oyles et al. 2021)

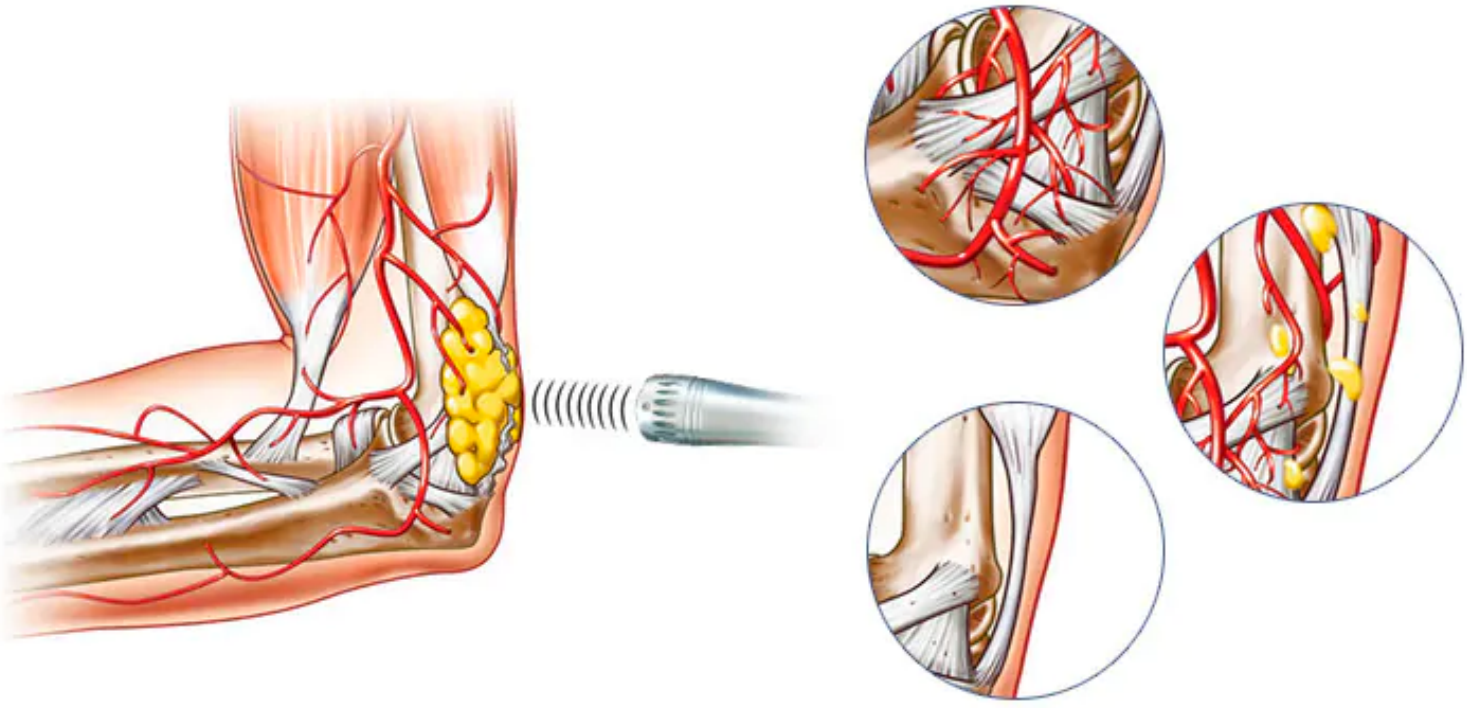
JBI 11/11 [100%]



Quality Check

*see appx

This review provided a comprehensive overview of electrophysical therapies' performance in sensorimotor rehabilitation of ulnar, radial, and median neuropathies compared to placebo, physical therapy, or between them.



KEY FINDINGS

38 studies were included;

The overall quality of evidence was rated as low or very low according.

Low-level laser therapy & Ultrasound vs. Manual Therapy

Showed favorable results in improving symptom severity and functional status.

Improvements in pinch strength and pain levels.

Splints:

Showed superior results to electrophysical modalities.

MAIN TAKEAWAYS

Favorable results for pain relief, improvement of symptoms, functional status, and neurophysiological parameters for some electrophysical modalities

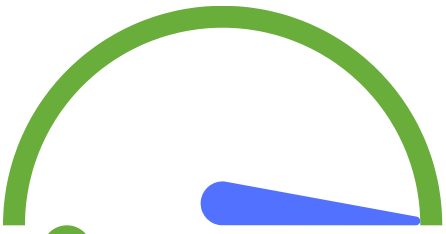
Results found mainly when applied with a splint.

PHYSIOTHERAPY FOR CUBITAL TUNNEL SYNDROME

MARCH 2023

Click for Full Text (Wolny et al. 2022)

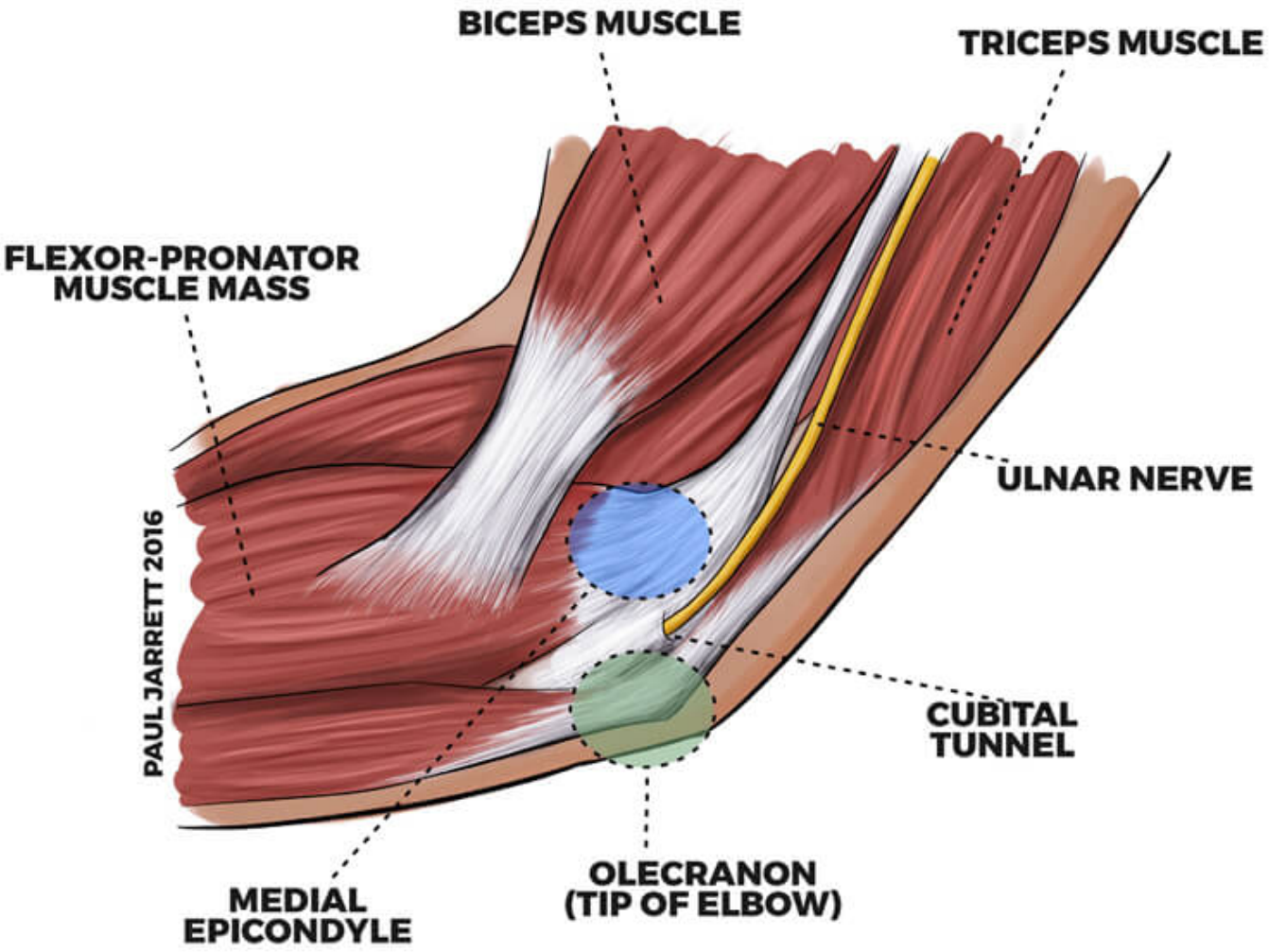
JBI 10/11 [90%]



Quality Check

*see appx

This systematic review aimed to evaluate the effectiveness of physiotherapy treatment for CuTS.



KEY FINDINGS

11 articles included; 187 participants

Main Outcomes:
Pain, Muscle strength, Pinch-grip & Limitation of upper limb function.

Physiotherapy Treatments:
Manual therapy, Neurodynamic techniques, Electrical modalities.

66% of trials showed statistically significant beneficial effects immediately and over the long term.

91% of trials included showed statistically significant beneficial effects in the short and medium term.

Only one clinical trial showed no therapeutic effect.

MAIN TAKEAWAYS

A wide range of therapeutic interventiosn were utilized across all studies.

There is no possibility of recommending the best method of physiotherapy in clinical practice for people with CuTS based on the results of this systematic review.

Most conservative treatement strategies were beneficial to some degree.

GIVE US YOUR FEEDBACK!

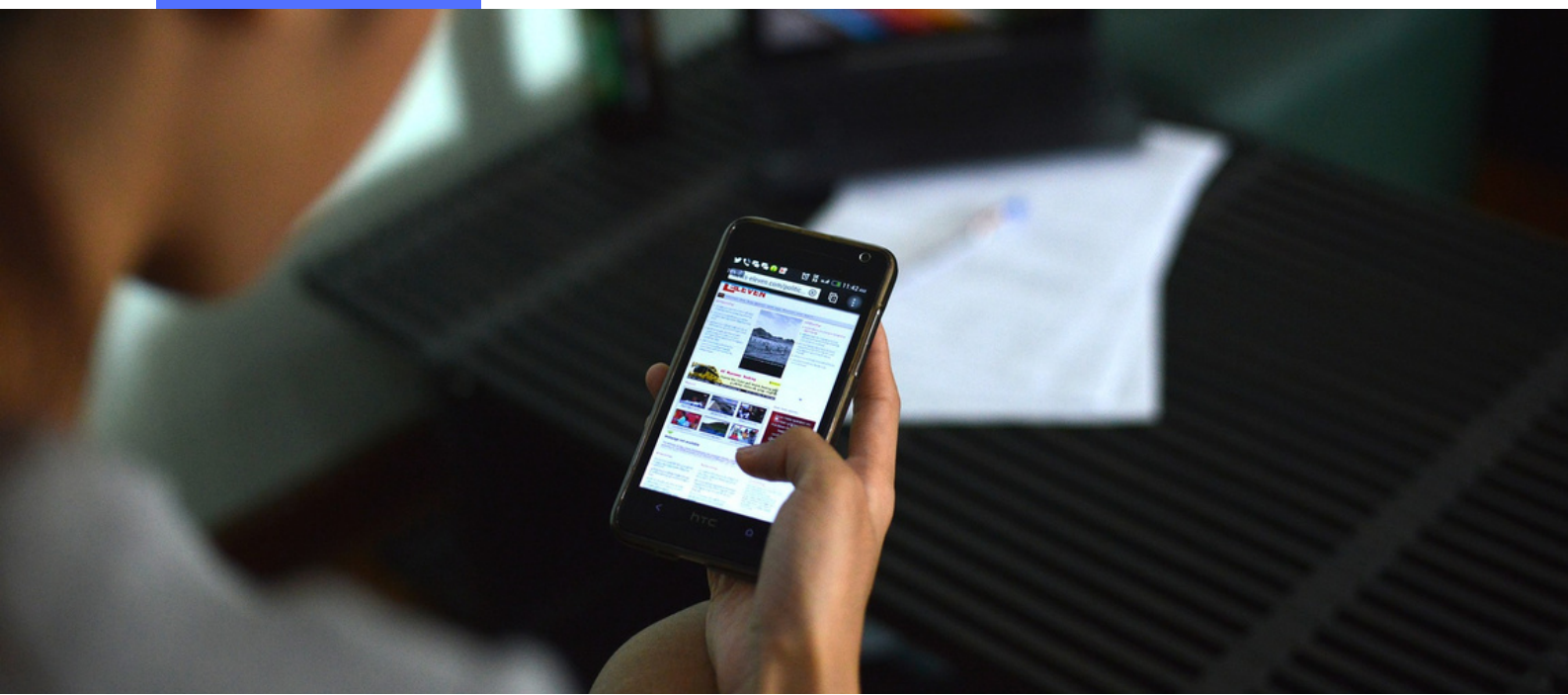
MEMBERS

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: Caliandro et al. Year: 2016

		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%)

LIMITATIONS:

Only 2 RCTs were available on the effectiveness of conservative treatments.

No RCT compared a surgically treated UNE group and an untreated or conservatively treated group.

JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Bula-Oyola 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%)

LIMITATIONS:

Scarce availability of studies evaluating traumatic peripheral neuropathies.

Did not include studies published in a language other than English.

JBI Critical Appraisal Checklist for systematic reviews and research syntheses

Author: Wolny et al. 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?	☐	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%)

LIMITATIONS:

The number of papers included in the review was small, and only three RCTs were identified.

The sample size was small, with only 186 subjects.

Some of the papers lacked clinical information about the patients' condition and severity of CuTS, which may have also affected the obtained results.