



Elbow Injuries in Throwers: Non-Operative Protocol

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 throwers 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