

Tennis and the Elbow

By

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Common pathologies

- Lateral epicondylitis
- Medial epicondylitis
- Medial collateral ligament injury
- Ulnar neuropathy

Lateral epicondylitis

- 50% of players have it some time in the career
- Age- 30 -40 years
- 13% of elite have condition

Pathology

- Pathological changes seen in the CEO
- Microtrauma → microtears → injury
- Inflammation
- Fibrosis and granulation tissue
- Weakness
- Re-injury

SO ON AND SO ON

Diagnosis

- History
- Objective
 - Tenderness CEO
 - Pain on grip
 - Pain on muscle test- ECRL, ECRB
 - Pain/tight extensor stretch
- Observe technique
 - Most commonly the backhand

Poor *backhand* Technique

- The cause in 38% of time
- Poor body coupling
 - Premature trunk rotation- “opening up”
 - Forearm isolation
- Ball contact
 - Ball not hit anterior- “out in front”
- Insufficient body weight transfer
 - Leaning back

Poor technique cont

- Forearm position
 - Elbow extends before contact
 - Full pronation
 - Ball hit in wrist flex, ulnar deviation
 - Radius head rotates anteriorly against ECRB → bursitis
 - Max contraction of extensors in wrist hyper-pronation flexion ie ECRB
- Increase effort
 - Poor style
 - Poor hand eye co-ordination

Poor *forehand* technique

- Less common than with backhand
- Excessive topspin
 - Impact made with extreme pronation
 - Same tension created as in backhand
- Important to start low, end high

Medial epicondylitis

- Less common than lateral
- Pathology
 - CFO- interface between PT and FCR
 - Similar to lateral
- Diagnosis
 - You know it!
 - Poor technique

Causes

- Commonly involves the serve or overhead shots
 - Increase in valgus stress
 - Increase pronator and flexor activity
- Excessive topspin
 - Increased work in PT
- Shoulder pathology
 - Loss of shoulder range and strength
 - Compensation at cocking phase of serve ie \uparrow elb flex
 - Dramatic increase in valgus forces

Medial collateral ligament

- Insidious onset
- Due to increases in valgus forces in cocking phase off serve and overhead shots
- Less pain in early phase and acceleration
- May accompany ulnar nerve tractioning
- Physical exam

Ulnar nerve neuropathy

- Due to traction, compression or subluxation
- Other medial elbow pathologies
- Position of arm in serve and neural mobility

Rehabilitation

- You know it
- Equipment
 - Mid/large size racquet
 - Light racquet, not head heavy- customise to game
 - String tension 3-5lbs less
 - Natural gut strings
 - Appropriate grip size- ↑ 1/8 inch if too small
 - New tennis balls

- Progress strokes: easy to hard
 - *Lat Epi*- FV, OH, BV, FH, S, BH
 - *Med Epi*- BV, BH, FV, FH, OH, S
- Mediate amount of topspin
- Mediate amount of power used
- Don't forget shoulder
- Coaching for good technique

- END POINT- play 3 consecutive practice sets with nil pain. Takes about 5-7 sessions?