Rehabilitation Protocol for Medial/Lateral Epicondylalgia

This guideline is intended to assist clinicians and patients through the non-operative course of care for Medial and Lateral Epicondylitis/Epicondylalgia. This protocol is time based (dependent upon tissue healing) as well as criterion based (dependent upon patient tolerance). Specific intervention should be based on the needs of the individual and should consider exam findings and clinical decision making. If you have questions, contact the referring physician.

The interventions included within this protocol are not intended to be an inclusive list. Therapeutic interventions should be included and modified based on the progress of the patient and under the discretion of the clinician.

Laterally, this involves tendinopathy of the tendon, sheath, and muscular junction of the extensor carpi radialis brevis (ECRB) muscle and other extensor tendons on the lateral epicondyle of the humerus; while medial, this involves tendinopathy of the structures of flexor carpi radialis (FCR) muscle and other flexor tendons on the medial epicondyle of the humerus. Typically, repetitive strain is believed to be the mechanism of injury resulting in microscopic and macroscopic tears together with potential micro-avulsion fractures.

Diagnosis Considerations	• Pain with repetitive wrist flexion/extension, weak grip strength. Local tenderness.
	• Pain typically described as dull ache immediately after activity and at rest. Can be sharp and radiate down forearm.
	• Common Aggravating Factors: shaking hands, baseball, swimming, golf, tennis, bowling, racquetball, football, weightlifting, track and field throwing and repetitive dynamic overload activities.
	• Throwing in late cocking and acceleration because of increased valgus stress (medial).
	• Special Tests:
	  ○ Lateral: Resisted isometrics, Cozen's Test, Chair Test, Mill's Test, Maudsley Test, Coffee Cup Test, Resisted Middle Finger Extension Test, Polk's Test (Phase 1)
	  ○ Medial: Reverse Cozen's Test, Polk's Test (Phase 2)
	• Functional outcome measures: Patient-rated Tennis Elbow Evaluation (PRTEE), Disabilities of the Arm, Shoulder, and Hand (DASH)	

Differential Diagnosis	• Radial tunnel syndrome • Posterior interosseus syndrome • Intraarticular abnormalities • Lateral collateral elbow instability • Cervical pathology (C6) • Ulnar nerve entrapment, impingement, or neuritis • Avulsion of apophysis	• Ulnar collateral ligament injury • Extraarticular olecranon exostosis/bursitis • Rotator cuff tendinopathy • Thoracic outlet syndrome • Biceps/Triceps tendinopathy • Loose bodies, chondral involvement • Rheumatic disease

PHASE I: IMMEDIATE/ACUTE (0-2 WEEKS)

Rehabilitation Goals	• Reduce any swelling, minimize pain and immobilization as needed
	• Patient education
	  ○ Minimize aggravating factors as much as possible, activity modification
	  ○ Initial self-symptom management and joint protection
	  ○ Independent with initial home exercise program

Interventions	During this early acute phase, numerous manual interventions may be utilized to reduce the patient's pain, restriction to movement, and joint mobility: • Soft Tissue Mobilization/Instrument-Assisted Soft Tissue Mobilization

	• Splinting/Taping • Ischemic compression/Bloodflow Restrictive Training • Dry Needling • Nerve mobilization • Joint mobilization/manipulation • Strengthening • Stretching • Modalities
Criteria to Progress	• Tolerance to full AROM without pain (unloaded) • Independent with initial home exercise program

PHASE II: INTERMEDIATE/SUB-ACUTE (2-4 WEEKS)

Rehabilitation Goals	• Progressive stretching
	• Progressive loading/strengthening of supporting structures
	• Maintain full ROM
	• Independent with progressed home exercise program, all daily activities with appropriate activity modification
	• Patient Education
	  ○ Pathomechanics
	  ○ Ergonomics/posture
	  ○ Activity modification
	  ○ Lifting mechanics

Additional Interventions **Continue with Phase I interventions*	*Strengthening: Minimal loading* • Wrist flexor/extensor isometrics • Neuromuscular re-education of proximal scapular stabilizing musculature Serratus anterior, middle/lower trapezius isometrics *Stretching* • Wrist flexors (elbow flexed to 90 degrees) • Wrist extensors (elbow flexed to 90 degrees)
Criteria to Progress	• Maintenance of full ROM • Full tolerance to stretching at 90 degrees of elbow flexion • Tolerance to light/unloaded daily activities without increase in pain • 70% strength of contralateral side

PHASE III: LATE/CHRONIC (4-6+ WEEKS)

Rehabilitation Goals	• Maintain full ROM • Promote proper movement patterns • Avoid post-exercise pain/swelling

Additional Interventions **Continue with Phase I-II Interventions*	*Strengthening*
	• Eccentrics/Concentrics (while both motions are beneficial, some patients may tolerate eccentric loading prior to concentric loading)
	  Wrist flexion/extension
	  Forearm pronation/supination
	  Mobilization with movement
	• Progression of neuromuscular re-education of proximal scapular stabilizing musculature
	  Resisted serratus anterior, lower/middle trapezius strengthening
	
	Stretching
	• Wrist flexors (elbow straight/extended)
	• Wrist extensors (elbow straight/extended)
	
	Correction of movement abnormalities with functional tasks

	Plyometrics Program
Criteria for Progress/ Return to Sport	• Independent self-management of symptoms • Achieve all muscle strength goals (90% of contralateral side) • Achieve functional goals • Demonstrate appropriate understanding of condition and maintenance to prevent risk of recurrence

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Contact	Please email MGHSportsPhysicalTherapy@partners.org with questions specific to this protocol

References:

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