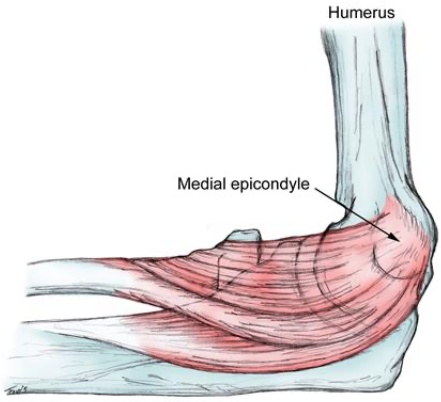
TWIN CITIES ORTHOPEDICS

Medial Elbow

Dr. Jonathan Reid

BACKGROUND

The medial elbow is anchored by the medial epicondyle, a prominent bony projection on the distal humerus that serves as the origin for the common flexor-pronator mass — including a number of extensor muscles. Unlike the lateral epicondyle, the medial epicondyle also gives rise to the ulnar collateral ligament (UCL) complex, specifically its anterior bundle, which is the primary soft-tissue stabilizer against valgus (inward-bending) stress at the elbow. The ulnar nerve runs directly posterior to the medial epicondyle, within the cubital tunnel, making this region clinically significant for nerve entrapment as well as tendon and ligament pathology. Together, the flexor-pronator mass and UCL provide both dynamic and static stabilization against the valgus forces generated during throwing, lifting, and gripping activities. Because of this dual role — muscular origin and ligamentous attachment in one confined area — the medial epicondylar region is a common site of overuse injury, particularly in overhead throwing athletes.



- **Valgus stabilization** — The UCL's anterior bundle resists the significant valgus stress generated at the elbow during the late cocking and acceleration phases of throwing, acting as the primary static restraint.
- **Dynamic muscular support** — The flexor-pronator mass contracts to provide dynamic stabilization against valgus stress, effectively supplementing and offloading the UCL during high-demand overhead activities.
- **Traction/tensile loading** — Repetitive valgus loading creates tensile stress at the medial epicondylar attachment sites, predisposing this region to traction apophysitis in youth athletes and chronic tendinosis or ligament attenuation in adults.

This combination of high mechanical demand and anatomical crowding (muscle, ligament, and nerve in close proximity) makes the medial elbow especially vulnerable to chronic degenerative and traction-type injuries.

- **Medial Epicondylosis** — By far the most common medial elbow pathology; a degenerative tendinosis process termed angiofibroblastic hyperplasia (not true inflammation) of the flexor-pronator mass origin caused by repetitive loading, resulting in a cascade of events: 1) organized Type I collagen is replaced by thinner, weaker Type III collagen in a disorganized manner, 2) proliferation of ground substance (mucoid degeneration), and 3) growth of new blood vessels and nerve fibers. This degenerative process creates a thicker, weaker, and functionally painful tendon.
- **Medial Epicondylitis** — The traditional/older term, implying an acute inflammatory process ("-itis") of the common flexor origin at the medial epicondyle. Still widely used clinically and colloquially "golfer's elbow."
- **Ulnar collateral ligament (UCL) injury/insufficiency —** Attenuation, partial tear, or complete rupture of the anterior bundle of the UCL from repetitive valgus overload (classically in throwing athletes), causing medial elbow pain and instability.
- **Ulnar neuropathy (cubital tunnel syndrome) —** Compression or irritation of the ulnar nerve as it passes posterior to the medial epicondyle through the cubital tunnel, producing numbness/tingling in the ring and little fingers, medial elbow pain.

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- **Medial epicondyle apophysitis ("Little League elbow") —** A traction-related injury to the growth plate (apophysis) of the medial epicondyle in skeletally immature throwing athletes, caused by repetitive valgus stress before the apophysis has fused.

INITIAL MANAGEMENT

Regardless of the specific diagnosis, initial management of injuries to the inside of the elbow start with unloading the tendon or ligament to reduce ongoing stress, along with measures to control inflammation and pain. A home exercise program emphasizing gentle stretching is typically introduced early to maintain flexibility and support the healing process. A formal course of physical therapy is often prescribed as well, progressively strengthening the tendon complex so the person can return to full activity with an elbow that is more resilient and better conditioned for their sport or activity level.

Oral OTC Medications

- **Ibuprofen** (Advil) — For adults and children over 12, 200–400 mg every 4–6 hours (not exceeding 1200 mg per day)
- **Acetaminophen** (Tylenol) — For adults and children over 12, 325-650 mg every 4-6 hrs, (not exceeding 4000 mg per day)
- **Lidocaine patches** (Lidoderm 4%) — Recommended to wear for 12 hours, with 12 hours in between applications

Oral Prescription Medications

- **Meloxicam** (Mobic) — Take one tablet as prescribed with food, do not take this with any other NSAID (e.g., Ibuprofen)

Daily Stretches

- **Wrist extensor stretch** — With the elbow straight, flex the wrist downward, holding the end-range position to stretch the extensor tendons on the outside of the elbow. Your other hand can be used to apply slight, additional pressure down on the wrist.
- **Wrist flexor stretch** — With the elbow straight, extend the wrist upward, holding the end-range position to stretch the flexors on the medial elbow. Your other hand can be used to apply slight, additional pressure, pushing the fingers further up/back.
- **Prayer-to-reverse-prayer stretch** — Starting with palms together at chest height, rotate the hands so fingers point downward, then reverse to fingers pointing upward, moving through wrist flexion and extension.

Physical therapy: Appointments are scheduled by patients calling the location specific scheduling phone number, which can be found on the provided physical therapy card or by going online.

Ultrasound-Guided Corticosteroid Injection

INTERVENTIONAL MANAGEMENT

Conservative management for medial elbow injuries is often successful in alleviating symptoms and helping the body heal. Medial elbow pain that persists despite conservative management, as outlined above, often is indicative of a structural pathology that has not recovered or healed adequately. Depending on the etiology or nature of this structural pathology, additional recovery time may be necessary or an intervention may be required. Reevaluation is likely indicated towards this determination, however, advanced imaging (MRI or Ultrasound) can be helpful to review at the time of reevaluation to better understand the structural pathology.

- Advanced imaging or 0 EMG will likely be recommended at the time of reevaluation. Please reach out to Rhodora **(952-456-7209)** to coordinate the appropriate imaging.

Interventional management is tailored to the structural issue preventing recovery and turn to pain-free activity/sport.

- **Orthobiologic Procedure** — Autologous stem cells or blood products (Platelet-rich plasma) can be used to augment tendon or cartilage recovery
- **Percutaneous Tenotomy (TENJET)**— A minimally invasive intervention that identifies and removes diseased tendon tissue while preserving healthy tendon tissue through guided, high-velocity saline debridement

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- **Open Debridement and repair**— Surgical resection of diseased tendon tissue with potential release and re-insertion with anchor screws to the original tendon origin site
- **UCL Reconstruction** — Commonly known as "Tommy John surgery" involves replacing a torn or insufficient ulnar collateral ligament with a tendon autograft (often from the palmaris longus, gracilis, or hamstring) or allograft, rerouted through drilled bone tunnels in the humerus and ulna to restore valgus stability at the elbow

Notes

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