Rehabilitation s/p UCL Repair with Internal Brace

Saint Louis University- SSM Health Physical Therapy Orthopedic Residency
in Collaboration with SLUCare Physicians

These guidelines, treatments, and milestones have been established to assist in guiding rehabilitation based on the most current available evidence. They are not intended to be a substitute for sound clinical judgement with consideration of the individual contextual features of the patient and the demands of various functions/ sports

Overview:

The ulnar collateral ligament (UCL) does not play a large role in elbow stability for most activities of daily living, but it does undergo tremendous stresses with overhead throwing and is susceptible to injury in overhead athletes. [1-3] Candidates for repair are most commonly younger (pre-professional) and present with either a proximal or distal UCL tear with minimal mid-substance damage. [4,5] As compared to a UCL reconstruction, the UCL repair with internal bracing allows for expedited rehabilitation and quicker return to throwing while maintaining the integrity of the repair. [5-7]

Guideline

Timeline	Goals	Treatment Recommendations
Phase 1 *(Week 0-1)*	Protect integrity of surgical repair Reduce pain and inflammation Maintain/ achieve full wrist ROM Minimize atrophy of	

		o Scapular training with manual resistance[7] • Modalities as needed
Timeline	**Goals**	**Treatment Recommendations**
Phase 2 *(Week 2 –5)*	Progress to full elbow ROM with minimum goal of 10°-125°. Minimal pain and tenderness Good isometric strength testing with the wrist, elbow, and shoulder Maintain aerobic fitness Address and develop any core, balance and kinetic chain deficits that can attribute to undue stress to the elbow	• Use of Brace o Brace may be removed during therapy, for hygiene and for home exercise program o Week 2: Set to allow 30°-110°of flexion[5,7] o Week 3: Set to allow 10°-125 flexion[5,7] o Week 4: Set to allow unrestricted ROM[5,7] • Manual Therapy o Scar and soft tissue mobilization as needed[7] o PROM/ AAROM for elbow and wrist[7] o Mobilizations as indicated[7] • Therapeutic Exercise o Core and lower extremity training o Aerobic activity (including upper bicycle ergometer) o Active (light) concentrics for periscapular muscles, muscles of the GH joint, elbow, wrist flexors and pronators. Introduce 10 days postoperatively[5,7] o Throwers Ten for comprehensive strengthening of shoulder complex. Introduced week 3 or later for tissue healing[5,7] o When full elbow range of motion is achieved and the patient can complete the entire Throwers Ten series, consider progressive closed chain strengthening[9,10] prior to initiation of plyometrics in Phase 3 o Long duration stretching for up to 15 minutes per session (60 total minutes per day) and/or functional splinting if having difficulty regaining elbow extension[7]
Timeline	**Goals**	**Treatment Recommendations**
Phase 3 *(Week 6-8)*	Full, nonpainful elbow AROM outside of the brace No pain or tenderness to palpation	• Brace o Discharge elbow brace at week 6 or once all goals from phase 2 are met (whichever is later)[7] • Manual Therapy

70% strength of the
involved shoulder
(suggest 10 rep max
testing)

Example exercises: single leg lawn mower, single leg body blade, single leg wall exercises.

- Impairments throughout the kinetic chain need to be addressed prior to return to throwing, as limitations proximally and in the lower extremity will result in excessive

  - Program indicates throwing at each stage for 2-3 separate practices without pain or symptoms before progressing to the next stage. (13 stage for non-pitchers, 15 stages for pitchers) For details see Reinold 2002.
- Return to sport is typically between 5-

12. Zaremski JL, Vincent KR, Vincent HK. Elbow Ulnar Collateral Ligament: Injury, Treatment Options, and Recovery in Overhead Throwing Athletes. *Curr Sports Med Rep.* 2019;18(9):338-345 PubmedID 31503046.
13. Hannon J, Garrison JC, Conway J. Lower extremity balance is improved at time of return to throwing in baseball players after an ulnar collateral ligament reconstruction when compared to pre-operative measurements. *Int J Sports Phys Ther.* 2014;9(3):356-364 PubmeCmmai3.0(3)9.6 (r)96.74 (i)0.3.20(n)3