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Keele Critically Appraised Topic Group
October 2022

Specific Question:

In adults with longstanding tennis elbow (Lateral Elbow Tendinopathy LET), are passive treatments as effective as exercises at reducing pain and increasing function?

Clinical bottom line

In adults with longstanding Lateral Elbow Tendinopathy (LET) exercise was more effective than passive treatments, but the evidence was of limited quality.

Why is this important?

There is variation in physiotherapy clinical practice in the treatment of tennis elbow, our team was interested to explore the most effective treatments for the condition.

Search timeframe

2005- 2022

Inclusion Criteria

	Description	Search terms
Population and Setting		Adults over 18 with lateral elbow pain for more than 3 months
Intervention or Exposure		Physiotherapy exercises
Comparison, if any		Passive treatments - Stretches, Rest and Activity modification, kinesio taping, dry needling, acupuncture, vibration or shockwave therapy, splinting, steroid injections, ultrasound guided interventions
Outcomes of interest		Pain – numeric rating scale, visual analogue scale Function, quality of life
Types of studies		Systematic review, RCT and other journal article abstracts, conference abstracts and links to Cochrane trials, in the order of their publication date from 2016 onwards

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Review date Sept 2025

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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 discus and Pub Med

Date of search- ***30.4.21 and updated 3.11.21***

Results of the search

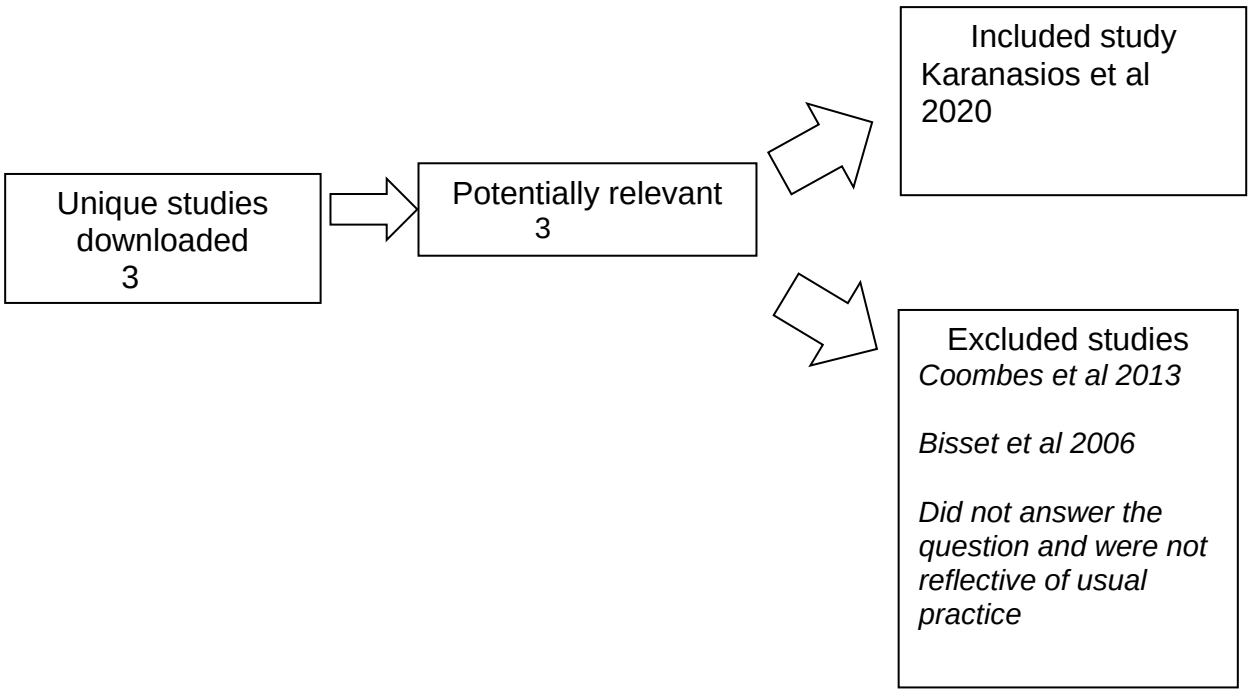

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Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Karanasios et al 2020 *Systematic review and meta analysis*	*Adult patients with tennis elbow* *Primary Care, secondary Care UK and global population.* *30 RCTs*	*Evaluated the effectiveness of exercise compared with other conservative interventions in the management of Lateral Elbow Tendinopathy.* ---------- *Exercise (Ex) with or without physiotherapy or Home Exercise Programme (HEP) compared with corticosteroid injections* ---------- *Eccentric compared with concentric exrercise alone or in combination with or without physiotherapy or HEP* ---------- *Ex with or without physiotherapy or HEP compared with*	30 studies included in systematic review 21 studies included in meta-analysis = 2123 subjects ---------- Global rate of change (3 studies), Pain intensity (3 studies), Pain free- grip strength (3 studies), Elbow disability (4 studies) All outcomes favoured exercise. ---------- No differences in change in pain intensity (3 studies), Pain-free grip strength (2 studies) or elbow disability (2 studies) on these outcomes ---------- 3 studies included in systematic analysis however they provided contradictory results. No quantitative analysis.	High quality systematic review utilizing Cochrane risk of bias tool and GRADE methodology for rating quality of studies. Identified high risk of bias in 70% of the trials included in the review

		Cyriax physiotherapy --- *Ex with or without physiotherapy or HEP or forearm support band (FSB) compared with FSB alone* --- *Ex with or without physiotherapy or HEP compared with other types of active or passive interventions*	--- 3 RCT's included in systematic analysis, no quantitative analysis No differences in self perceived improvement, Pain free grip strength (PFGS) at all follow-up occasions. Statistical difference favouring Forearm Support Band alone in change in pain rating in short-term time point, but not mid or long term. --- 6 studies included in systematic analysis, no quantitative analysis. No differences compared to cryotherapy, Pilates, oral Non Steroidal Anti-inflammatory Drugs, Proprioceptive Neuromuscular Facilitation, wrist manipulation, neural tension techniques. The addition of scapular strengthening was favoured compared with standard care?	

Summary

Evidence indicates that exercise (scapular and elbow strengthening) is favourable compared to passive interventions in the treatment of LET. However, this is based on the analysis of studies of low to moderate quality. No evidence of harm.

	Good quality evidence to support use….	☐
	Insufficient or poor quality evidence OR substantial harms suggest intervention used with caution after discussion with patient…	☑
	No good quality evidence, do not use until further research is conducted OR Good quality evidence to indicate that harms outweigh the benefits….	☐

Implications for Practice/research

Clinicians may consider using exercise for the management of long term tennis elbow if not already doing so. The systematic review identified high risk of bias which researchers should aim to address in future studies.

What would you tweet?
Systematic review evidence suggests exercise is more effective in reducing pain and increasing function than passive treatments, but the evidence is of limited quality.

References

Bisset, L., Beller, E., Jull, G., Brookes, P., Darnell, R., Vincenzino, B., 2006. Mobilisation with movement and exercise, corticosteroid injection or wait and see for tennis elbow: randomised trial. British Medical Journal. Vol 333 (7575).

Coombes, B., Bisset, L., Brookes, P., Khan, A., Vincenzino, B., 2013. Effect of corticosteroid injection, physiotherapy, or both on clinical outcomes in patients with unilateral lateral epidondyalgia: a randomised controlled trial. Journal of the American Medical Association. Vol 309 (5). p461-469

Karanasios, S., Korakakis, V., Whiteley, R., Vasilogeorgis, I., Woodbridge, S., Gioftsos, G., 2020. Exercise interventions in lateral elbow tendinopathy have better outcomes than passive interventions, but the effects are small: a systematic review and meta-analysis of 2123 subjects in 30 trials. British Journal of Sports Medicine. Vol 55, p 477-485.

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