Common Work-Related Shoulder Conditions & Treatment

2024 Governor's Conference
Butte MT

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Objectives

- Understand the basic anatomy of the shoulder
- Describe the spectrum and complexity of shoulder injuries
- Discuss conservative treatment recommendations for shoulder injuries
- Discuss surgical treatment recommendations for shoulder injuries
- Understand realistic recovery timeframe expectations

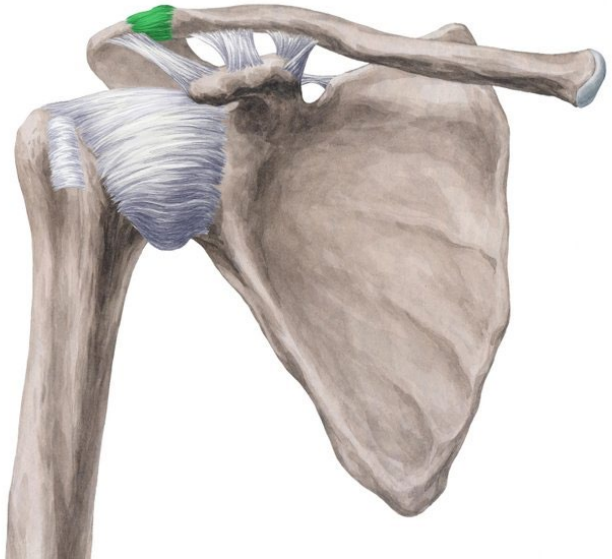
Background

- Grew up in Butte/Columbia Falls
- Undergrad: MSU- Bozeman
  - Met wife
- Medical School: Univ. of Washington via MT WWAMI program
- Residency: Univ. of Vermont Medical Center – Burlington, VT
- Fellowship: UCLA- Sports Medicine
  - Football, Women's water polo, Men’s Golf, Women's Tennis, Lakers

Shoulder Anatomy

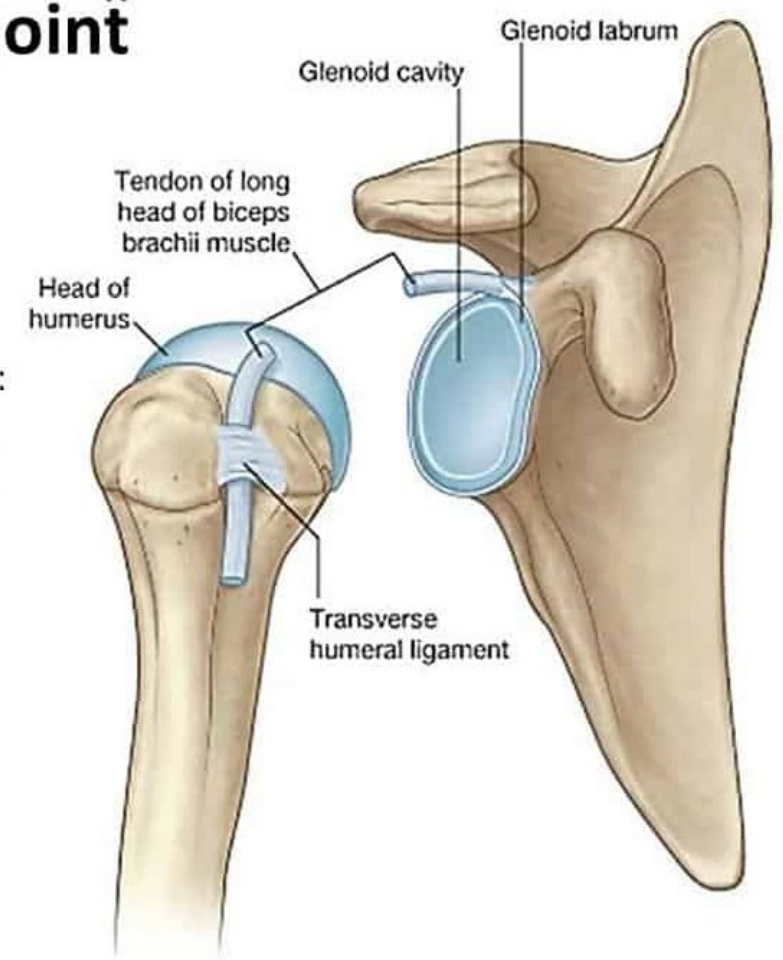
Surrounding Structure

- Long head of biceps tendon
- Labrum
- AC joint
- Subacromial bursa



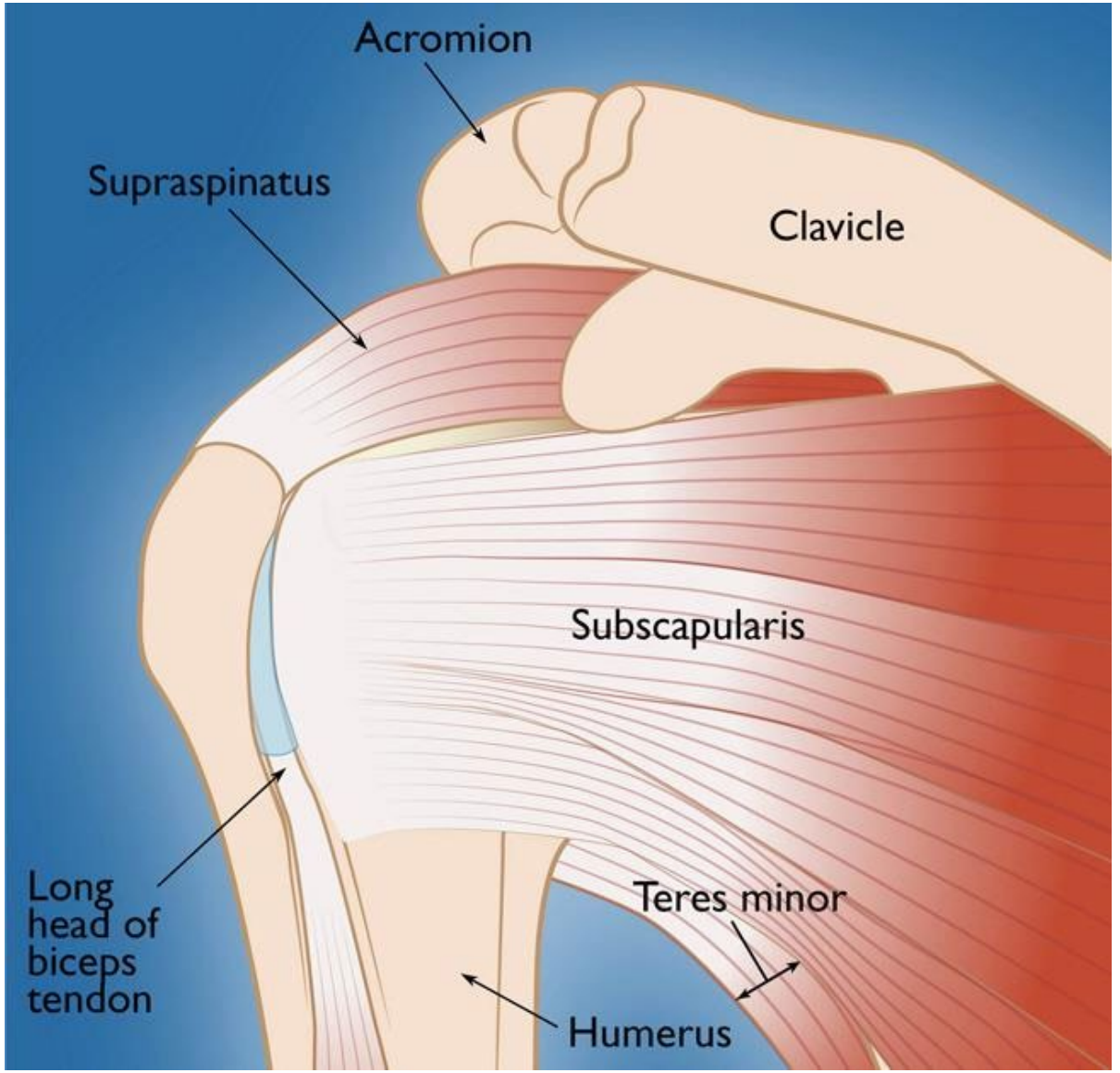
Glenohumeral joint

- Articular surface
- Synovial ball and socket articulation
- hyaline cartilage
- Joint stability is provided by:
  - rotator cuff muscles,
  - long head of biceps brachii
  - extracapsular ligaments.
- Movements: flexion, extension, abduction, adduction, medial rotation, lateral rotation, and circumduction.



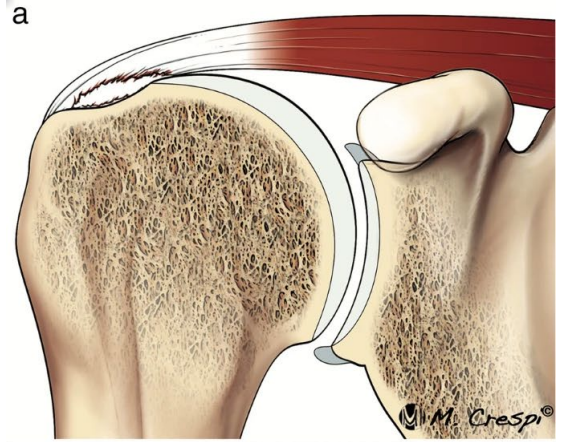
Rotator cuff

- Supraspinatus
- Infraspinatus
- Teres minor
- Subscapularis



Shoulder Injuries

Rotator cuff tears
Acute traumatic versus degenerative



https://insightsimaging.springeropen.com/articles/10.1186/s13244-024-01607-w

Rotator cuff tears-conservative treatment

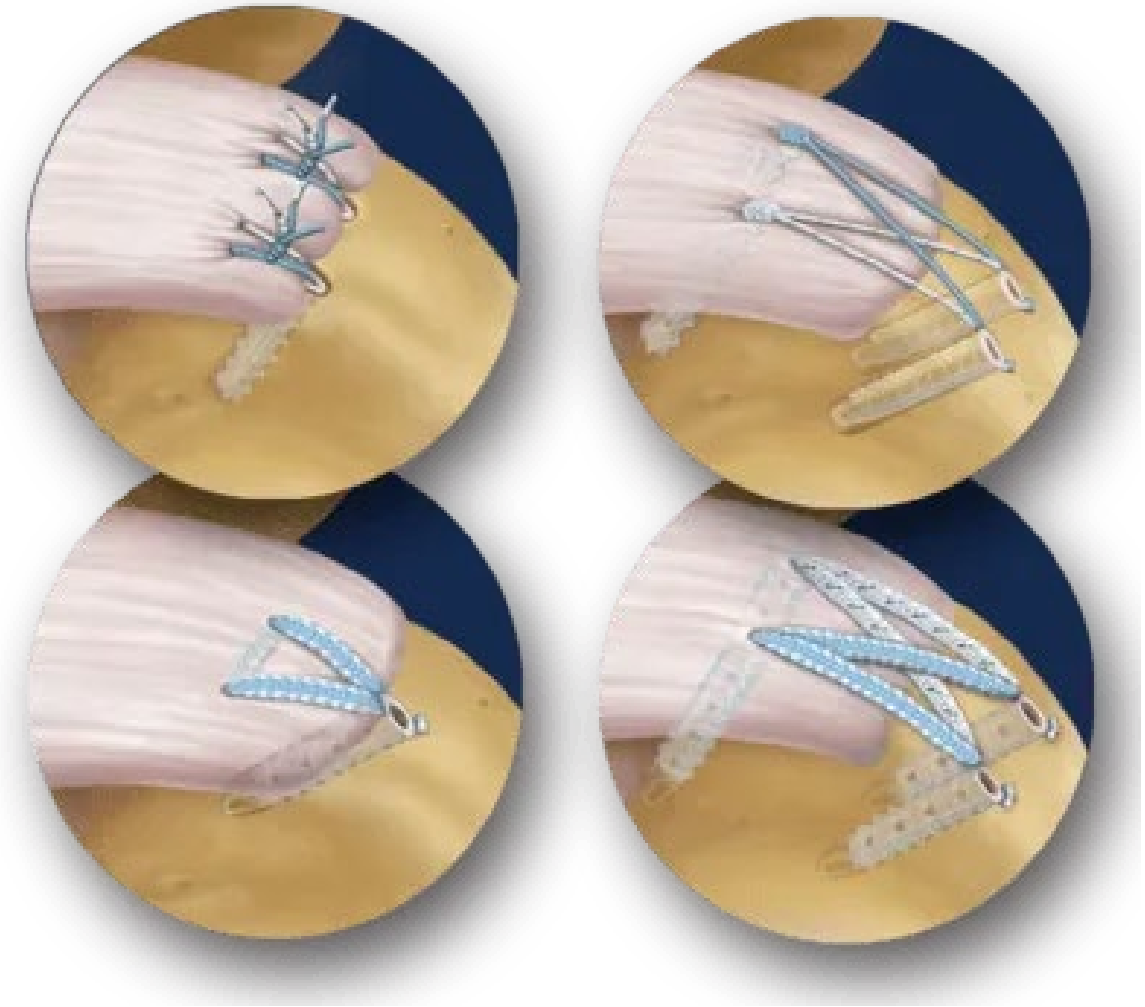
- Many partial tears (low grade)
- Bursal versus articular sided
- Limited ability to heal
- Natural History—> Progressive
- Sling for two weeks
- Injection***
- Progressive PT and loading program
- Expected recovery 3 months
- MMI 3-6 months

Rotator cuff tears- surgical treatment

- Common reason patients need surgery in 50-70 year olds
- High grade partial versus complete
- Traumatic tears treated acutely do better
- Pain relief is predictable with surgery
- Function is less predictable with surgery
- MMI 12 months

Rotator cuff tears- surgical treatment

- Arthroscopic versus open
- Large variation in tear size, pattern, chronicity
- Not all rotator cuff repairs are created equal

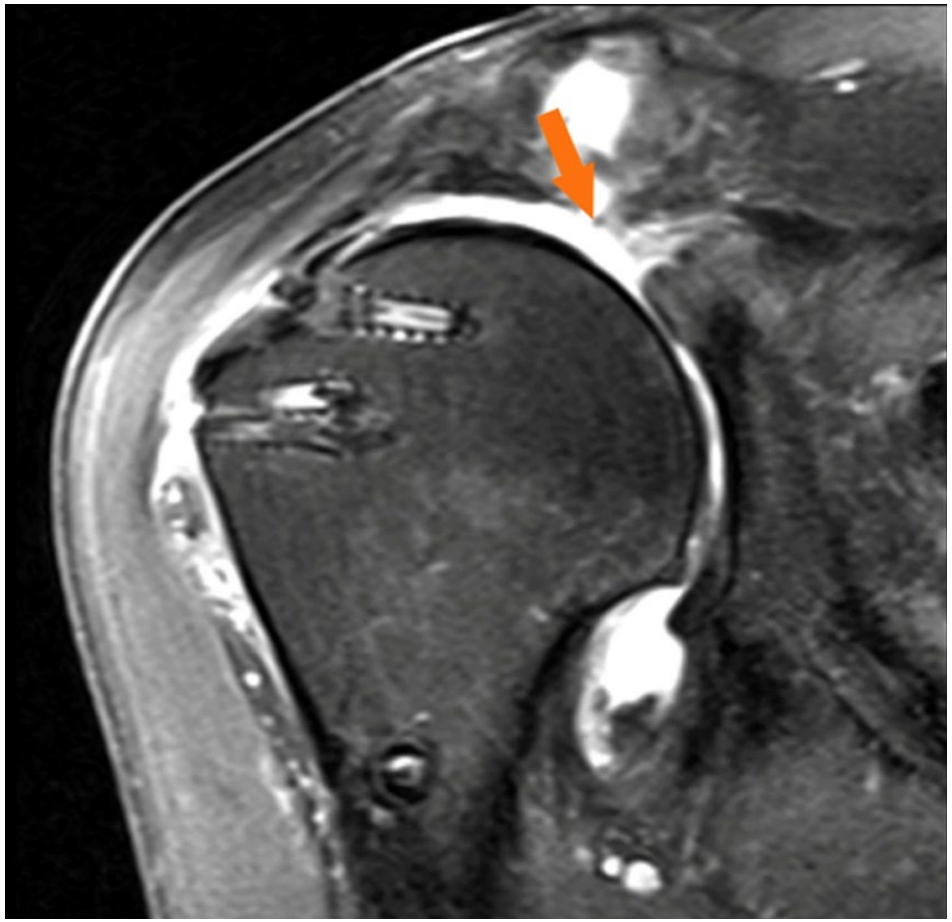


Rotator cuff tears- rehabilitation

- Slow recovery
- Sling x 6 weeks
- Start PT @ 2 weeks
- Full ROM by 12 weeks
- Full strength by 12 months
- 3-6 months of formal PT

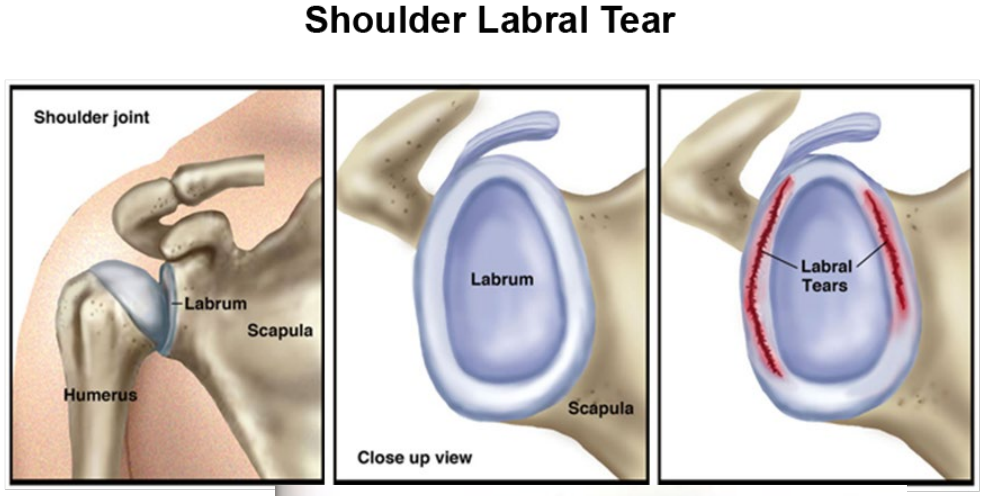
Recurrent rotator cuff tears

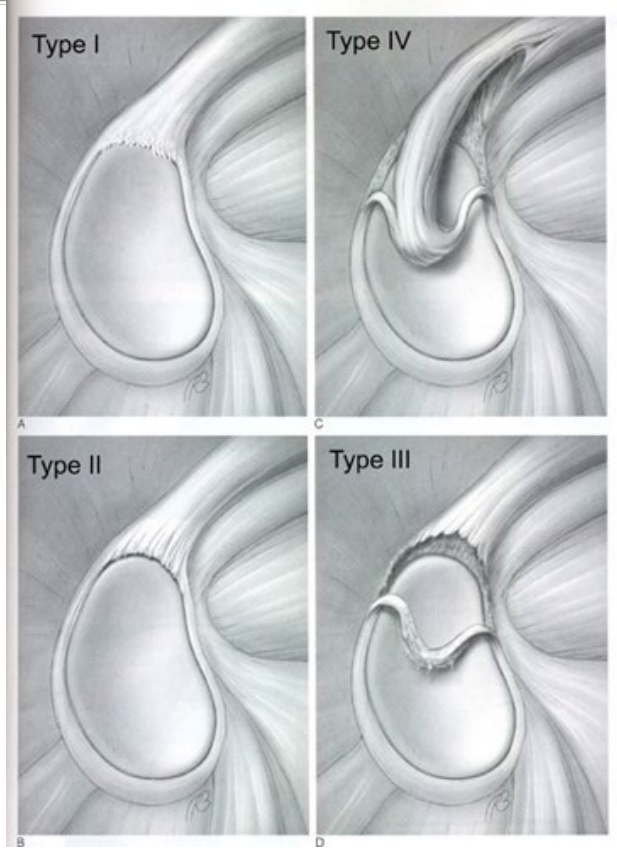
- Usually tissue fails
- Risk factors
  - Smoking
  - Diabetes
  - Age greater than 65
  - Non-compliance
  - Large, multi-tendon tears with retraction



Labrum tears

- Often associated with instability event
- Surgical treatment depends on location
- Traumatic versus degenerative
- Rarely need surgery when associated with arthritis/degeneration





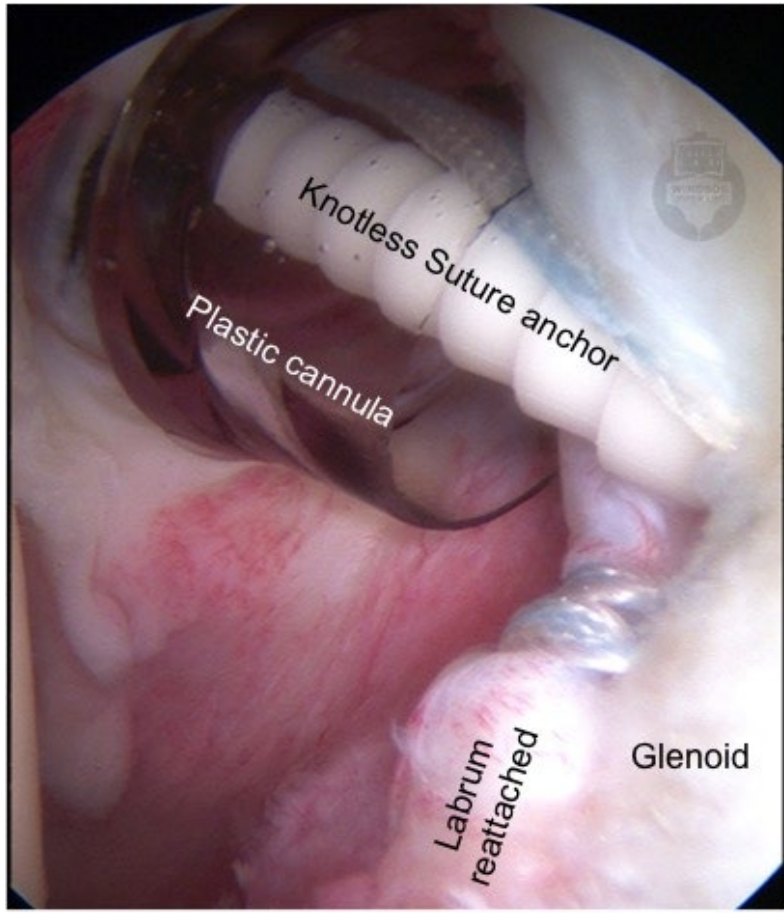
https://www.choosept.com/guide/physical-therapy-guide-shoulder-labral-tear

Labrum Injury- conservative treatment

- Rehab progressive strengthening after a short period of immobilization
- Nonsurgical
  - Partial
  - Degenerative
  - Symptom severity

Labrum injury- surgical treatment

- Repair versus debridement

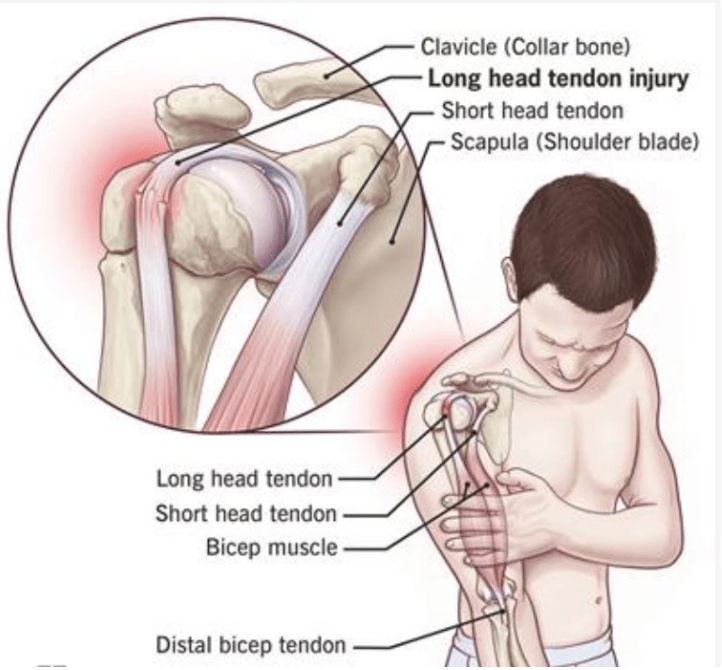


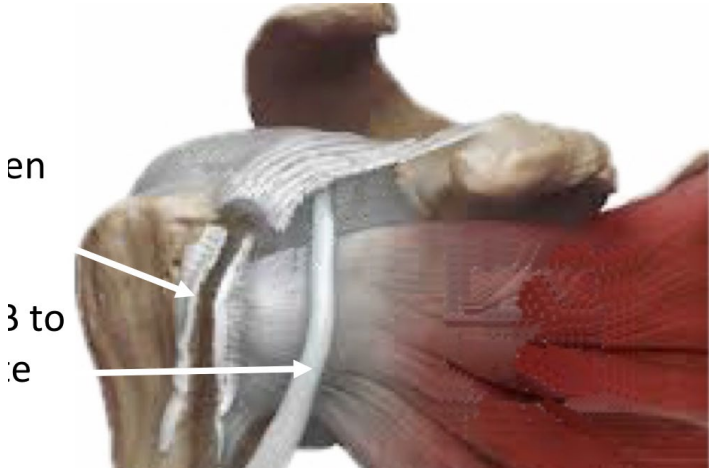
Labrum Surgery Rehabilitation

- Repair
  - Sling x 6 weeks
  - Full ROM at 3 mo
  - Full recovery by 6 mo
- Debridement
  - Sling x 2 weeks
  - Full Rom at 6 weeks
  - Full recovery by 3 months

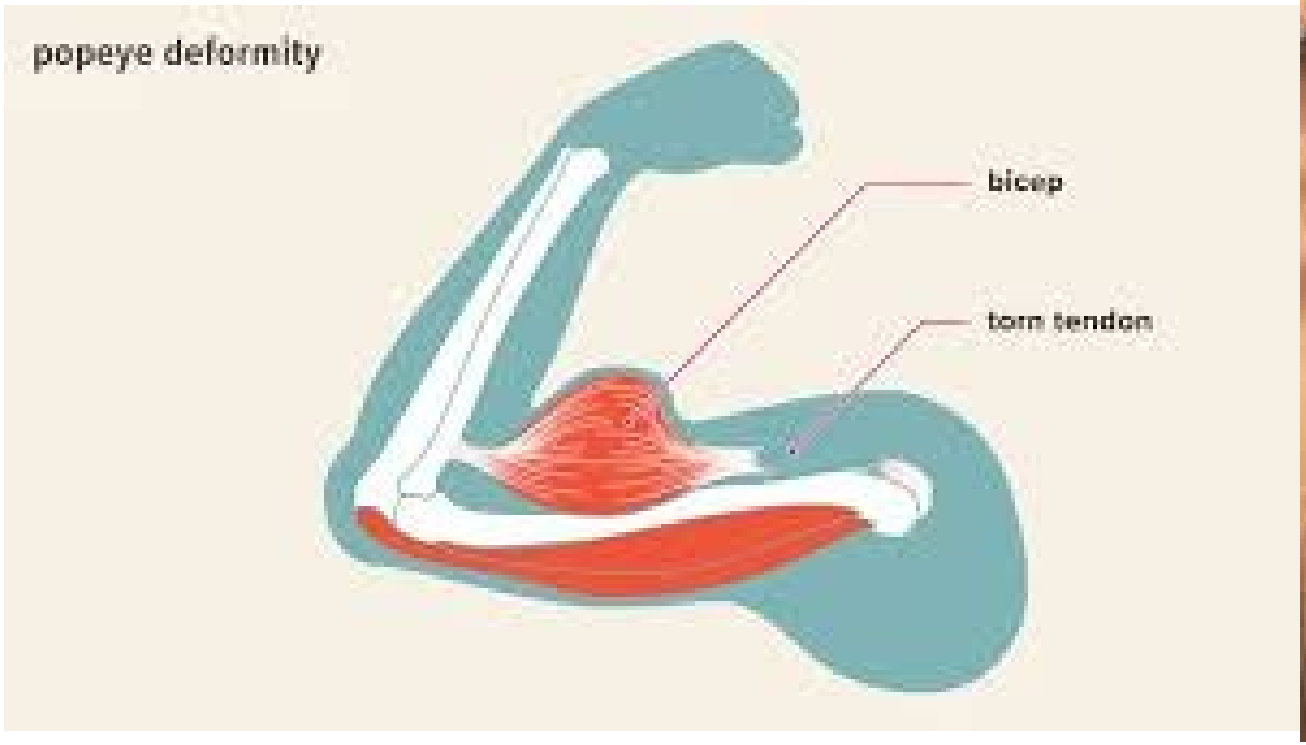
Long head bicep tendon injury

- Rupture
  - Usually non-op
  - Popeye deformity
- Tendonitis
- Partial tears hurt more than full tears
- Subluxation
  - Usually associated with an upper border subscapularis tear



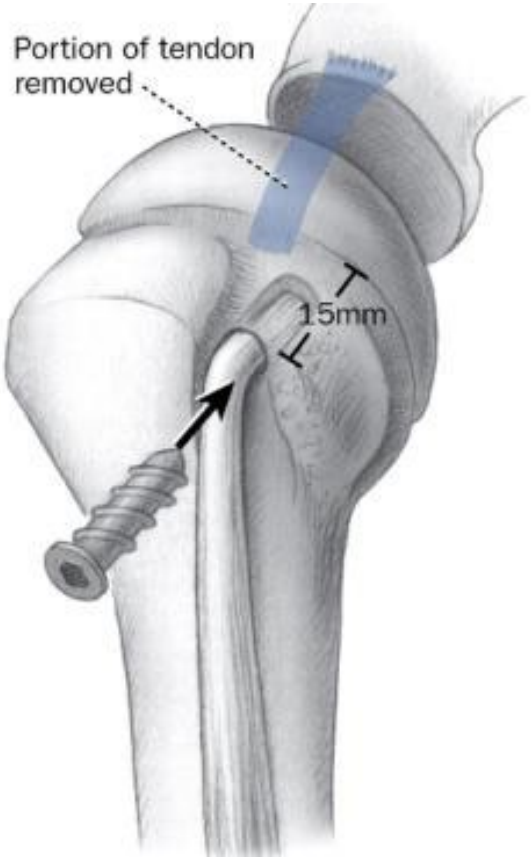


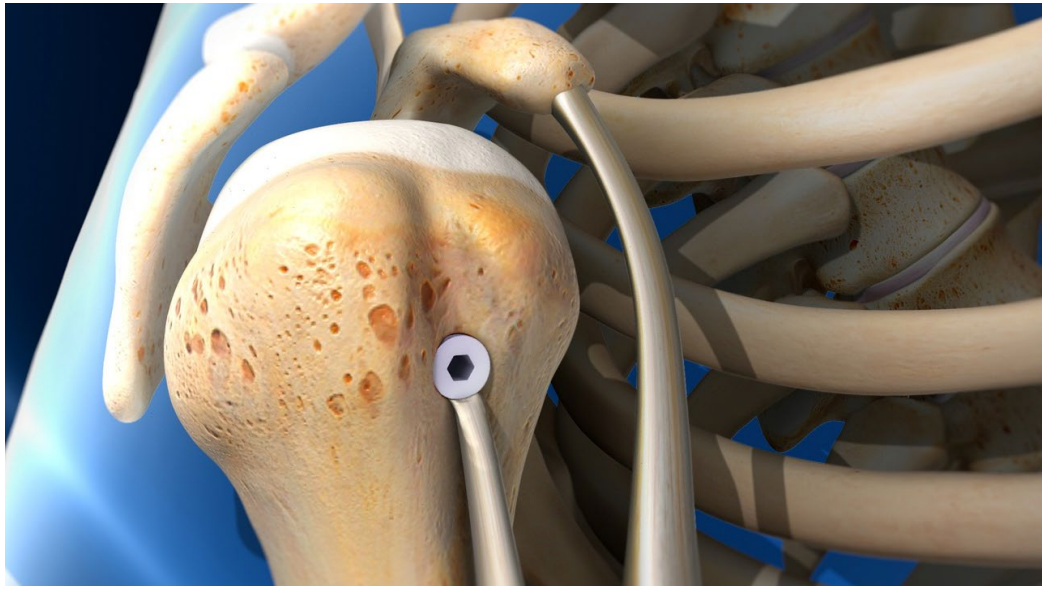
Popeye Deformity

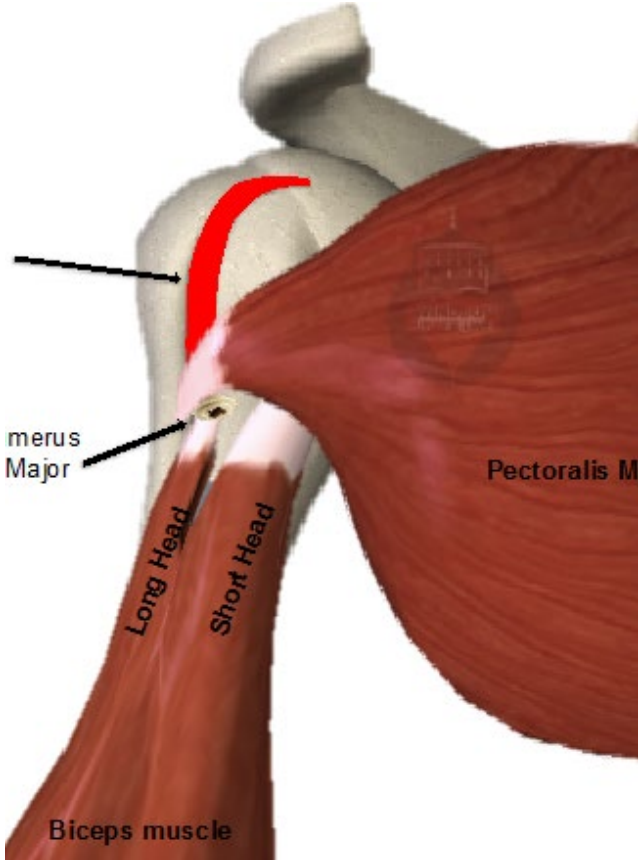


Biceps tendon injury - Surgery

- Biceps tenodesis

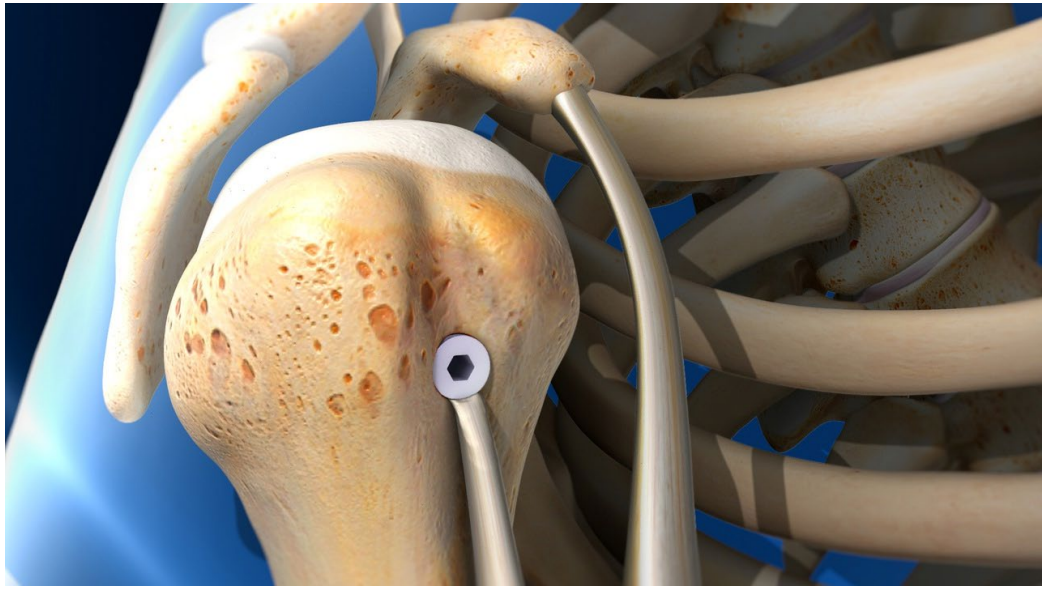






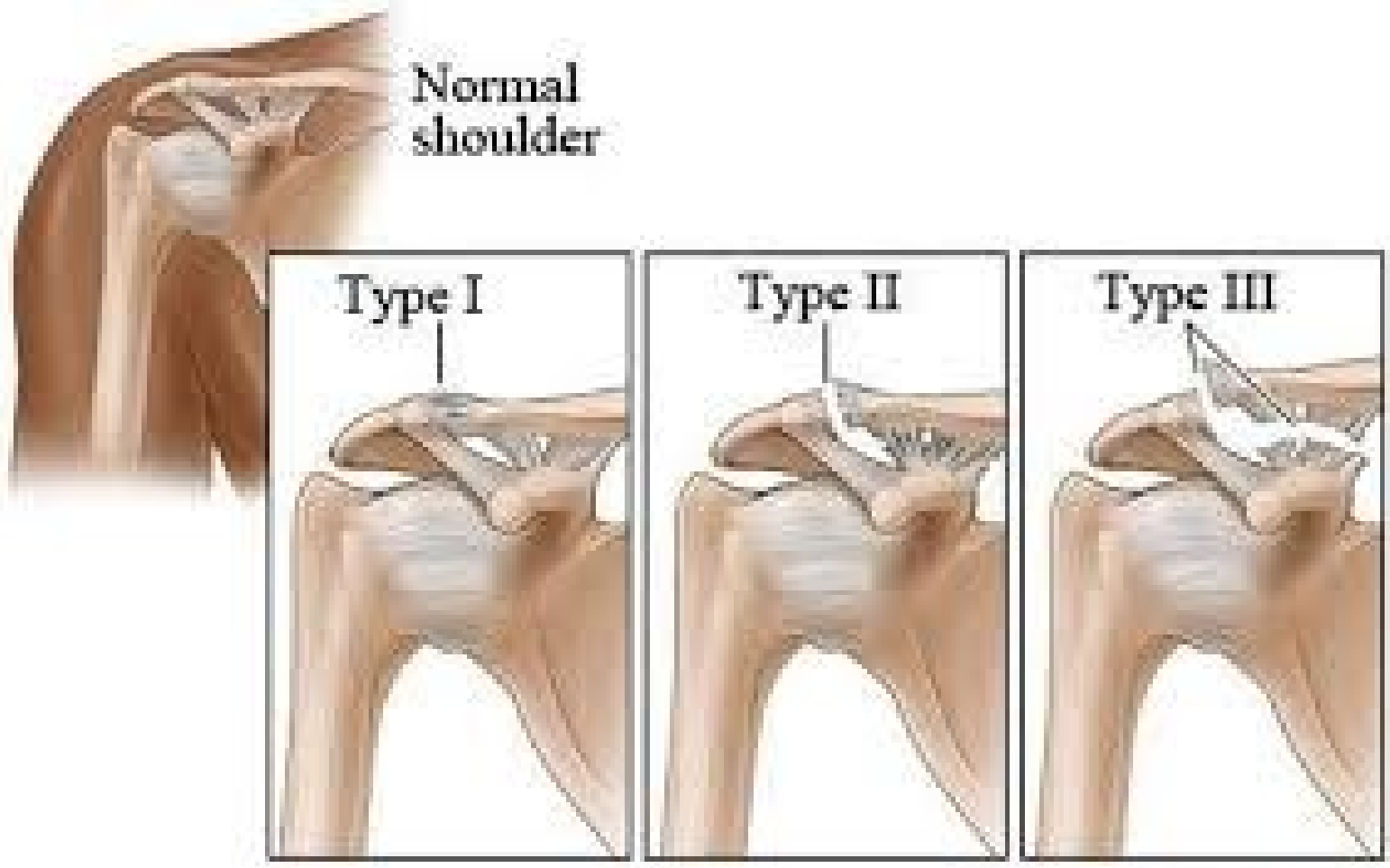
Biceps tenodesis- Rehab protocol

- Sling x 2 weeks
- Full ROM by 6 weeks
- Full Recovery 3-4 months



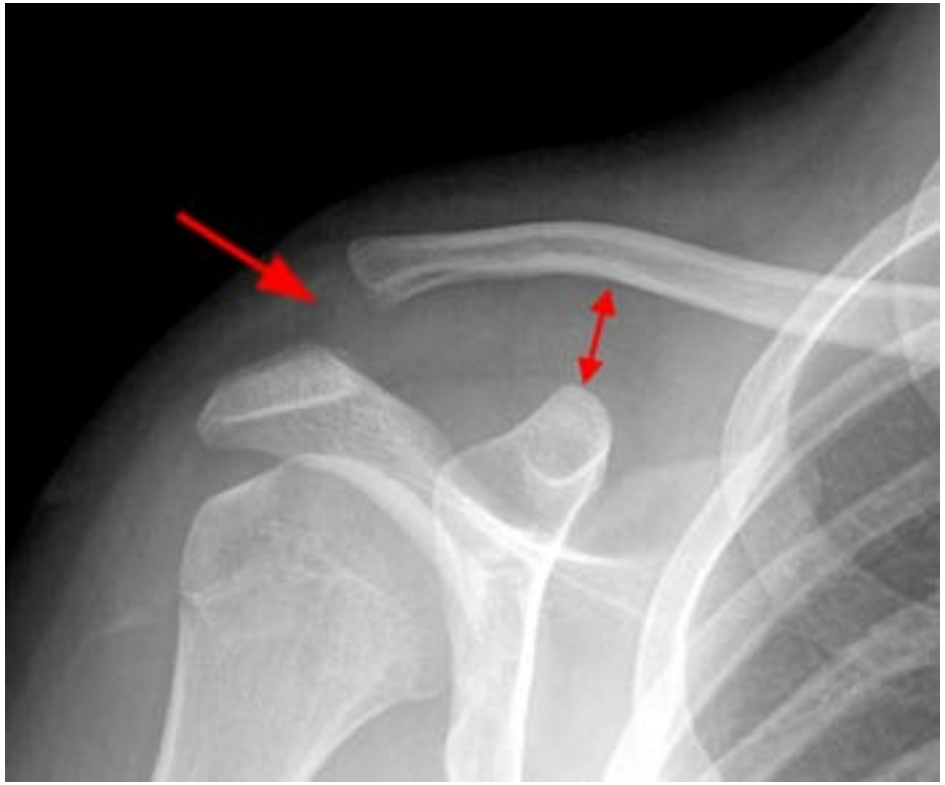
AC joint injury

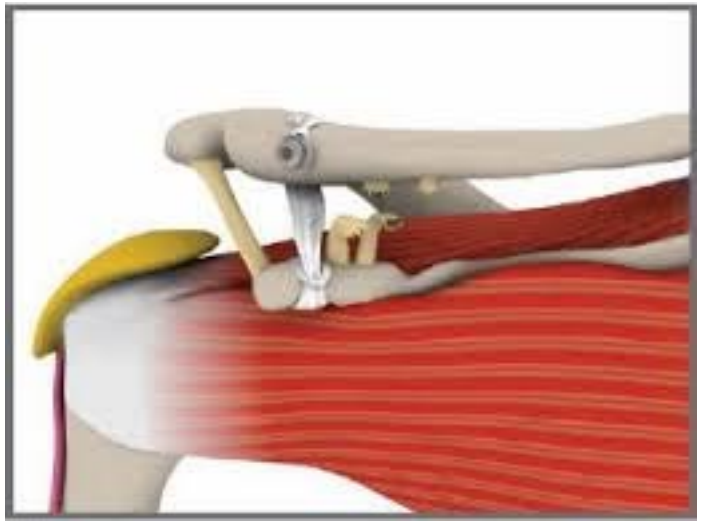
- Almost always traumatic
- Spectrum of severity
- Most are treated non-surgical
- Treatment: sling 2-4 weeks then PT
- 3 month total recovery



AC joint injury- Surgical

- Acute versus chronic reconstruction
- Sling 6 weeks
- Full ROM 3 months
- Full recovery 6 months





Fractures

- Many managed non-surgically
- Indications for surgery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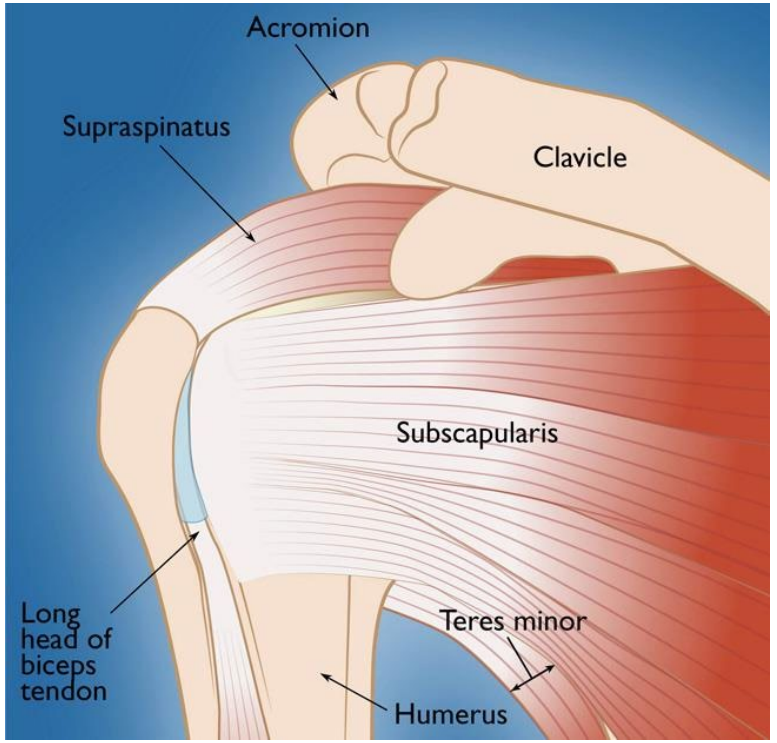
Fracture recovery

- 6 weeks immobilization
- Progressive ROM and strength
- Concomitant nerve injury or patient co-morbidies can delay healing
- Can have some residual permanent impairment
  - Stiffness
  - Pain
  - Need to have hardware removed after fracture heals

Summary

- Many rotator cuff repairs take a full year to heal
- Most smaller shoulder injuries (AC joint, biceps tenodesis, labral repairs, clavicle fractures) take 6 months to fully heal
- Many shoulder injuries can be successfully managed conservatively with immobilization, work modification, time and physical therapy
- Patients with shoulder injuries can be very rewarding to take care of



Thank you

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