

## **UCL Non-Operative Treatment Protocol**

Sprains or Partial UCL Tears

For any questions please contact R. Gunnar Tysklind, MD at (317)948-2550.

Hinged elbow brace for first 6 weeks to protect healing tissue. Restore ROM while wearing brace during this time.

Week 0-3	NSAIDs, Ice, Compression, E-stim for pain modulation and inflammation  ROM- Limit between 10-100° (pain free ROM)  Elbow PROM, AROM and AAROM in brace  Shoulder ROM  NO ER stretching  Wrist flexion/extension  Strengthening  Lower extremity & core  Periscapular activation  Shoulder isometrics – NO IR strengthening to limit stress on medial elbow (load above elbow)  Wrist isometrics  Grip strengthening	
Week 3-4	Use NSAIDs, Ice, Compression and E-stim as necessary for pain modulation  Begin to increase elbow ROM 5-10° per week in brace within a pain free range (10-115°)  • Active shoulder and elbow ROM (table slides)  • Pronation/supination – no pain  • Wrist stretching  Strengthening  • Lower extremity, core, scapula control and stabilization	

	<ul> <li>Shoulder rotator cuff isometrics</li> <li>Isometric elbow and wrist flexion/extension</li> <li>Continue grip strength</li> </ul>	
Week 4-5	Goal: Gradually continue increasing elbow ROM (5-125°)  Stretching	
	Restore ulnar deviation	Sleeper Stretch
	Shoulder and wrist stretching	Co o n
	Low-load, long-duration stretch into elbow extension with light resistance.	
	Strengthening (must resolve pain and inflammation prior to elbow strengthening)	
	Lower extremity, core and balance	
	Scapular control with low level arm elevation	
	<ul> <li>Shoulder strengthening progression</li> <li>D1/D2 patterns</li> </ul>	
	Initiate isotonic exercises concentrically and	
	eccentrically	
	<ul> <li>Wrist curls</li> </ul>	A THE COUNTY
	<ul><li>Pronation/supination</li><li>Biceps/triceps</li></ul>	
	Shoulder rhythmic stabilization	
Week 5-6	Goal: Achieve full ROM by end of week 6 (0°-135/145°)	an among age among and among and among and among and among and among an amo
	Full shoulder and elbow ROM	32 3
	Continue strengthening lower extremity, core and scapular muscles.	
	Work on single leg balance	
	Plyometrics	
	<ul> <li>Two handed below chest plyoball toss</li> <li>Double and single leg balance</li> </ul>	

Week 6-7	Goal: Actively stressing the UCL	
	Maintain ROM with continual stretching, no varus or valgus stress on the elbow	
	Lower extremity and core strengthening	
	Continue to work on balance	
	Early Closed Kinetic Chain exercises against wall	A
	Scapular strengthening with longer lever arm  • Supine serratus anterior punches	4.6
	<ul><li>Upright wall push up</li><li>Wall ball rolls</li></ul>	
Week 7-8	Goal: Initiate Thrower's Ten Program	
	Strengthening  • Lower extremity, core, and scapula	
	<ul> <li>Shoulder advanced exercises</li> <li>90/90 activation</li> </ul>	<b>Y</b>
	<ul> <li>PNF - D1/D2 resistance</li> <li>Wrist and forearm</li> </ul>	Start
	Plyometrics	Figure 1. Di Flexion with Elastic Resistance.
	<ul> <li>Side toss seated with truck rotation</li> <li>Continuous ball drops at 90° ABD for pronator mass endurance</li> </ul>	Start End
	Rhythmic stabilizations at 90/90	Figure 2. D2 Flexion with Elastic Resistance.

Week 9-12	Goal: Strengthen most muscle groups by week 12  Strengthening  Continue to strengthen kinetic chain  Core and scapula  Elbow strengthening  flexion/extension  pronation/supination  PNF patterns with body blade  Progressing CKC – elbow to hand push-ups	
	Plyometrics  Plyoball with mini tramp  Begin with two-hand plyos  Progress to one-hand  Start 0° abduction, progress to 90° over time  Plyometric wall throws with trunk rotation  Emphasize core control and strength	
CRITERIA FOR RETURN TO PLAY	<ul> <li>Full pain free elbow ROM and strength         <ul> <li>Pronation (flexor pronator mass),</li> <li>supination, extension, and flexion</li> </ul> </li> <li>Can demonstrate good throwing mechanics for particular sport</li> </ul>	
Week 12+	Initiate Interval Throwing Program  Continue throwers 10 exercise and Plyometrics	

## REFERENCES:

- 1. Rettig AC, Sherrill C, Snead D, Mendler C, Mieling P. Nonoperative Treatment of Ulnar Collateral Ligament Injuries in Throwing Athletes. Am J Sports Med. 2001;29(1):15-17.
- 2. Wilk KE, Macrina LC, Cain EL, Dugas JR, Andrews JR. Rehabilitation of the Overhead Athlete's Elbow. *Sports Health.* 2012;4(5):404-414.

- 3. Garrison JC, Arnold A, Macko MJ, Conway JE. Baseball Players Diagnosed With Ulnar Collateral Ligament Tears Demonstrate Decreased Balance Compared to Healthy Controls. *J Orthop Sports Phys Ther.* 2013;43(10):752-758.
- 4. Podesta L, Crow SA, Volkmer D, Bert T, Yocum LA. Treatment of partial ulnar collateral ligament tears in the elbow with platelet-rich plasma. Am J Sports Med. 2013;41(7):1689-1694.
- 5. Ford GM, Genuario J, Kinkartz J, Githens T, Noonan T. Return-to-Play Outcomes in Professional Baseball Players After Medial Ulnar Collateral Ligament Injuries: Comparison of Operative Versus Nonoperative Treatment Based on Magnetic Resonance Imaging Findings. Am J Sports Med. 2016;44(3):723-728.
- 6. Frangiamore SJ, Lynch TS, Vaughn MD, et al. Magnetic Resonance Imaging Predictors of Failure in the Nonoperative Management of Ulnar Collateral Ligament Injuries in Professional Baseball Pitchers. Am J Sports Med. 2017;45(8):1783-1789.