



## Ulnar Collateral Ligament Reconstruction REHAB Protocol

### Phase I (weeks 0-3)

- PT will start approximately 1 weeks post operatively

#### **Rehab Goals:**

- Protect healing tissues
- Decrease pain and inflammation
- Prevent muscular atrophy
- Initiate elbow ROM

#### **Precautions:**

- Week 1 – immobilized at 90 degrees of elbow flexion in hard brace
- Week 2 – functional hinged brace with ROM from 30-100
- Week 3 – Functional hinged brace with ROM from 15-110

#### **ROM exercises:**

- Gentle AA and AROM for the elbow and wrist
- Gentle and gradual overpressure to meet ROM guidelines
- NOTE: be sure to avoid valgus force or positioning during ROM exercises.

#### **Suggested therapeutic exercises:**

- Begin week 2 with sub-maximal isometrics for shoulder IR, shoulder abduction, biceps, wrist flexors and extensors
- Hand gripping
- Cervical spine and scapular AROM

#### **Cardiovascular Fitness:**

- Walking, stationary bike – brace on
- No treadmill
- Avoid running and jumping due to the distractive and compressive forces that can occur at landing

### Phase II (begin after meeting phase I criteria; weeks 4-8)

#### **Rehab goals:**

- Gradual increase in elbow ROM to near full ROM by the 9-10 week
- Protect reconstruction during continued healing
- Improve muscular strength of the arm, shoulder and trunk

#### **Precautions:**

- Week 4 – functional hinged brace with ROM from 10-120
- Week 5 – functional hinged brace with ROM from 5-130
- Week 6 – functional hinged brace with ROM from 0-130
- Discontinue brace at 6-8 weeks except unsafe environments
- Avoid valgus positions and minimize valgus stress to the elbow during all rehab exercises

#### **ROM exercises:**

- Gentle A and AAROM for the elbow and wrist
- PROM should be initiated if needed in a very controlled and gentle fashion

***Suggested therapeutic exercises:***

- Isotonics with light resistance for shoulder IR/ER, shoulder abduction, elbow flexion/extension, pronation/supination, wrist flexion/extension (all in a protected elbow positions – hand staying on the medial side of the elbow for all shoulder rotation exercises)
- Scapular strengthening and stabilization
- Hip, LE and core strengthening
- Cervical spine AROM /stretching

***Cardiovascular fitness:***

- Walking, stationary bike – brace on
- No treadmill
- Avoid running and jumping due to the distractive and compressive forces that can occur at landing

**Phase III (begin after meeting phase II criteria; weeks 9-12)**

***Rehab goals:***

- Increase overall strength and endurance
- Achieve and maintain full elbow ROM
- Transition to entry level plyometrics

***Precautions:***

- There should be no pain while doing the strengthening exercises
- Post exercise soreness should be less than 4/10 and return to baseline within 24-36 hours

***ROM exercises:***

- ROM should be full at post op week 10, and if not please consult with physician

***Suggested Therapeutic exercises:***

- Progressive isotonics for shoulder and elbow strengthening with the arm <45 degrees abduction positions, controlling speed of the movement and valgus force at the elbow
- Initiate eccentric elbow flexion strengthening
- Assess shoulder mobility and address imbalances (such as posterior capsular tightness) which may prevent optimal throwing biomechanics in the next phase
- Manual resistance diagonal patterns
- Hip, lower extremity and core strengthening
- Scapular strengthening and stabilization

***Cardiovascular fitness:***

- Walking, stationary bike – brace off
- Continue to avoid running and jumping

**Phase IV (begin after meeting phase III criteria; weeks 13-20)**

***Rehab goals:***

- Maximize RTC and scapular strength in throwing positions and postures
- Initiate education on throwing mechanics
- Transition to higher level plyometrics

***Precautions:***

- There should be no pain while doing the strengthening exercises
- Post exercise soreness should be less than 4/10 and return to baseline within 24-36 hours

**ROM exercises:**

- ROM should be full at this point, if not please consult with physician

**Suggested Therapeutic exercises:**

- Shoulder and elbow strengthening with the arm <45 degrees abduction positions, controlling speed of the movement and valgus force at the elbow
- Initiate rhythmic stabilization drills for the elbow and shoulder in protected positions (at athlete's side)
- Initiate plyometrics – 2 hand drills only
- Begin throwing mechanics education – including slow motion “air throws”, posture and position check points
- Hip, lower extremity and core strengthening
- Scapular strengthening and stabilization

**Phase V (begin after meeting phase IV criteria; weeks 21-36)**

**Rehab goals:**

- Maximize dynamic neuromuscular control with shoulder and elbow stabilization
- Develop biomechanically sound throwing mechanics
- Maximize muscular endurance and strength of the muscle involved in throwing – including core, upper and lower extremity

**Precautions:**

- There should be no pain while throwing or doing sport specific drills
- Post throwing or post sports specific drill soreness should be less than 4/10 and return to baseline within 24-36 hours

**ROM exercises:**

- ROM should be full at this point, if not please consult with physician

**Suggested therapeutic exercises:**

- Multi-joint, multi-planar strengthening program
- Shoulder and elbow stabilization and proprioceptive drills
- Plyometric progressions (over several weeks) – transition from 2 arms in the sagittal plane, to 1 arm, to 2 arm rotational movements, to 1 arm
- Initiate interval throwing program, progressing to a position specific throwing program around week 28 if the athlete has had no pain or problems with the baseline throwing program
- Initiate sport specific return program for golf, tennis, basketball or volleyball
- Hip, lower extremity and core strengthening

**Cardiovascular fitness:**

- Training should be targeted toward sport specific energy systems