



General Rehabilitation Guidelines

Program for Non-Operative Treatment of Elbow Injuries in Throwers

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Points:

- Many elbow injuries in throwers stem from problems that originate more proximally in the kinetic chain
 - Glenohumeral internal rotation deficit (GRID) leads to increase valgus stress at the elbow causing several potential problems: MCL strain, flexor-pronator overload, valgus extension overload and posterior impingement
 - An imbalance in internal and external rotation strength at the shoulder also places increased valgus stress at the elbow
 - Insufficient core body strength leads to ineffective force transfer through the kinetic chain and places additional stress on the elbow

Acute Phase (Week 1)

- *Goals*
 - Improve ROM
 - Diminish pain and inflammation
 - Retard muscle atrophy
- *Exercises*
 - Stretching for wrist and elbow joint, stretches for shoulder joint (especially posterior capsule)
 - Strengthening exercises isometrics for wrist, elbow and shoulder musculature
 - Pain and inflammation controls, cryotherapy, E-stim, ultrasound, whirlpool

Subacute Phase (Weeks 2-4)

- *Goals*
 - Normalize motion
 - Improve muscular strength, power and endurance
- *Week 2*
 - Initiate isotonic strengthening for wrist and elbow
 - Initiate exercise tubing exercises for shoulder
 - Continue use of cryotherapy and other modalities
- *Week 3*
 - Initiate rhythmic stabilization drills for elbow and shoulder joint
 - Progress isotonic strengthening for entire upper extremity
 - Initiate isokinetic strengthening exercises for elbow flexion/extension
- *Week 4*
 - Initiate thrower's ten program
 - Emphasize eccentric biceps work, concentric triceps and wrist flexor work
 - Program endurance training
 - Initiate light plyometric drills
 - Initiate swinging drills

Intermediate Phase (Weeks 4-6)

- *Goals*
 - Preparation of athlete for return to functional activities
- *Criteria to Progress to Advanced Phase*
 - Full non-painful ROM
 - No pain or tenderness
 - Satisfactory isokinetic test
 - Satisfactory clinical exam
- *Weeks 4-5*
 - Continue strengthening exercises, endurance drills, and flexibility exercises daily
 - Thrower's ten program
 - Progress plyometric drills
 - Emphasize maintenance program based on pathology
 - Progress swinging drills (ie, hitting)
- *Weeks 6-8*
 - Initiate interval sport program once determined by physician

Return to Activity Phase (Weeks 6-9)

- Weeks 6-9 – return to play depends on condition and progress.
 - Continue strengthening program thrower's ten
 - Continue flexibility program
 - Progress functional drills to unrestricted play