

## ULNAR COLLATERAL LIGAMENT RECONSTRUCTION

### Phase I- Protective Phase (0 – 3 Weeks Post-op)

#### Goals:

- Protect healing tissues and minimize deleterious stresses
- Decrease pain, inflammation and swelling
- Gradual return of protected AROM
- Brace settings:
  - 0-7 days post-op posterior 90° splint
  - 7-14 days post-op: Functional brace 30°-90°
  - 14-21 days post-op: Functional brace 20°-100°
  - 21-28 days post-op: Functional brace 10°-110°
  - 28-35 days post-op: Functional brace 0°-120°
  - \*\*Contact TMI if patient is not reaching weekly ROM goals.

#### Days 0 – 7:

- Posterior splint at 90° of elbow flexion
- Wrist active ROM exercises and gripping exercises (NO RESISTIVE WRIST OR GRIP STRENGTHENING FOR 6 WEEKS IF THERE IS COMBINED FLEXOR TENDON REPAIR)
- Initiate scapular elevation/depression/protraction/retraction AROM

#### Days 7 - 14: (1 week post-op)

- Apply functional brace set at 30° – 90° (BRACE LOCKED AT 90 DEGREES UNTIL 4 WEEKS POST-OP IF COMBINED FLEXOR TENDON REPAIR. MAY COMPLETE ROM OUTSIDE OF BRACE.)
- Initiate active elbow flexion and extension within brace limits
- Initiate shoulder isometrics while brace locked at 90° (flexion, abduction, ER) NO IR

#### Day 14 - 21: (2 weeks post-op)

- Adjust functional brace to be set at 20° – 110°  
(Increase brace by 10° of extension and 10° of flexion per week)



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## **Phase II – Intermediate Phase (3 - 8 Weeks Post-op)**

### **Goals:**

- Gradually increase ROM to attain FROM by 4 – 6 weeks post-op (per brace guidelines above)
- Promote healing of tissue
- Regain and improve muscular strength

### **Day 21-42 (3 – 6 Weeks Post-op):**

- Adjust brace as stated above
- Progress shoulder isotonic program without valgus loading (no IR until 6 weeks post-op)
- Begin low-load prolonged stretching for extension as needed
- Initiate cardio work (stationary bike/elliptical) when wounds are fully closed.
- Initiate lower body work using no upper extremity. Ex. body weight circuits, abdominal work

### **6 – 8 Weeks Post-op:**

- Begin shoulder IR exercises to compliment existing shoulder/scapular exercises
- Initiation of running cardio work allowed
- Progress leg and core strengthening program while respecting valgus loads to elbow
- Initiate light forearm strengthening (manual resistance for control).

## **Phase III – Advanced Strengthening Phase (8 – 19 Weeks Post-op)**

### **Goals:**

- Increase strength and endurance of shoulder/scapula/elbow
- Optimize scapular position for a thrower by improving flexibility of posterior shoulder, pectoralis minor, latissimus dorsi, and teres major
- Optimize scapular position for a thrower by emphasizing rhomboid, middle trapezius, lower trapezius, and serratus anterior strengthening and endurance
- Progress manual dynamic rhythmic stabilization exercises of shoulder/scapula/elbow

### **8 - 19 Weeks Post-op:**

- Progress isotonic program for shoulder, scapula, and elbow
- 10 weeks post-op: Forearm dumbbells and rice bucket
- 12 weeks post-op: Begin isokinetic shoulder and elbow training , low level upper body workouts (tubing program)
- 17 weeks post-op: Initiate sock/towel drills, begin 2 handed upper extremity plyometric program for shoulder and elbow at 17 weeks post-op (2 handed chest pass, 2 handed overhead, 2 handed diagonal chops), ball flips (prone and forearm on alternate days)
- 18 weeks post-op: Begin 1 handed upper extremity plyometric program for shoulder and elbow at 18 weeks post-op (1 handed IR/ER at neutral progressing to 1 handed 90/90 IR), ¼ wall dribbles and decels,

BodyBlade IR/ER at neutral, shoulder flexion/extension, scapular plane horizontal abd/add

- 19 weeks post-op: Begin D2 Bodyblade throwing pattern, complete WK 17 and WK 18 workouts daily

## **Phase IV – Return to Activity Phase (20 – 53 Weeks Post-op)**

### **Goals:**

- Initiation of interval throwing and hitting programs.
- Continue stretching/strengthening program as previous

### **20 Weeks Post-op:**

- Initiate throwing and hitting interval sports program (please refer to interval throwing and hitting programs)

## **Phase V – Return to sport activities (6 months post-op)**

- 9.5 months post-op: Interval mound program (fastballs only)
- 10.5 months post-op: Interval mound program (fastball/change ups)
- 11 months post-op: Interval mound program (breaking balls)
- 12-13 months post-op: Live BP transitioning to starting rotation or reliever routine.

A starting pitcher will switch to his 5 day starting rotation plan. As a starter you are trying to build endurance as well as your pitch counts and innings. It is ok for both if it takes time before you return to an affiliate to pitch (we are not in a rush at this point). A reliever will follow the plan below and progress towards pitching on consecutive days if pitching coach feels this is necessary at this point.

### **STARTER** (5 day rotation with regular bullpens)

1 <sup>st</sup> Start:	1 inning 20 pitch limit
2 <sup>nd</sup> Start:	1-2 innings 30 pitch limit
3 <sup>rd</sup> Start:	2 innings 30 pitch limit
4 <sup>th</sup> Start:	3 innings 45 pitches
5 <sup>th</sup> Start:	3 innings 45 pitch limit
6 <sup>th</sup> Start:	4 innings 60 pitch limit

### **RELIEVER**

Week 1:	Pitch 1 inning, 2 days off, pitch 1 inning
Week 2:	Pitch 1 inning on alternate days (i.e. MWF)
Week 3:	Pitch 1 inning, 2 days off, pitch 1+ inning
Week 4:	Pitch 1 inning on consecutive days once this week

## **Criteria for return to play:**

- Physician approval with satisfactory clinical exam
- Full, non-painful ROM and satisfactory strength test
- Satisfactory completion of interval sport program