

Common elbow conditions: acute and chronic

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Disclosures

- We have no disclosures that are pertinent to this presentation



Objectives

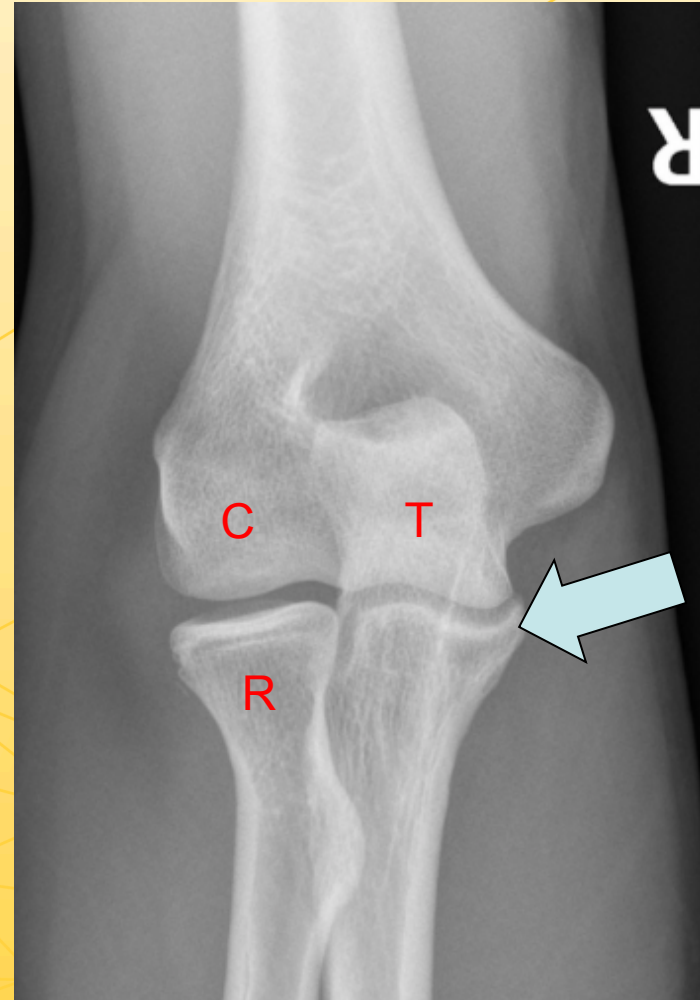
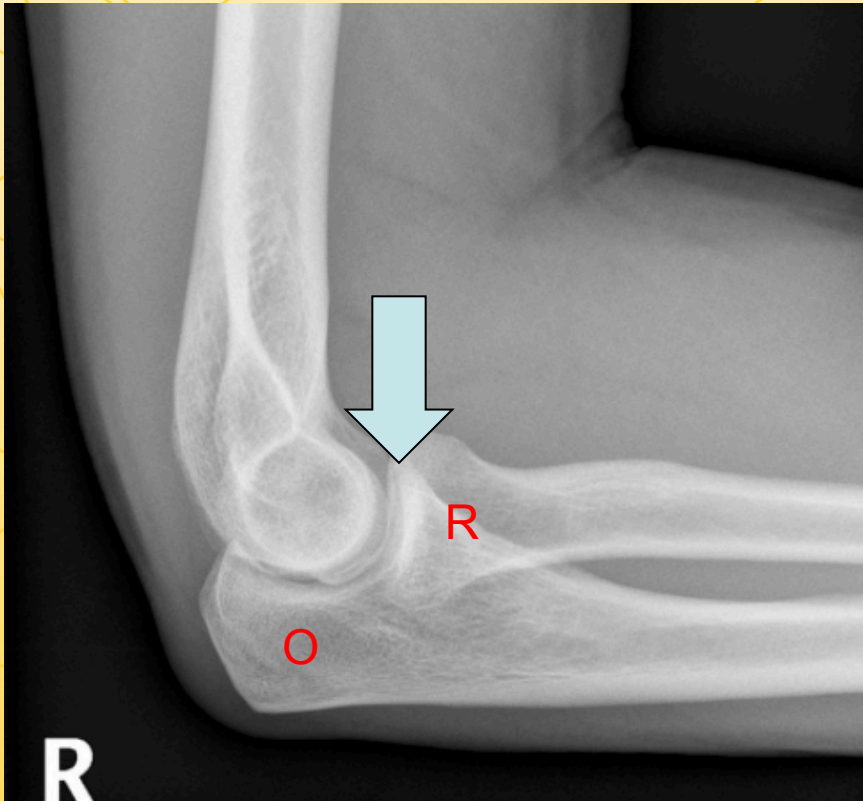
At the end of this session, learners will be able to

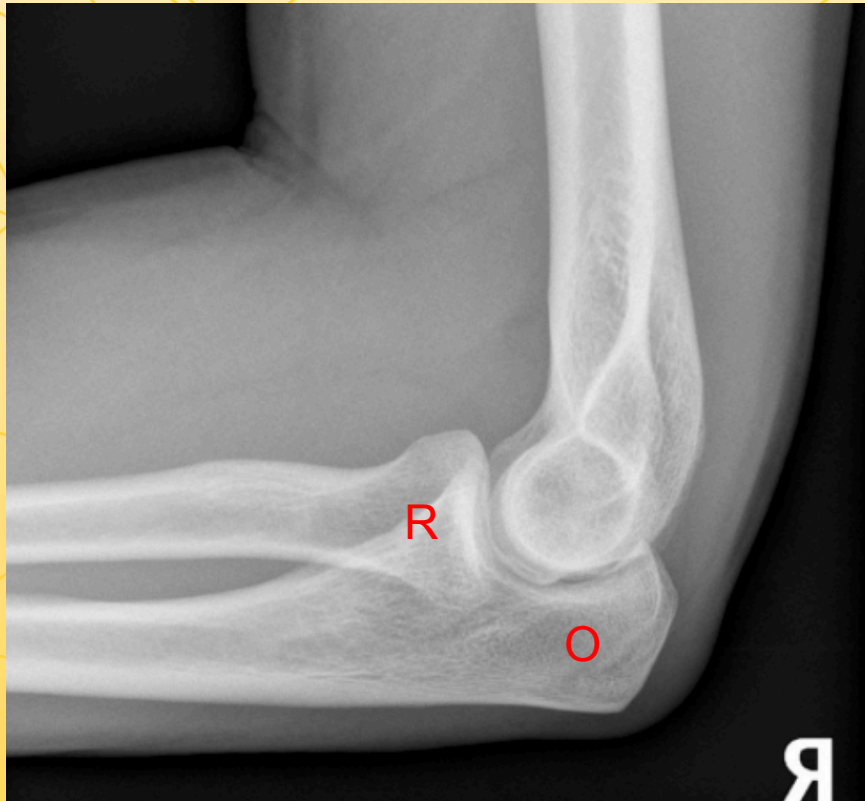
- Identify and initiate care for common acute elbow conditions including radial head fractures and distal biceps ruptures
- Identify and initiate care for common subacute nontraumatic elbow conditions including lateral epicondylitis, radial tunnel syndrome, and cubital tunnel syndrome



- Anatomy review
- Acute elbow injuries
 - Radial head fractures
 - Distal biceps rupture
 - Everything else...
- Subacute/ Chronic elbow conditions
 - Lateral epicondylitis
 - Radial tunnel syndrome
 - Medial epicondylitis
 - Cubital tunnel syndrome





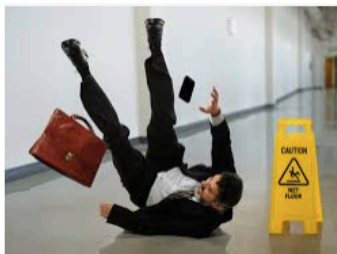


Radial head fractures

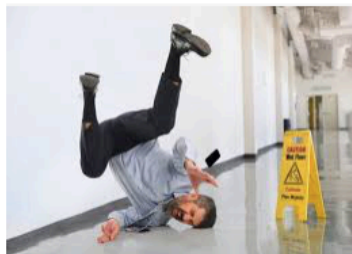
- Common result of a FOOSH injury

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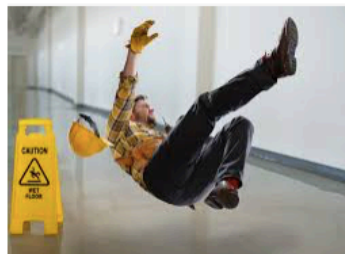
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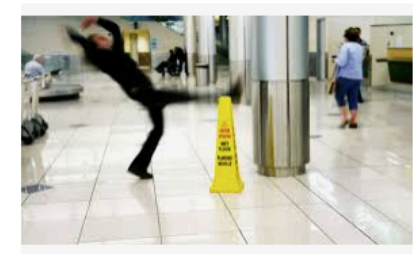
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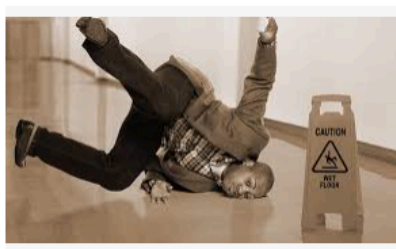
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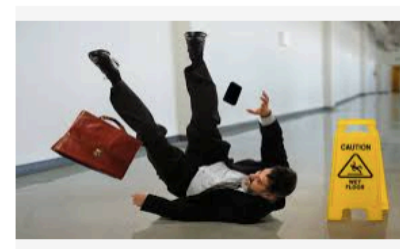
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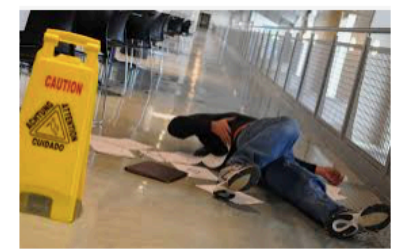
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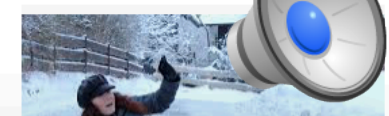
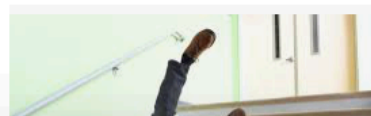
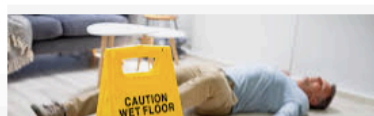
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Radial head fractures: Physical exam

- Moderate elbow swelling
- Difficulty with full active or passive ROM, flexion/extension and rotation
- Tender at the radiocapitellar joint



Radial head fractures: Treatment

- Minimally displaced: sling and early motion
 - Check at one week out to r/o other injuries, make certain no mechanical block to motion (+/- local)
 - CT scan if uncertain of bony injury, MRI if suspect ligamentous injury
- Comminuted or displaced: ORIF or radial head replacement
- Beware of additional injuries
 - Terrible triad



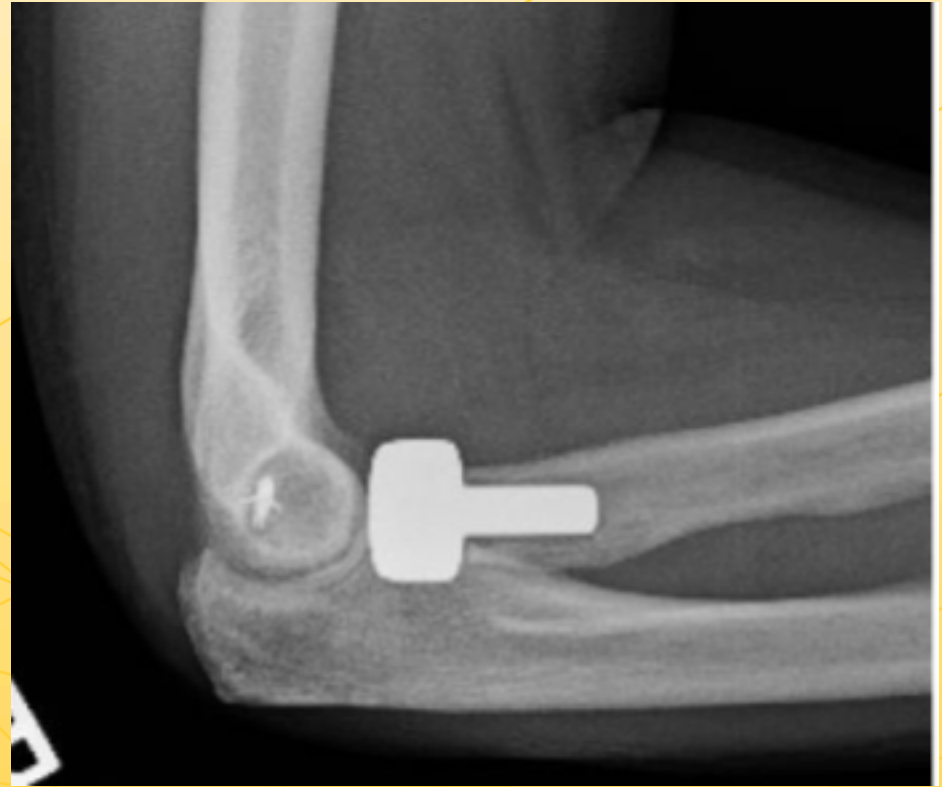


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Many patterns of elbow fractures



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Elbow fractures

- Ulnar nerve problems
- Stiffness
- Instability

Surgical stabilization followed by early motion

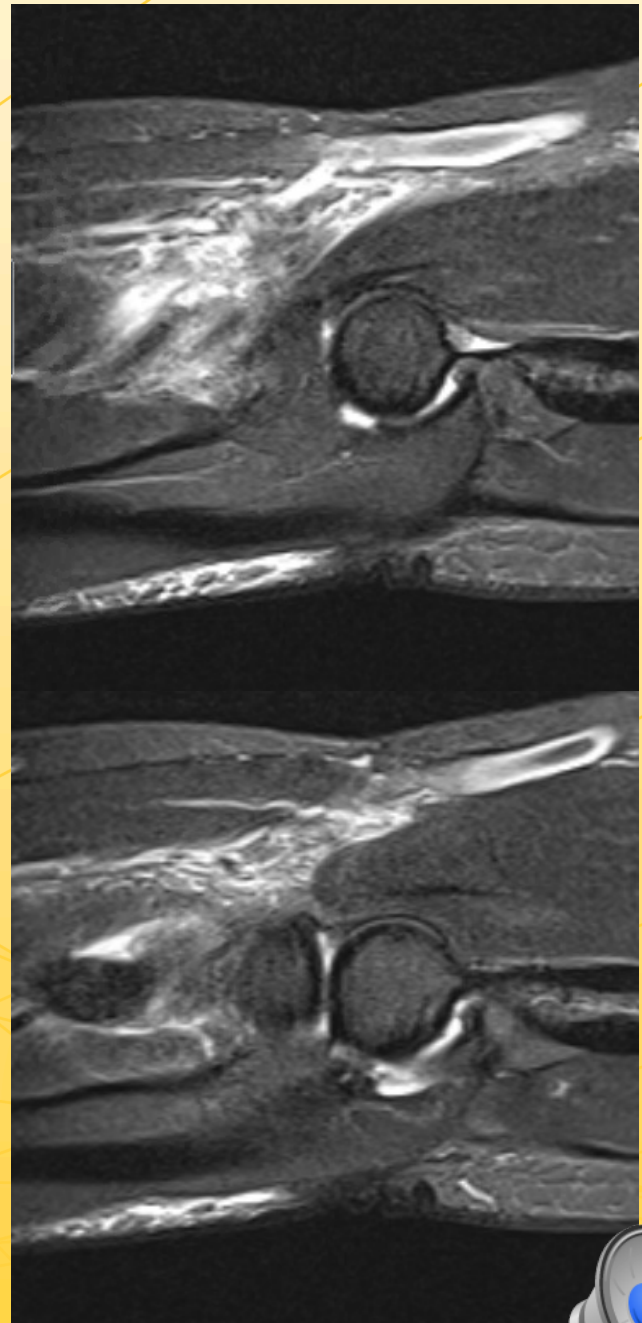
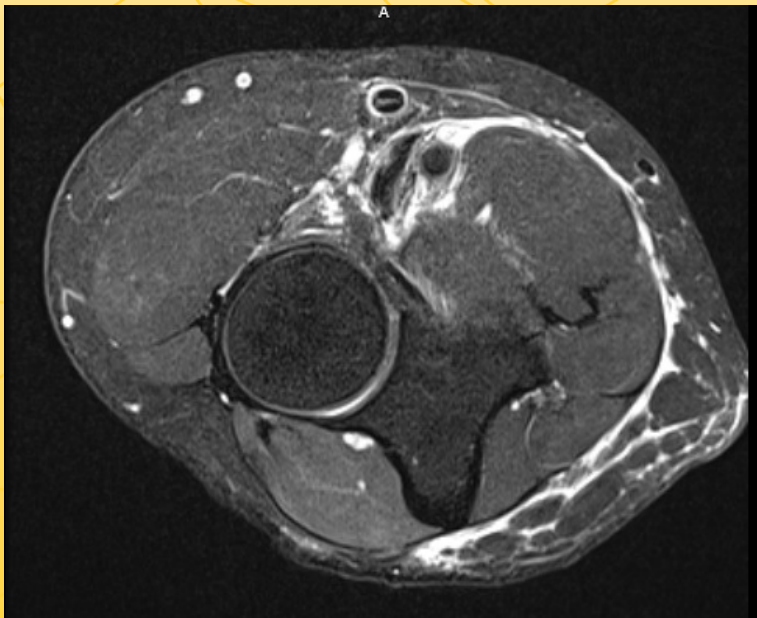
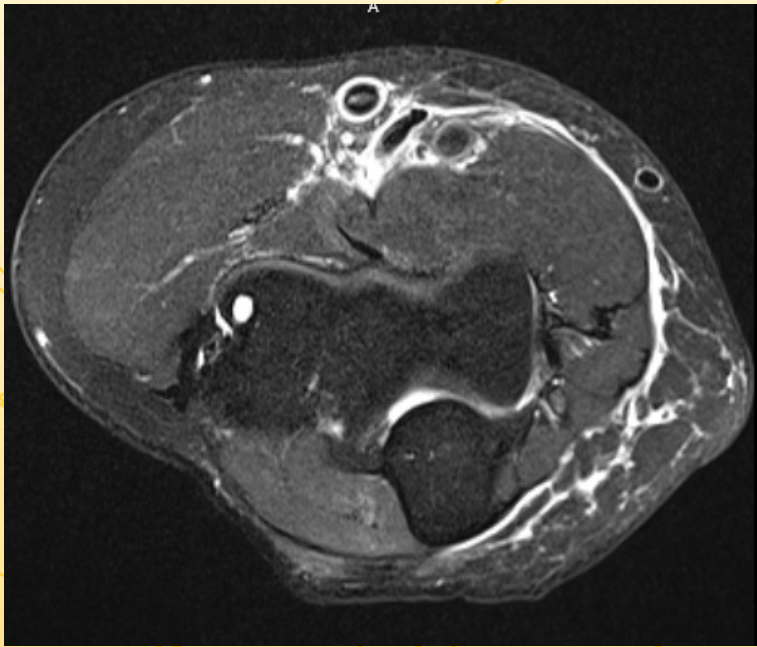
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Distal Biceps Rupture

- Males age 40-60 years
- Often carrying or lifting object and
- On exam
 - Bruising in the antecubital fossa
 - “hook test”
 - Weakness of supination (more so than flexion)
- Xrays typically normal, confirm diagnosis with MRI or ultrasound





Distal Biceps Rupture

- Nonsurgical treatment associated with some lasting loss of supination strength
- Surgical repair easiest within 3 weeks of injury
 - Possible complications include
 - Synostosis
 - Nerve injury (PIN)
 - Lateral antebrachial cutaneous nerve paresthesias
 - Rerupture



Distal biceps tendinosis

- Can be prodrome to rupture
- Pain with supination AND with pronation
- Tender at distal biceps insertion
- MR will show tendinopathy but fibers in continuity
- Rest? Activity modification? Surgical repair?



Lateral epicondylitis (aka tennis elbow)



- Aka tennis elbow, lateral epicondylitis, enthesopathy of the extensor carpi radialis brevis
- Rarely due to tennis activities
- Patients aged 30-65
- Pain with grip and lifting objects
 - Grip strength can be used to diagnose and to track recovery



Lateral epicondylitis (aka tennis elbow)

- Xrays typically normal
 - No need for MRI
 - MRI changes often present in asymptomatic individuals
- On exam
 - Tenderness at the lateral epicondyle (just anterior)
 - Pain with resisted wrist extension with elbow in extension



Lateral Epicondylitis- treatment

- 80-90% resolve with or without treatment within a year
- Bracing
 - counterforce brace, wrist brace
- Physical therapy
- Nitroglycerin patch
- Injection
 - Corticosteroid, autologous blood, prolotherapy, PRP
- Surgery reserved for those with persistent symptoms
 - about 70% of patients with good to excellent outcomes
 - No clinical difference between open and arthroscopic treatment



Radial Tunnel Syndrome

- Nerve compression as the PIN enters the supinator
- Often vague symptoms of dorsal forearm/dorsal hand and wrist pain
- Can coexist with or be confused with lateral epicondylitis



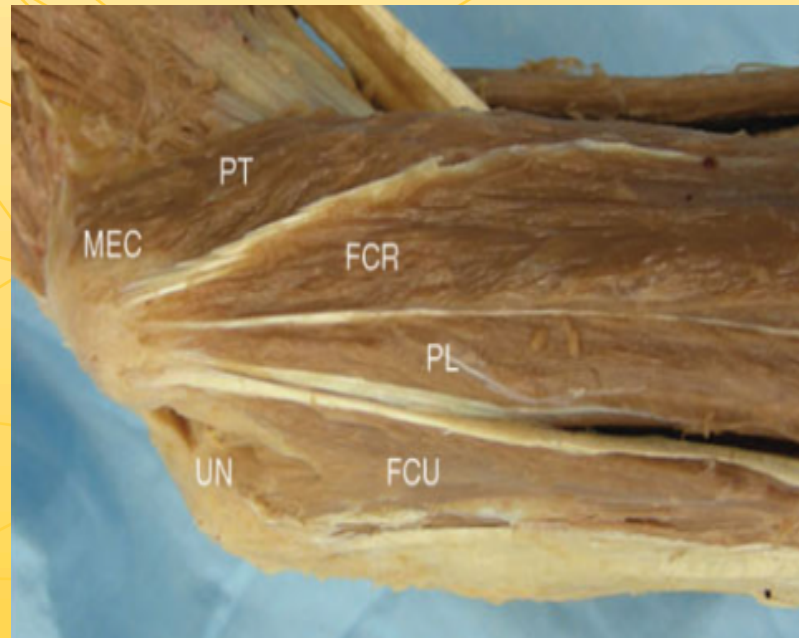
Radial Tunnel Syndrome

- Tenderness at the radial tunnel (about 5 cm distal to the lateral epicondyle) > than lateral epicondyle
- Pain with passive pronation and wrist flexion
- Pain and weakness with resisted long finger extension
- Treatment options: therapy and/or steroid injection, occasionally surgery



Medial Epicondylitis (aka “golfer’s elbow”)

- Pain over medial elbow
- Common in golf, tennis, and throwing athletes



Nirav et al, JAAOS 2015



Medial Epicondylitis

- Xrays to rule out arthritis, UCL calcification
- Tender over medial epicondyle (distinct from cubital tunnel/ulnar nerve)
- Pain with resisted wrist flexion, forearm pronation, grip



Medial Epicondylitis- treatment

- Bracing
 - counterforce brace, wrist brace, elbow splint
- Icing
- Physical therapy
- Injection
 - Corticosteroid, autologous blood, prolotherapy
- Surgery NOT typically recommended, though some reports of successful relief of symptoms.
- Must rule out UCL problems, cubital tunnel syndrome



Cubital tunnel syndrome

- Sensory symptoms in the ring and small finger
 - Monofilament, 2 point discrimination
- Weakness of intrinsic muscles (finger abduction and adduction)
 - Wartenberg's sign (small finger rests abducted)
 - Froment's sign (thumb IP flexion)
 - clawing
- Pain/tenderness/hypersensitivity along the cubital tunnel
- Positive elbow hyperflexion test
- Positive scratch collapse test
- Check for nerve hypermobility





Cubital tunnel syndrome

Sensory symptoms only

- Non surgical treatment
 - Night time splinting
 - Oral medications (gabapentin, low dose amitriptyline)
- Surgery based on patients wishes and degree of symptoms

Motor symptoms

- EMG/NCV test
- Semi-urgent surgical intervention (don't wait for months)
 - In situ cubital tunnel release
 - Ulnar nerve transposition
- Consider nerve transfer (refer to specialist)



THANK YOU!

