Lateral elbow pain and muscle function impairments.

Guideline ID: 2993 Published: 2022 Dec

Academy of Orthopaedic Physical Therapy, APTA

Lucado AM, Day JM, Vincent JI, et al. Lateral elbow pain and muscle function impairments. J Orthop Sports Phys Ther. 2022 Dec;52(12):CPG1-CPG111. [212 references] PubMed

View Original Guideline

Overview

Guideline Objective

To describe evidence-based practice for assessing and treating lateral elbow tendinopathy (LET)

Note: This guideline excluded studies that addressed pathologies closely related to LET. For example, cervical radiculopathy, primary peripheral nerve entrapment, and joint pathology including plica syndrome, radiocapitellar chondromalacia, and posterolateral rotatory instability as causes of lateral elbow pain were excluded. This guideline also excluded interventions outside the scope of physical therapist practice including but not limited to pharmacological and surgical interventions unless directly compared to physical therapy management.

Patient Population

Adults with symptoms of LET

Recommendations

Recommendation Statements

Outcome, Activity Limitations, Self-Report Measures

Activity Limitations Physical Performance Measures

Clinicians should use the diagnosis-specific Patient-Rated Tennis Elbow Evaluation (PRTEE) to assess pain/irritability and function and/or the region-specific Disabilities of the Arm, Shoulder and Hand (DASH) to assess upper extremity function at baseline and at least one other follow-up point that includes discharge for individuals with lateral elbow tendinopathy (LET). (**Grade of Recommendation: A**)

Clinicians should use the Patient-Specific Functional Scale (PSFS) for patients with high-demand activities and/or should administer a scale that assesses activity-specific disability (e.g., DASH work or sports/performing arts module) at baseline and at least one other follow-up point that includes discharge for individuals with LET. (**Grade of Recommendation: A**)

Physical Impairment Measures

Clinicians should include the physical impairment measures of elbow and wrist range of motion, pressure pain threshold, pain-free grip strength, and maximum grip strength at baseline and at least one other follow-up point that includes discharge for individuals with LET. (**Grade of Recommendation: B**)

Interventions

Exercise

Clinicians should use isometric, concentric, and/or eccentric therapeutic resisted exercises of the wrist extensors in the treatment of individuals with subacute or chronic LET. (**Grade of Recommendation: B**)

Clinicians may use a phased approach to reintroduce stress, increase strength, improve endurance, and restore optimal motor control in individuals who have LET symptoms with high-demand occupations, hobbies, performing arts, or athletic interests. (**Grade of Recommendation: F**)

Multimodal Interventions: Including Exercise

Clinicians should use therapeutic resisted wrist extension strengthening exercises in combination with other therapeutic interventions, including manual therapy, in the

treatment of patients with subacute or chronic LET. (**Grade of Recommendation: B**)

Clinicians may include shoulder and scapular stabilizer muscle training exercises, when impairments are identified, in conjunction with other forms of wrist extensor strengthening exercise in individuals with LET. (**Grade of Recommendation: C**)

Manual Therapy Joint Mobilizations/Manipulations

Clinicians should use local elbow joint manipulation or mobilization techniques to reduce pain and increase pain-free grip strength in individuals with LET, as a stand-alone or adjunctive treatment in improving short-term outcomes for those who can tolerate the specific technique. (**Grade of Recommendation: B**)

Clinicians may use manipulation or mobilization techniques directed at the cervical spine, thoracic spine, and/or wrist as an adjunct to local treatment for short-term pain relief in individuals with LET when impairments in those regions are identified. (**Grade of Recommendation: C**)

Manual Therapy Soft Tissue Mobilizations

Clinicians may use soft tissue mobilizations, including manual release therapy, to improve pain and function in individuals with chronic LET. (**Grade of Recommendation: C**)

Clinicians may use instrument-assisted soft tissue mobilization combined with exercise to improve pain and function in those with chronic LET. (**Grade of Recommendation: C**)

Based on conflicting evidence, a recommendation cannot be made regarding the use of deep transverse tendon cross-friction massage to alleviate symptoms in individuals with LET. (**Grade of Recommendation: D**)

Dry Needling

Clinicians should use either tendon or trigger point dry needling for the treatment of pain and functional deficits associated with LET. (**Grade of Recommendation: B**)

Orthoses

Based on conflicting evidence, a recommendation cannot be made regarding the use of a forearm counterforce or wrist support orthosis to alleviate intermediate or long-term symptoms in individuals with LET. (**Grade of Recommendation: D**)

Clinicians may use a forearm counterforce or wrist support orthosis to be worn during activity for immediate improvement of pain and strength in those with LET whose symptoms are aggravated with activity. (**Grade of Recommendation: F**)

Taping

Clinicians should use rigid taping techniques for immediate/short-term pain relief and improvement in pain-free muscle function in those with irritable LET. (**Grade of Recommendation: B**)

Clinicians may use kinesiology tape application as part of a multimodal treatment program for immediate and short-term management of pain and muscle function in individuals with LET. (**Grade of Recommendation: C**)

Cryotherapy

Clinicians may use cryotherapy combined with burst transcutaneous electrical nerve stimulation (TENS) to reduce pain in the short term in individuals with symptoms of LET for greater than 30 days. (**Grade of Recommendation: C**)

Clinicians may use cryotherapy to reduce pain in individuals with irritable symptoms of LET. (**Grade of Recommendation: E**)

Therapeutic Ultrasound

Based on conflicting evidence, a recommendation cannot be made for the use of ultrasound as a stand-alone treatment. (**Grade of Recommendation: D**)

Phonophoresis

Clinicians should not use phonophoresis with 10% hydrocortisone gel, topical prednisolone (2 mg/d), or 1% diclofenac sodium gel for the treatment of LET. (**Grade of Recommendation: C**)

Iontophoresis

Clinicians may use iontophoresis with an anti-inflammatory drug, early in the rehabilitation phase (no later than 2-4 weeks from onset or aggravation of symptoms), in individuals presenting with highly irritable symptoms of LET. (**Grade of Recommendation: C**)

TENS

Clinicians may use burst TENS applied to the painful region or high- or low-frequency TENS applied to acupuncture points, for short-term pain relief in individuals with LET. (**Grade of Recommendation: C**)

Laser

Clinicians may use laser therapy for improvements in pain and grip strength, seen in follow-up periods >4 weeks to 6 months, for individuals with LET. (**Grade of Recommendation: C**)

Ergonomics

Clinicians may use ergonomic interventions in the management of symptoms in individuals with LET; the implementation of education, behavioral modification, ergonomic equipment, and workstation adjustments is moderately supported by best practice/standard of care. (**Grade of Recommendation: E**)

Evidence Rating Scheme

Levels of Evidence Table[a]

Level	Intervention/ Prevention	Pathoanatomic/ Risk/ Clinical Course/ Prognosis/ Differential Diagnosis	Diagnosis/ Diagnostic Accuracy	Prevalence of Condition/ Disorder	Exam/ Outcomes
I	Systematic review of high-quality randomized clinical trials (RCTs) High-quality RCTs[b]	Systematic review of prospective cohort studies High-quality prospective cohort study[c]	Systematic review of high-quality diagnostic studies High-quality diagnostic	Systematic review, high-quality cross-sectional studies High-	Systematic review of prospective cohort studies High-quality prospective

Level	Intervention/ Prevention	Pathoanatomic/ Risk/ Clinical Course/ Prognosis/ Differential Diagnosis	Diagnosis/ Diagnostic Accuracy	Prevalence of Condition/ Disorder	Exam/ Outcomes
			study[d] with validation	quality cross-sectional study[e]	cohort study
II	Systematic review of high-quality cohort studies High-quality cohort study[c] Outcomes study or ecological study Lower-quality RCT[f]	Systematic review of retrospective cohort study Lower-quality prospective cohort study High-quality retrospective cohort study Consecutive cohort Outcomes study or ecological study	Systematic review of exploratory diagnostic studies or consecutive cohort studies High-quality exploratory diagnostic studies Consecutive retrospective cohort	Systematic review of studies that allows relevant estimate Lower-quality cross-sectional study	Systematic review of lower-quality prospective cohort studies Lower-quality prospective cohort study
III	Systematic reviews of case-control studies High-quality case-control	Lower-quality retrospective cohort study High-quality cross-sectional study	Lower-quality exploratory diagnostic studies Nonconsecutive	Local nonrandom study	High-quality cross-sectional study

Level	Intervention/ Prevention	Pathoanatomic/ Risk/ Clinical Course/ Prognosis/ Differential Diagnosis	Diagnosis/ Diagnostic Accuracy	Prevalence of Condition/ Disorder	Exam/ Outcomes
	study Lower-quality cohort study	Case-control study	retrospective cohort		
IV	Case series	Case series	Case-control study		Lower-quality cross-sectional study
V	Expert opinion	Expert opinion	Expert opinion	Expert opinion	Expert opinion

a Adapted from Phillips B, Ball C, Sackett D, et al. Oxford Centre for Evidence-based Medicine - Levels of Evidence (March 2009). Also refer to Appendix E of the original guideline.

b High quality includes RCTs with greater than 80% follow-up, blinding, and appropriate randomization procedures.

c High-quality cohort study includes greater than 80% follow-up.

d High-quality diagnostic study includes consistently applied reference standard and blinding.

e High-quality prevalence study is a cross-sectional study that uses a local and current random sample or censuses.

f Weaker diagnostic criteria and reference standards, improper randomization, no blinding, and less than 80% follow-up may add bias and threats to validity.

Recommendation Rating Scheme

Grades of Recommendation

Grades of Recommendation	Strength of Evidence	Level of Obligation

A	**Strong evidence**	A preponderance of level I and/or level II studies support the recommendation. This must include at least 1 level I study	Must or should
B	**Moderate evidence**	A single high-quality RCT or a preponderance of level II studies support the recommendation	Should
C	**Weak evidence**	A single level II study or a preponderance of level III and IV studies, including statements of consensus by content experts, support the recommendation	May
D	**Conflicting evidence**	Higher-quality studies conducted on this topic disagree with respect to their conclusions. The recommendation is based on these conflicting studies	
E	**Theoretical/ foundational evidence**	A preponderance of evidence from animal or cadaver studies, from conceptual models/principles, or from basic sciences/bench research supports this conclusion	May
F	**Expert opinion**	Best practice based on the clinical experience of the guideline development team	May

Related Content

Supporting Documents

No supporting documents available.

Implementation Tools

- Perspectives for Practice: Physical Therapy for People with Lateral Elbow Tendinopathy: Using the Evidence to Guide Musculoskeletal Rehabilitation Clinical

Practice; 2023 Jan 1.

- The Original Guideline includes the following:
  - Decision Tree (p. 43)

Patient Education

No patient education materials available.

Disclaimer

TRUST Scorecard

Composition of Guideline Development Group (GDG)

Multidisciplinary GDG Members	**Yes**
Methodologist Involvement	**Yes**
Incorporation of Patient and Public Perspective	★★★★☆

Systematic Review of Evidence

Literature Search	★★★★★
Study Selection	★★★★★
Evidence Synthesis	★★★★★

Foundations for Recommendations

Strength of Evidence Grade	★★★★☆
Description of Benefits and Harms of Recommendations	★★★★★
Summary of Evidence Supporting Recommendations	★★★★★
Strength of Recommendations Rating	★★★★★
Clear Articulation of Recommendations	★★★★★

Funding Source — **Yes**

Disclosure and Management of Financial Conflicts of Interests — ★★★☆☆

External Review — ★★★★★

Updating — ★★★★★