

Physical Therapy Protocol: Ulnar Collateral Ligament Repair + Internal Brace

Phase 1: Postop Day 1 through 7 – Pain Control and Muscle Activation

Physician Goals: Decrease pain and inflammation, initiate passive shoulder motion, start scapular strengthening and shoulder isometrics

Exercises: Passive shoulder flexion/ER/IR to tolerance, pendulums, wrist flexor/extensor stretching, putty/grip exercises; submaximal shoulder isometrics: ER, IR, abduction, flexion, and extension (must be pain free), periscapular stabilizer strengthening with seated neuromuscular control drills with manual resistance

Comments: Hinged elbow brace worn at all times including PT, locked in 90° of elbow flexion

Total Visits: 2

Phase 2: Weeks 2 through 5 – Range of Motion Recovery + Elbow Protection

Physician Goals: Regain normal elbow range of motion, improve strength and endurance

Exercises: Begin elbow PROM, then active-assisted ROM, then AROM within brace ROM restrictions listed below, progress scapular strengthening exercises with seated manual resistance: protraction/retraction, elevation/depression, diagonal patterns, progress to light isotonic strengthening exercises for wrist, elbow, and shoulder; beginning week 3 initiate Throwers Ten program; beginning week 4 initiation wrist flexion and elbow flexion against manual resistance

Comments: Brace settings – Week 2: 30° to 110°, Week 3: 10° to 125°, Week 4: 0° to 145°

Total Visits: 8 – One to two times per week with daily HEP

Criteria to progression to phase 3: Elbow PROM at least 10° to 125° with minimal pain, good manual muscle testing of key muscles/movements (elbow flexion/extension, wrist flexion, shoulder IR/ER and scapular abduction)

Phase 3: Weeks 6 through 8 – Strength Recovery

Physician Goals: Regain full elbow ROM if not already done, progress upper extremity strengthening

Exercises: Initiate Advanced Throwers Ten program, initiate 2-hand plyometrics – chest pass, side-to-side throw, and overhead pass, initiate prone plank exercise; beginning week 8 initiate 1-hand plyometrics – 90°/90° ball throw, 0° ball throw, continue Advanced Throwers Ten, initiate side plank with shoulder ER strengthening exercise; start blood flow restriction (BFR) with 50% arterial occlusion pressure 30-15-15-15 rep scheme with 60s rest, 20-30% contralateral arm 1 rep max, wrist flexion, wrist ulnar deviation, finger flexion, forearm pronation, eccentric forearm pronation

Comments: Discontinue elbow brace at 6 week

Total Visits: 6 – One to two times per week with daily HEP

Criteria for progression to phase 4: Full painless elbow PROM and AROM, no tenderness on exam, >70% shoulder and elbow strength compared to nonoperative arm

Phase 4: Weeks 9 through 12 – Prepare to Begin Throwing Program

Physician Goals: Improve shoulder, elbow, forearm strength and endurance in anticipation of initiation of throwing program after week 12

Exercises: Continue Advanced Throwers Ten program, 1-hand and 2-hand plyometrics program, beginning week 10 initiate seated chest-press machine, seated row machine, biceps/triceps machine or cable strengthening, continue blood flow restriction (BFR) with 50% arterial occlusion pressure 30-15-15-15 rep scheme with 60s rest, 20-30% contralateral arm 1 rep max, wrist flexion, wrist ulnar deviation, finger flexion, forearm pronation, eccentric forearm pronation

Comments: Position players may begin interval hitting program at week 10, see separate testing protocol for clearance to initiate throwing program

Total Visits: 8 – One to two times per week with daily HEP