Best Practice Recommendations

A series of evidenced-based guidelines to improve your patient care, provided by the developers of ATGenius.com.

Elbow Ulnar Collateral Ligament Injuries

Each Best Practice Recommendation includes key elements to evaluating or treating the condition, a Strength of Recommendation (SOR) grade based on research quality, and supporting evidence.

Best Practice Recommendation #1: HISTORY AND EXAMINATION

Clinicians should recognize that clinical diagnosis of UCL injuries can be difficult. Patients may be unable to recall a specific, acute injury event; examination findings may be subtle or hard to detect. SOR:B

- Only half of patients report a specific a specific, acute event that led to the injury.[1,2]
- Valgus laxity can be difficult to detect. Even with a complete UCL tear, only 22% of patients exhibit valgus instability with manual testing.[1]
- Many patients will have a subtle flexion contracture; tenderness over the UCL may or may not be present.[1,2]
- A small (1-3mm), side-to-side difference with valgus laxity testing can be normal in asymptomatic pitchers.[3,4]

Best Practice Recommendation #2: TREATMENT

Non-operative treatment may be attempted, however there is a lack of consensus for some patients and overall outcomes are less than favorable. Surgical indications include complete rupture, failed conservative treatment, and persistent pain and disability. SOR:B

- Experienced and well-trained surgeons generally agree that UCL reconstruction is indicated for professional athletes and those with compete tears, but fail to reach consensus on how to treat nonprofessionals or those with partial tears.[5]
- Non-operative treatment can be attempted, however with this approach only 42% return to sport.[6]
- Operative treatment is indicated for patients who have failed an exhaustive attempt at nonoperative treatment, have an MRI-documented complete rupture, or have significant dysfunction and persistent medial elbow pain.[7]

Non-operative treatment includes a period of rest from throwing, pain modalities, medication and splinting, followed by progressive strengthening and return to throwing. SOR: C

- Partial tears in young athletes are treated with 6 weeks of rest from throwing, followed by rehabilitation and a gradual return to throwing program. Older patients often require a longer rest and rehabilitation period.[8]
- Nonoperative treatment consists of rest from throwing for 2-3 months, daily icing, anti-inflammatory medications, a splint or brace at night, and range of motion therapy for the flexors and pronators. Once the elbow is pain-free, progressive strengthening and a return to throwing program can begin.[7]

Best Practice Recommendation #3: SURGICAL RECOVERY EXPECTATIONS

Patients should be educated on realistic expectations following UCL reconstructive surgery. Although the majority can return to sport, pitchers often have decreased performance following surgery and return to sport is not 100%. SOR:A

- Contrary to popular belief, pitchers do not throw harder following UCL reconstructive surgery and either maintain or lose a small amount of velocity.[9,10]
- Eighty-three percent of MLB pitchers return to sport following UCL reconstruction, however they tend to pitch fewer innings and have fewer wins per season after surgery.[11]
- Twenty-eight percent of youth, high school and collegiate players and 20% of coaches incorrectly believe performance will be enhanced beyond pre-injury level following surgery.[9]

Best Practice Recommendation #2: POST-OPERATIVE REHABILITATION

Post-operative rehabilitation should consist of progressive phases to gradually increase ROM and strength. Full rehabilitation time can vary, ranging from 10-18 months. SOR:C

- **Phase 1 (0-3 weeks):** Immobilized the first week, then ROM in a hinged elbow brace 30-100 degrees week 2. Progress to 15 to 110 degrees week 3. The goal is to increase extension by 5 degrees, and flexion by 10 degrees each week.[7]
- **Phase 2 (4-8 weeks):** Strength is restored beginning with 1-lb weights, increasing 1 lb. each week, focusing on the elbow, shoulder and scapular stabilizers. The brace is discontinued at 6 weeks.[7,12-14]
- **Phase 3 (9-13 weeks):** Flexibility, upper extremity neuromuscular function, and progressive resistive exercises are the focus of this phase. Sport-specific plyometric exercises begin at 12 weeks.[7]
- **Phase 4 (14-26 weeks):** Throwing progression is begun with short toss (45 feet) progressing to lofted long toss (120 feet), followed by a progression involving throwing on a line, from the knees, and from the mound. Competitive throwing can begin at 7-9 months however, many athletes need 10-18 months before they are game-ready.[7,11]

Information researched and provided by Casey Christy, DAT, ATC, CSCS, Co-Developer, ATGenius.com. Treatment decisions should be made based on the best available evidence, patient preference, and clinician expertise, in consultation with, and at the direction of a physician.

See our other best practice documents:

- **Acromioclavicular Joint Injuries**
- **ACL Injuries**
- **Abdominal Injuries**
- **Shoulder Dislocations**
- **Patella Dislocations**
- **Hip Apophyseal Injuries**
- **Plantar Fasciitis**
- **Medial Tibial Stress Syndrome**

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