**Article Full Title**

Physiotherapy treatment of lateral epicondylitis: A systematic review

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**Paper Abstract**

BACKGROUND: Lateral epicondylitis is a tendinopathy with a prevalence of between 1–3% of the population aged 35–54 years. It is a pathology with a favorable evolution, but with frequent recurrences (which imply an economic extra cost). OBJECTIVE: The objective of this review was to determine the efficacy of physiotherapy treatment for the treatment of epicondylitis and, if any, to identify the most appropriate techniques. METHODS: A systematic search was carried out in October 2020 in the databases of PubMed, Cinahl, Scopus, Medline and Web of Science using the search terms: Physical therapy modalities, Physical and rehabilitation medicine, Rehabilitation, Tennis elbow and Elbow tendinopathy. RESULTS: Nineteen articles were found, of which seven applied shock waves, three applied orthoses, three applied different manual therapy techniques, two applied some kind of bandage, one applied therapeutic exercise, one applied diacutaneous fibrolysis, one applied high intensity laser, and one applied vibration. CONCLUSIONS: Manual therapy and eccentric strength training are the two physiotherapeutic treatment methods that have the greatest beneficial effects, and, furthermore, their cost-benefit ratio is very favorable. Its complementation with other techniques, such as shock waves, bandages or Kinesio® taping, among others, facilitates the achievement of therapeutic objectives, but entails an added cost.

**NIH Risk of Bias Tool**

Quality Assessment of Systematic Reviews and Meta-Analyses

1. **Is the review based on a focused question that is adequately formulated and described?**

Yes

1. **Were eligibility criteria for included and excluded studies predefined and specified?**

Yes

1. **Did the literature search strategy use a comprehensive, systematic approach?**

Yes

1. **Were titles, abstracts, and full-text articles dually and independently reviewed for inclusion and exclusion to minimize bias?**

Yes

1. **Was the quality of each included study rated independently by two or more reviewers using a standard method to appraise its internal validity?**
2. **Were the included studies listed along with important characteristics and results of each study?**

Yes

1. **Was publication bias assessed?**

Yes

1. **Was heterogeneity assessed? (This question applies only to meta-analyses.)**

Cannot Determine, Not Reported, Not Applicable

**Key Finding #1**

The systematic review suggest that manual therapy and eccentric strength training were the most beneficial to treating LE as well possessed the best cost-benefit ratio.

**Key Finding #2**

A manual therapy (MT) study performed deep friction massage and corticosteroid injection and compared them to a control of wrist splint and a daily protocol of PT. It found that after MT pain intensity, grip strength, and functionally improved significantly whereas the group with a splint and a PT protocol did not.

**Key Finding #3**

Another study looked at corticosteroids in combination and comparison with a PT intervention that included MT techniques such as deep transverse friction massage at the origin of the tendon, Mill’s manipulation, and wrist stretching exercises. It found that the PT group had significant progressive improvement in all variables, at 3, 6, and 12 months. In the corticosteroid group they had a better improvement percentage at 6 months compared to subsequent evaluations. After 12 months both groups did not possess a statistical difference.

**Key Finding #4**

**Please provide your summary of the paper**

The systematic review compared the benefits of a variety of different interventions for the diagnosis of lateral epicondylitis (LE). They found that many provide a benefit for the patient to avoid surgery. It explained the general treatment progression for this disorder as generic pain relievers combined with rest, but that they often failed further prevention and relapses. Surgical interventions were considered with 80-97% gaining immediate pain relief. To avoid needless surgery the review found interventions that relieved pain and prevented relapses. They gave a precursor that tendinopathies improve with strengthening the affected area and LE is no different. The interventions they reviewed included shock wave, platelet rich plasma, conventional physiotherapy techniques, manual therapy, US, orthosis and taping, and laser. There were strong findings in many areas observed in the studies and highlights the benefits of PT intervention for the use in overcoming LE.

**Please provide your clinical interpretation of this paper. Include how this study may impact clinical practice and how the results can be implemented.**

As patients look to relieve themselves of pain and discomfort, we seek to provide them with the best outcomes with minimal impact on daily function and quality of life. Before surgery should be considered patients should be educated on the different options available to them. This systematic review found among many interventions that manual therapy, and eccentric strength training to be the most beneficial in the treatment of LE. Proper clinical decision making is necessary to choose between appropriate interventions but where applicable these two interventions were seen to be beneficial as well as cost-effective.