SEAVIEW ORTHOPAEDIC
& Medical Associates

INSTABILITY OF THE SHOULDER: CURRENT CONCEPTS

WHERE ARE WE NOW AND HOW DID WE GET HERE?

CHRISTOPHER J. SPAGNUOLA, MD

SPORTS MEDICINE-SHOULDER, ELBOW & KNEE SPECIALIST

DISCLOSURE

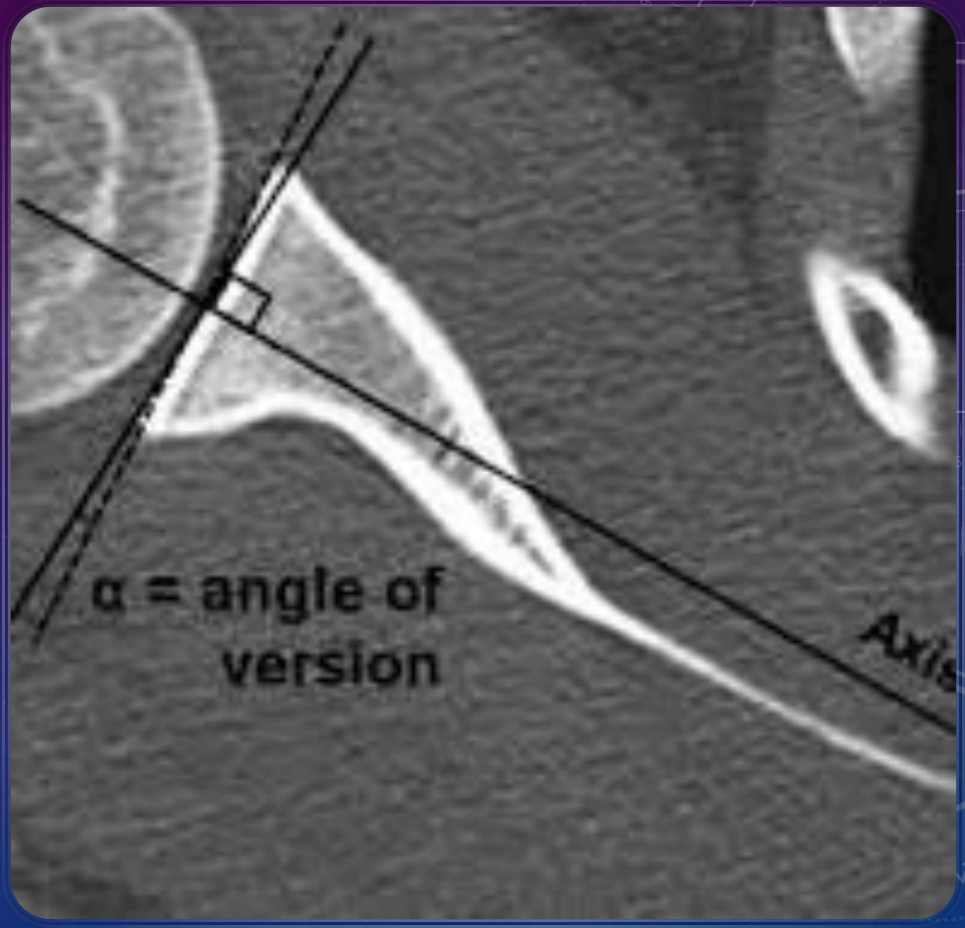
I have no actual or potential conflict of interest in relation to this program/presentation.

ANATOMY OF THE SHOULDER

- Bone Structure
- Ligaments
- Labrum
- Muscles

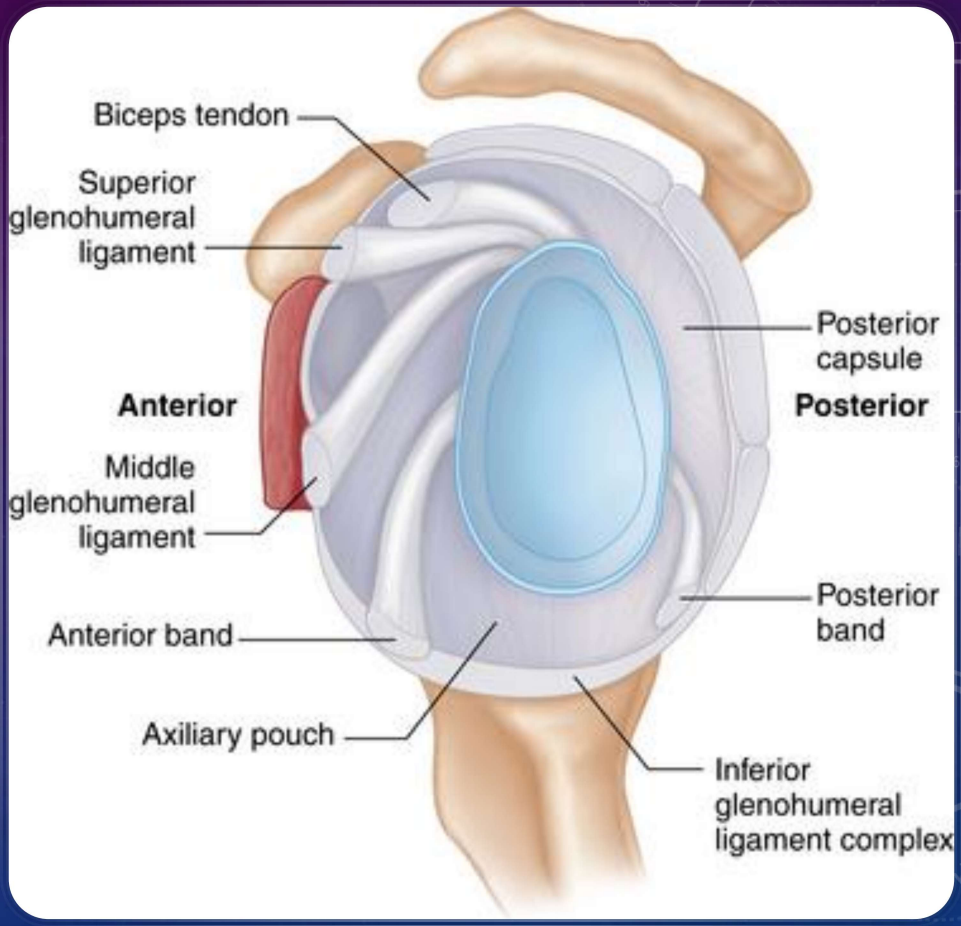
ANATOMY OF THE SHOULDER

- Bone Structure
  - Humeral Head- articular surface area much larger than the glenoid making the glenohumeral joint inherently unstable
  - Glenoid- retroversion 10 deg, more anteversion can increasing anterior instability, slightly superior tilted decreasing inferior instability



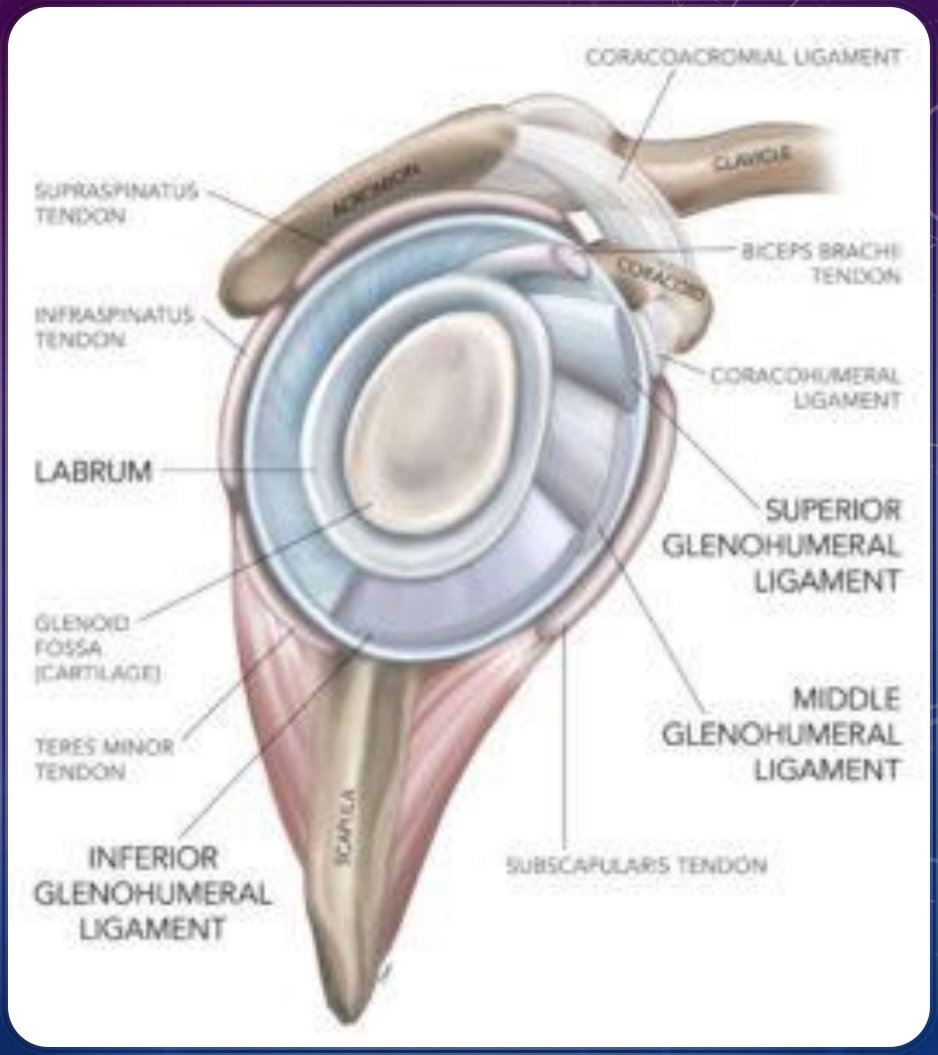
ANATOMY OF THE SHOULDER

- Ligaments
- Anterior Inferior Glenohumeral Ligament- primary stabilizer to anterior translation with arm abducted and externally rotated
- Posterior Inferior Glenohumeral Ligament- primary stabilizer to posterior translation with shoulder internally rotated
- Middle Glenohumeral Ligament- primary stabilizer to anterior translation with the arm abducted 45deg.
- Superior Glenohumeral Ligament- primary stabilizer to inferior translation



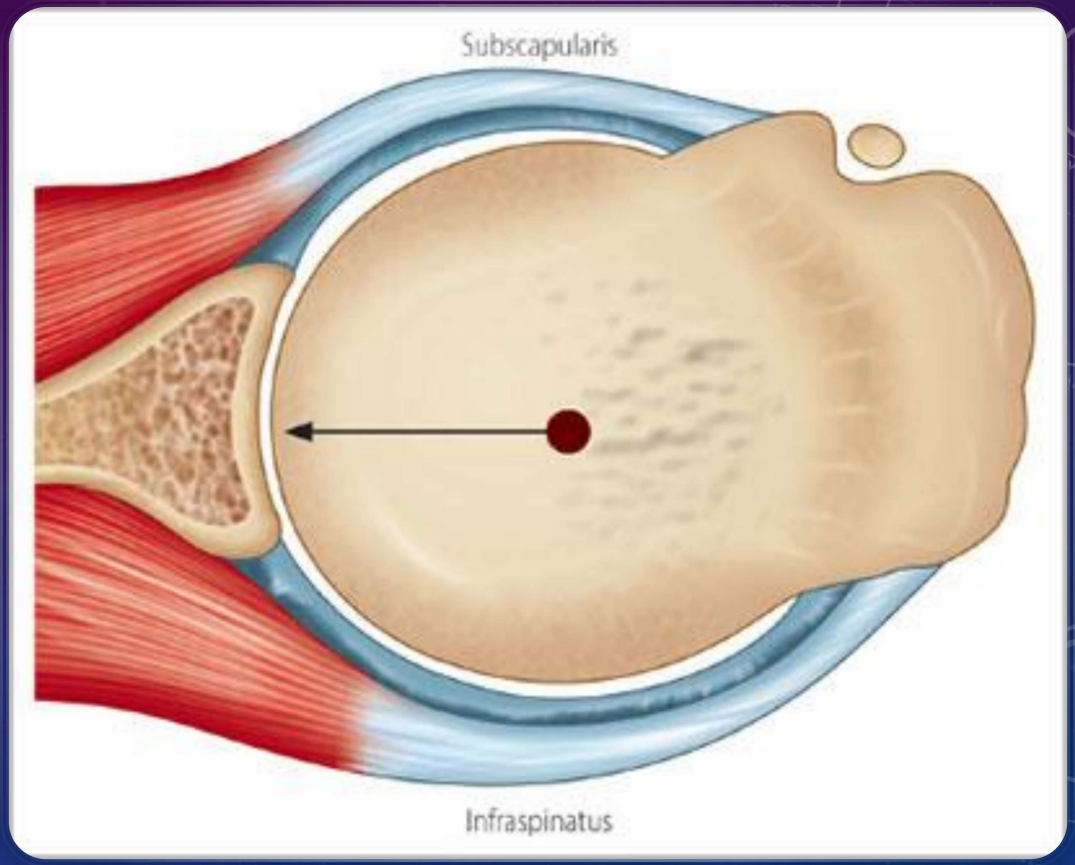
ANATOMY OF THE SHOULDER

- Labrum
  - Static stabilizer
  - Deepens Glenoid 5mm anterior.-posterior and 9mm superior to inferior
  - Attachment stie for Gloenohumeral ligaments
  - Creates a buttress to help resist humeral subluxations



ANATOMY OF THE SHOULDER

- Rotator Cuff Tendons
  - Create dynamic stability
  - Concavity Compression



MECHANISM OF INJURY

- Traumatic
  - Excessive force with Abduction and External Rotation- Anterior
  - Inferior distraction
  - Violent Adduction with forward flexion and Internal Rotation- Posterior, frequently missed on exam

SHOULDER DISLOCATION VIDEO

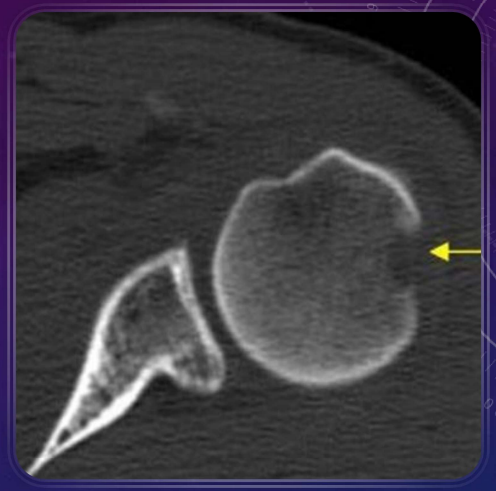
Source: Adelaide Football Club - https://www.youtube.com/watch?v=VNOmuFzfkng

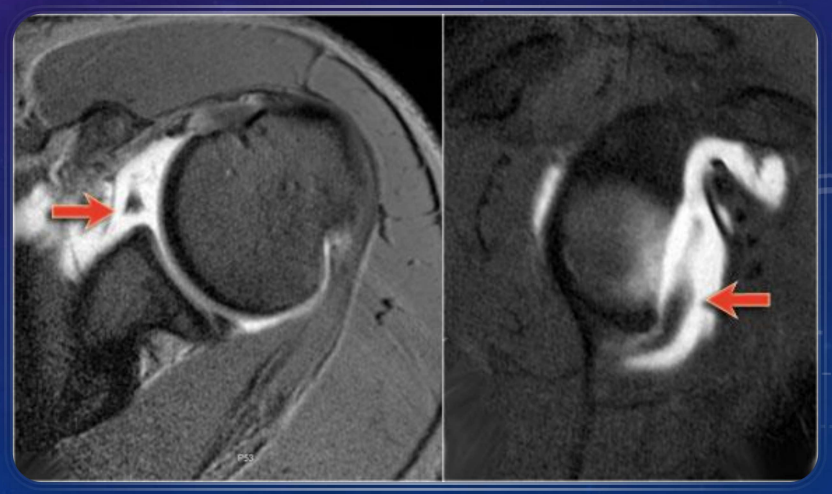
EVALUATION

- Inspection- look for deformity and dimpling of the skin
- Palpation- assess for tenderness to the touch (fractures)
- ROM- usually arm is held in Adduction with Internal Rotation, PROM and AROM decreased
- Check pulses- vascular injury, laceration to the Axillary artery
- Neurologic Exam- Neuropraxia involving the Brachial Plexus or Axillary Nerve

RADIOLOGIC STUDIES

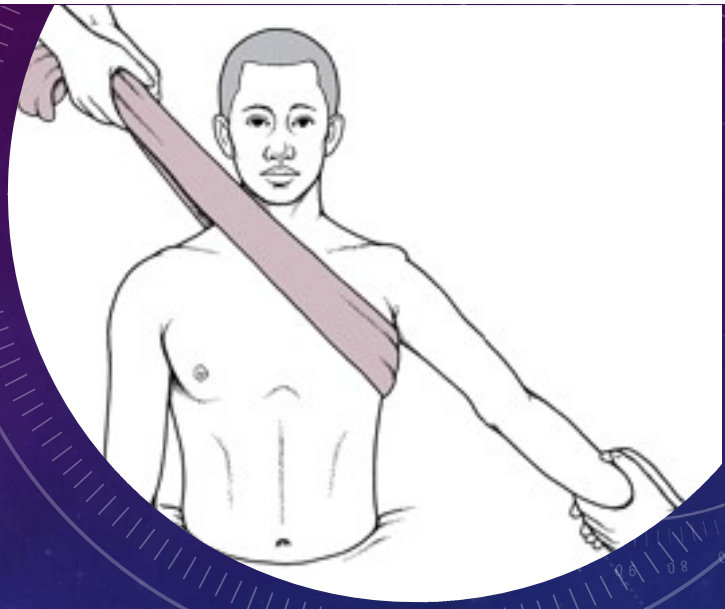
- X-rays- confirms dislocation and rules out fractures
- MR arthrogram- assesses labrum and rotator cuff
- CT scan- allows for evaluation of bone loss in Glenoid and size of a Hill-Sachs lesion





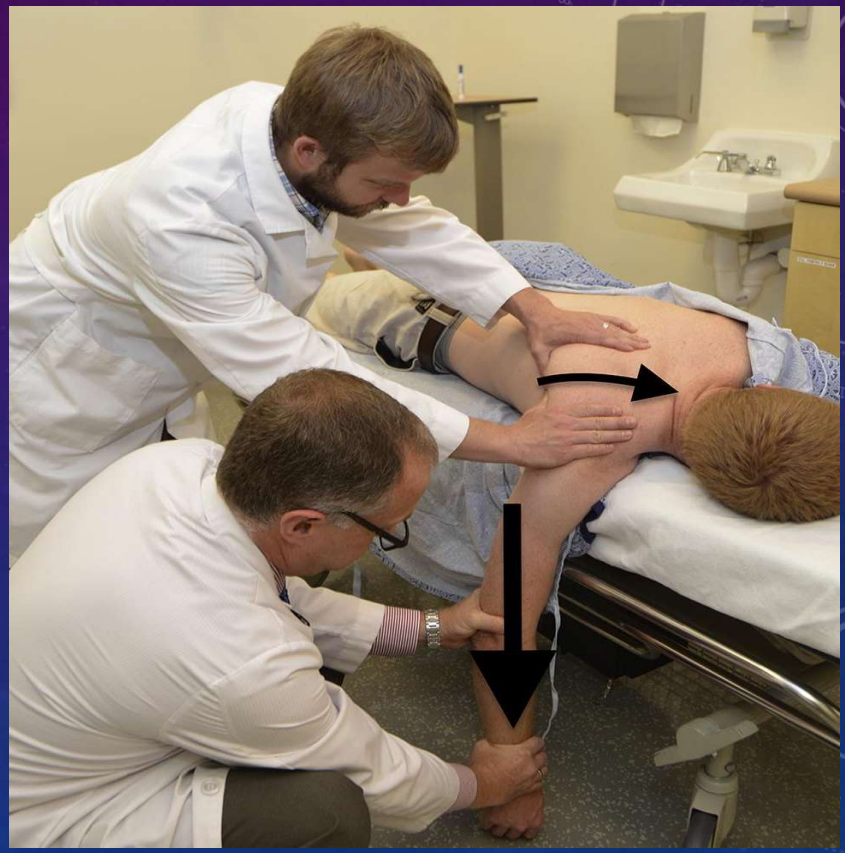
REDUCTION TECHNIQUES

- Traction- Counter traction



REDUCTION TECHNIQUES

Stimson Technique



Source: CliniSnips - Youtube
https://www.youtube.com/watch?v=Z9CO6Gd-23A&feature=emb_logo

REDUCTION TECHNIQUES

SELF REDUCTION

REHABILITATION

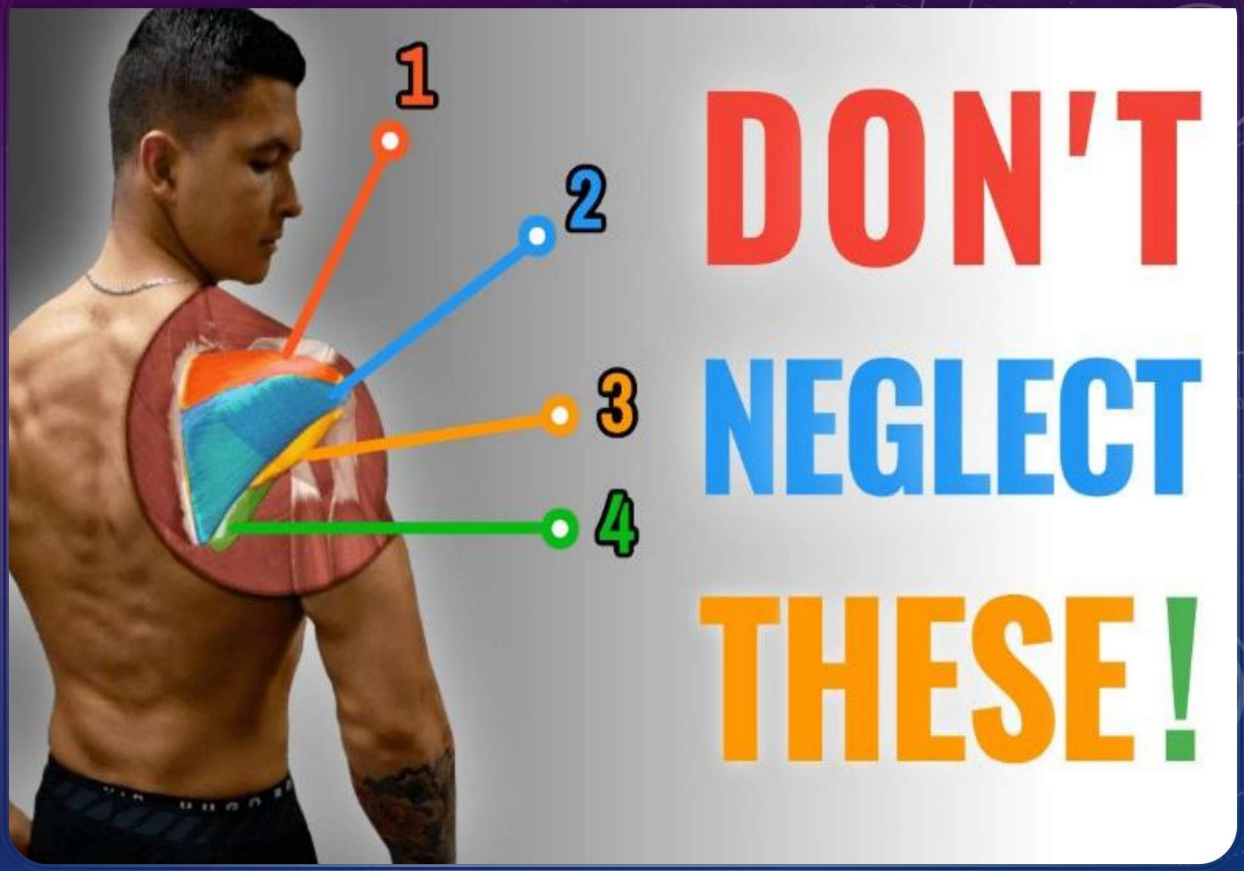
- Acute Phase
  - Rest
  - Sling- for comfort
  - Modalities
  - Gentle ROM avoiding extremes of motion

Advanced Strengthening Phase

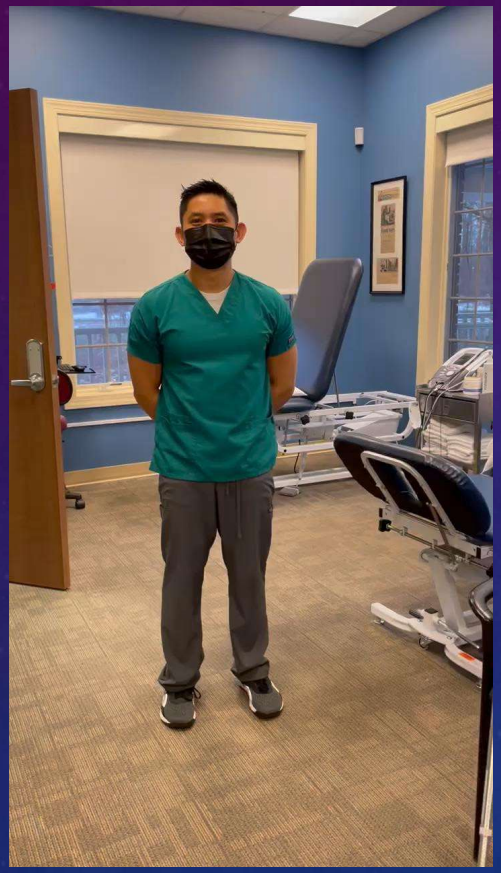
Scapular Setting Exercises

REHABILITATION

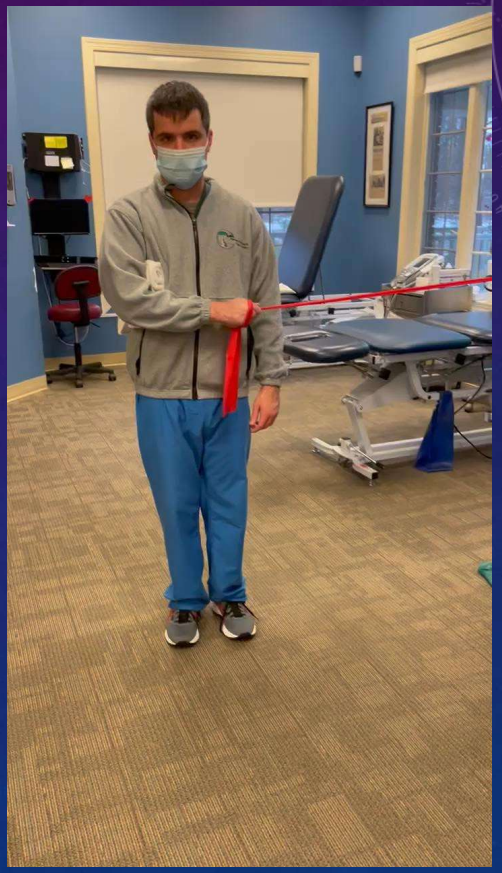
- Intermediate Phase
  - Improve ROM
  - Scapular exercises
  - Begin Gentle Strengthening



Non-operative / Pre-Op Patients: The Pendulum



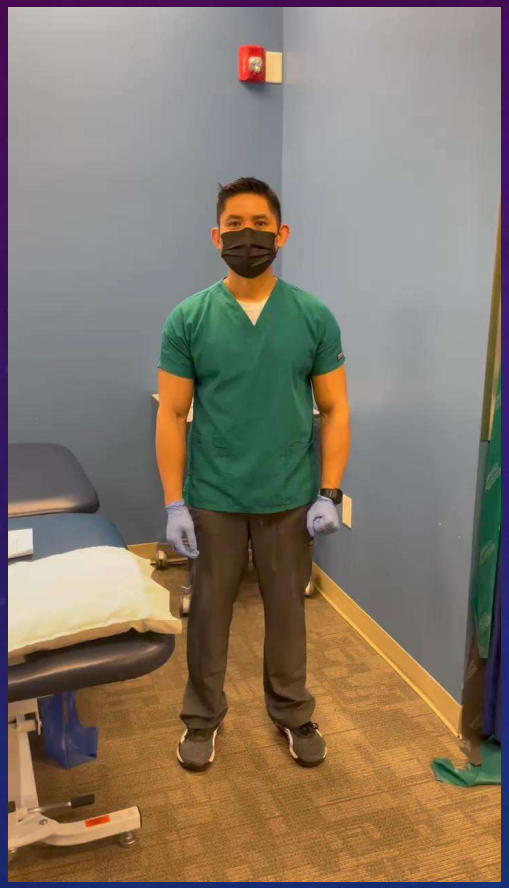
Gentle Strengthening of Rotator Cuff and Scapula: External & Internal Rotations



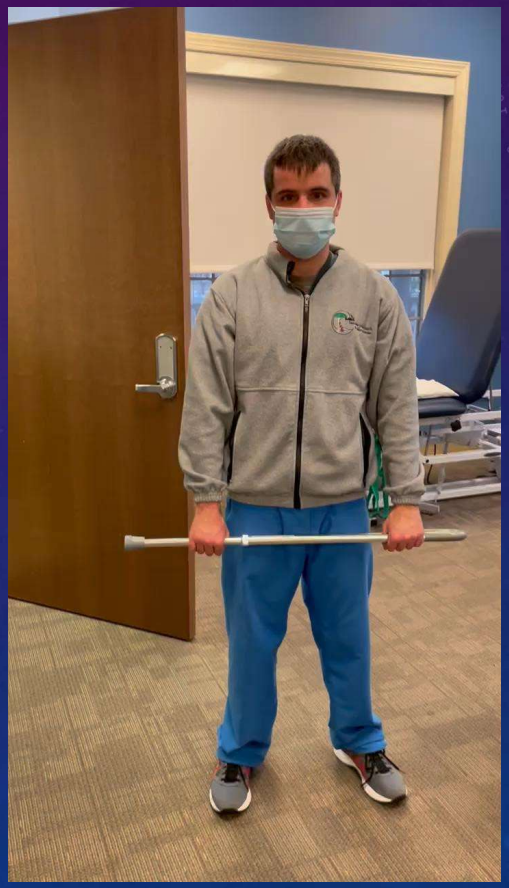
REHABILITATION

- Advanced Phase
  - Enhance Power and Speed (Plyometrics)
  - Rotator Cuff Strengthening
  - Scapula Strengthening
  - Terminal ROM
  - Initiate Sport Specific Training

Early Strengthening Exercises: Isometrics (Internal & External Rotation, and Flexion)



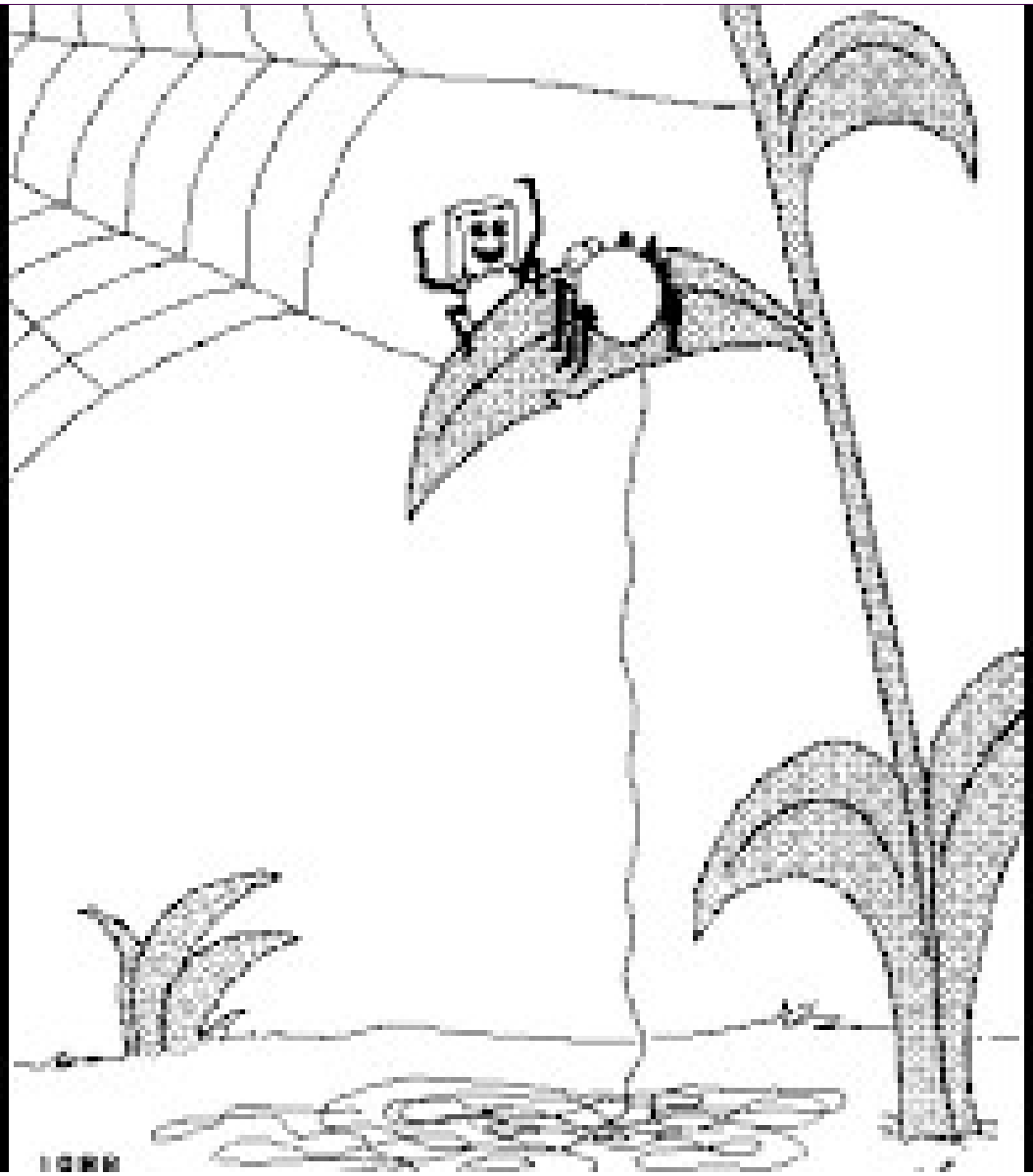
Range of Motion Exercise: With L-Bar / Cane (Flexion, Internal & External Rotation in Supine)



Strengthening Exercises: Prone Rows, Extensions, Sideline External Rotation

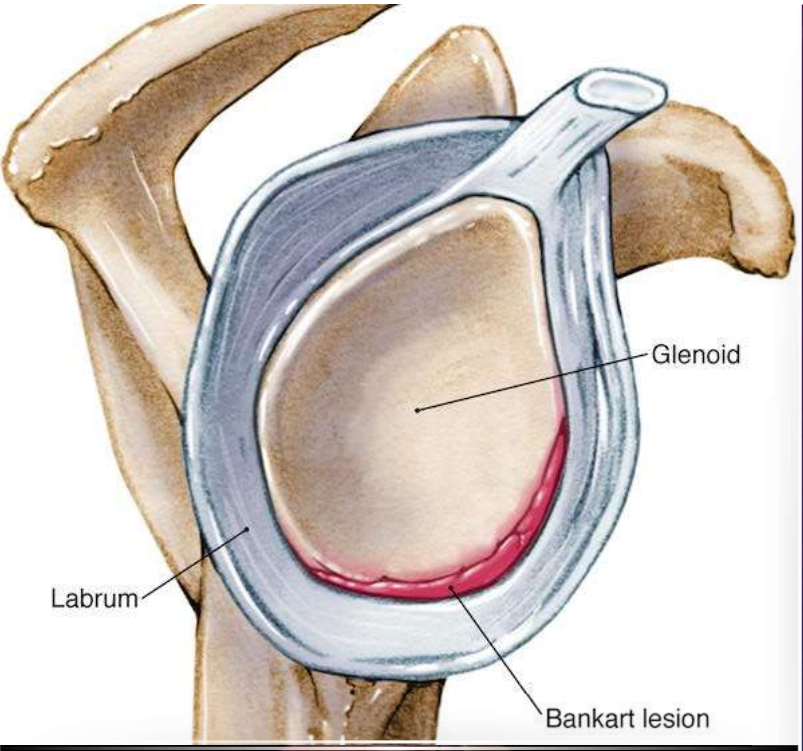
REHABILITATION

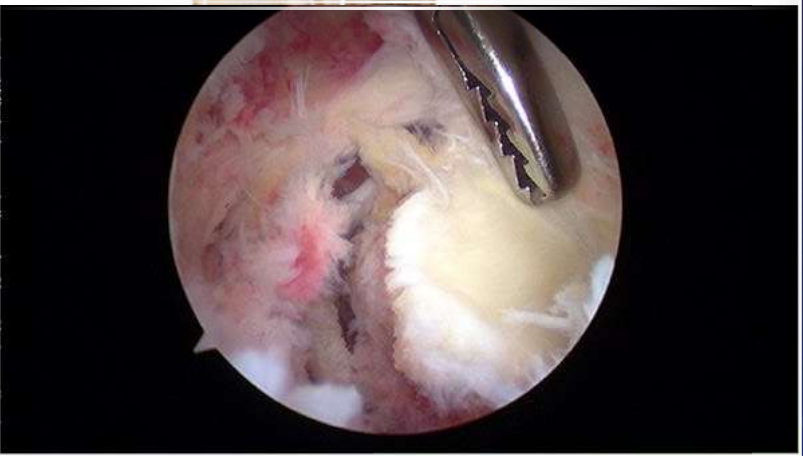
- Return to Activity Phase
  - Strength, Power, Endurance
  - Gradual return to Sport Activities



RETURN TO SPORTS

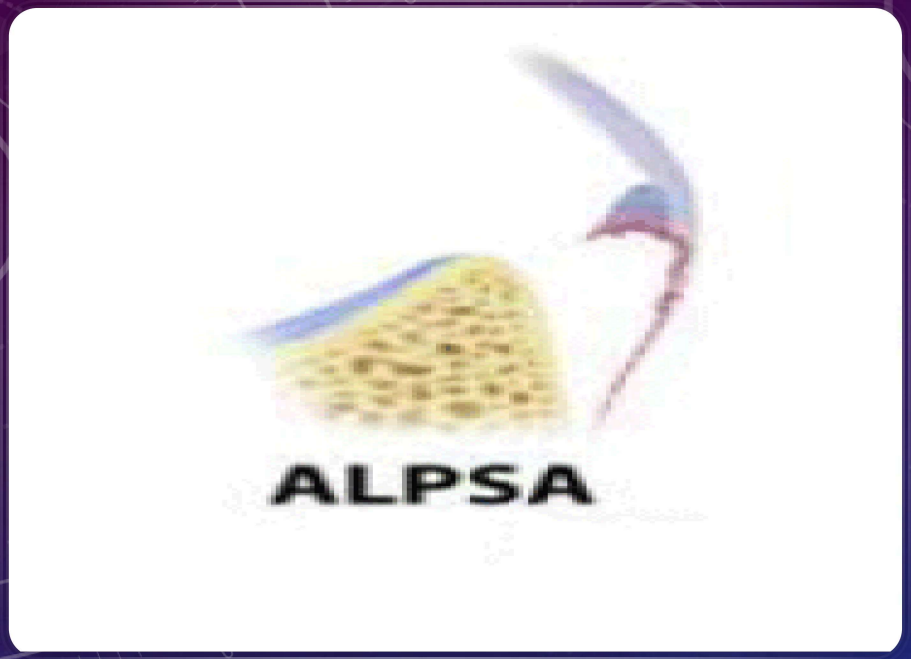
- Near FROM without pain
- 90% Strength
- Able to Perform Sport Specific Activity
- Brace Optional (Sport and Position Dependent)
- Return to Sport between 7-21 days

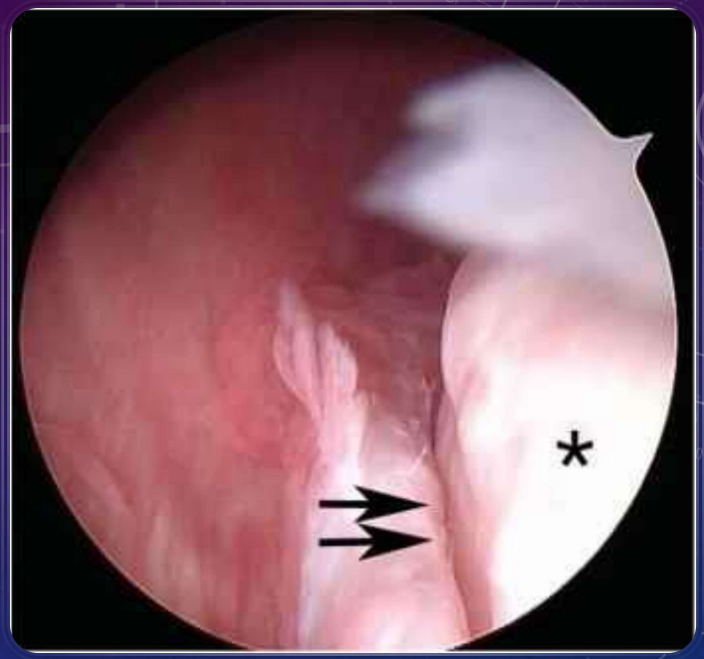




PATHOLOGY OF SHOULDER

- Anterior Inferior Glenohumeral Ligament Tear Labral
- (Bankhart Lesion)





PATHOLOGY OF SHOULDER

ANTERIOR LABROLIGAMENTOUS PERIOSTEAL SLEEVE AVUSLION (ALSPA)

PATHOLOGY OF SHOULDER

ANTERIOR GLENOID ARTICULAR DISRUPTION (GLAD LESION)

PATHOLOGY OF THE SHOULDER

- Humeral Avulsion of the Glenohumeral Ligament (HAGL)

FIRST TIME DISLOCATOR

- Younger age Higher chance of Recurrent Dislocations
- In Collegiate Athletes higher chance to return to sport after surgery
- In High School Athletes higher chance to play next season without Surgery
- Increasing Age decreases risk of recurrent dislocations but increase risk of Rotator Cuff Tear

SURGICAL TREATMENT

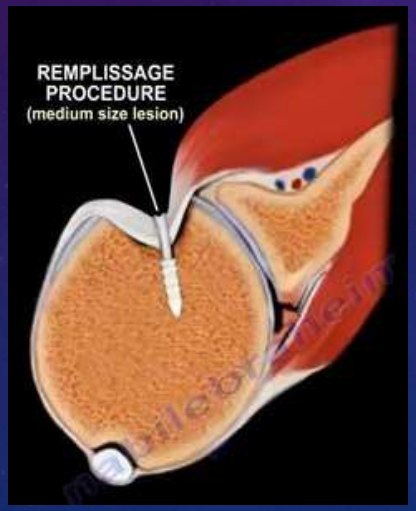
- Arthroscopic Anterior Labral Repair
- Arthroscopic Capsulorraphy
- Glenoid Bone Loss Less than 15%
- Non-Engaging Hill Sachs Lesion (On Track)

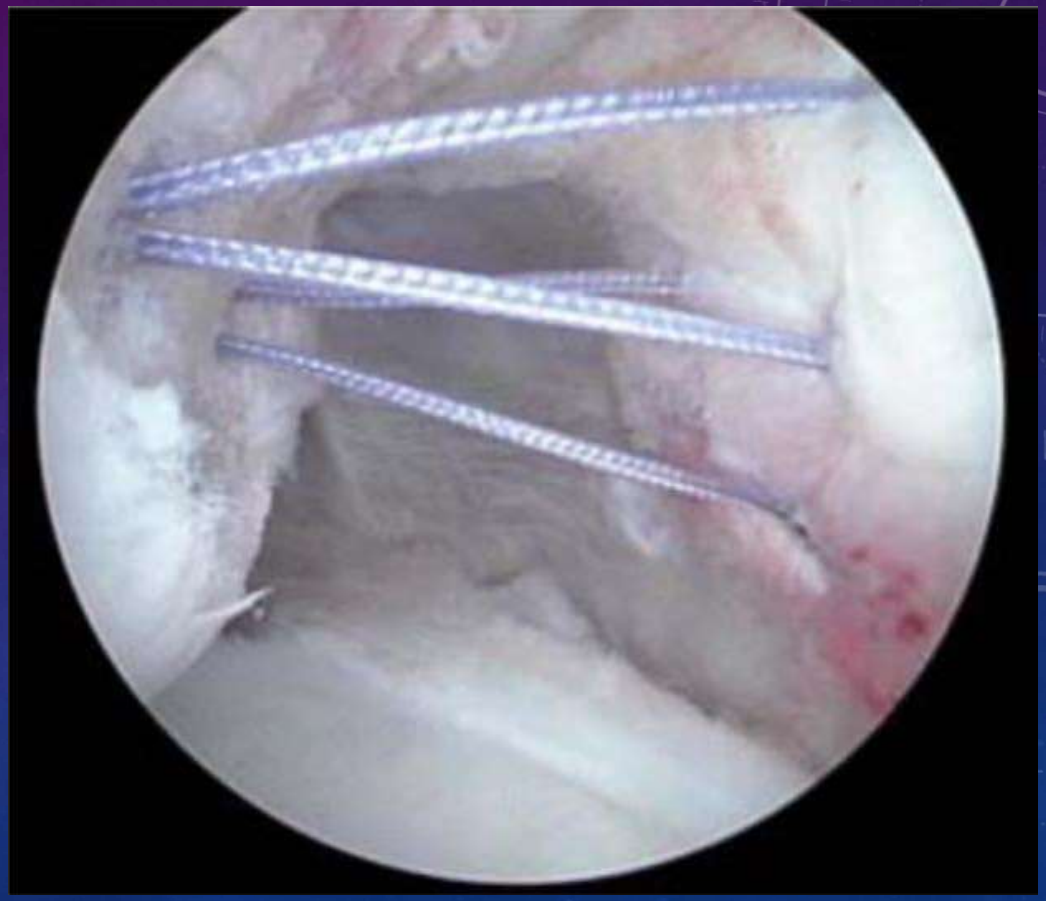
ARTHROSCOPIC CAPSULORRAPHY

Source: Parcus Medical – Youtube https://www.youtube.com/watch?v=xfUu9HtmqsI&feature=emb_logo

SURGICAL TREATMENT

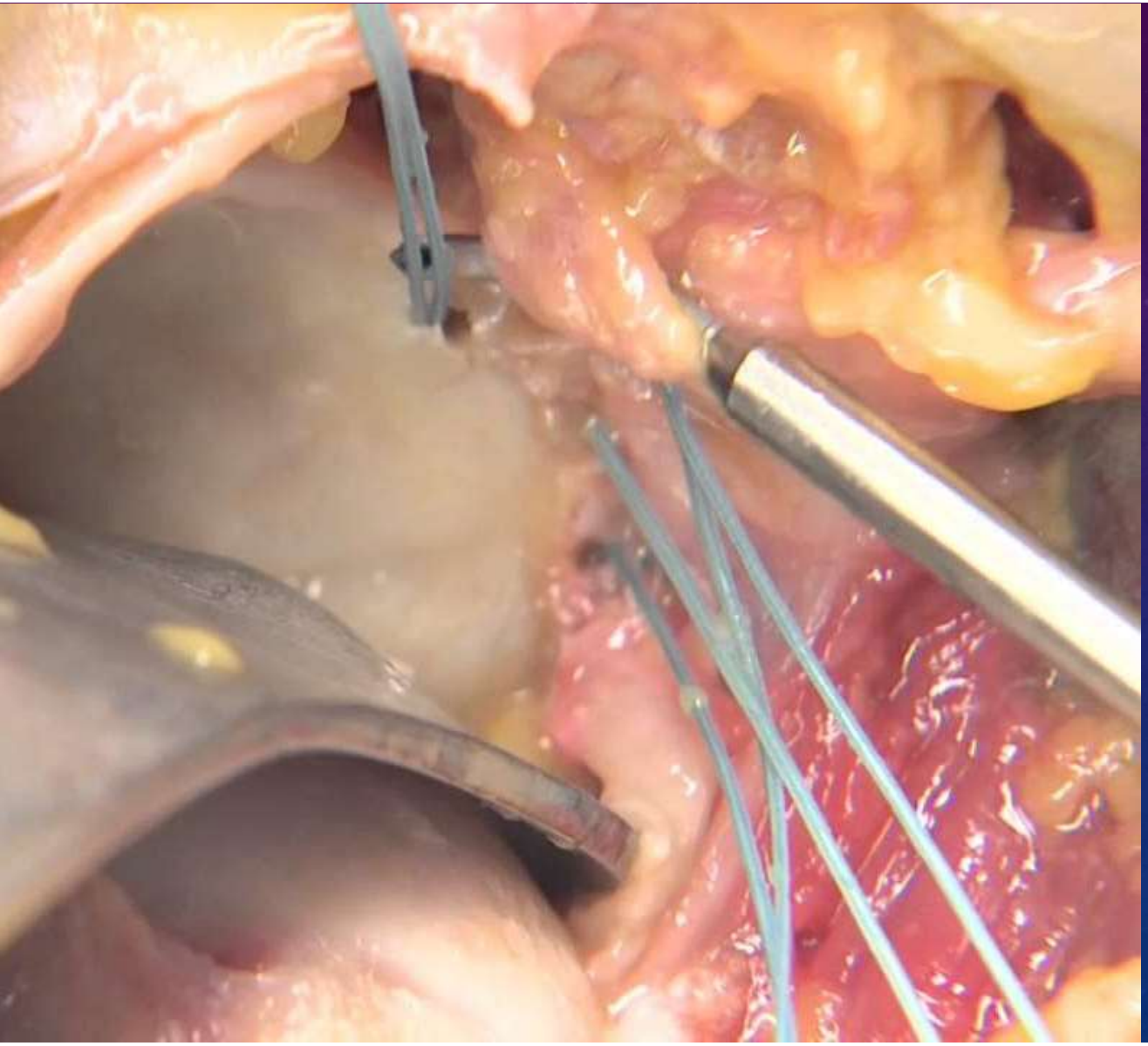
- Arthroscopic Labral Repair and Remplissage
- Addresses Hill Sachs Lesion





ARTHROSCOPIC LABRAL REPAIR AND REMPLISSAGE

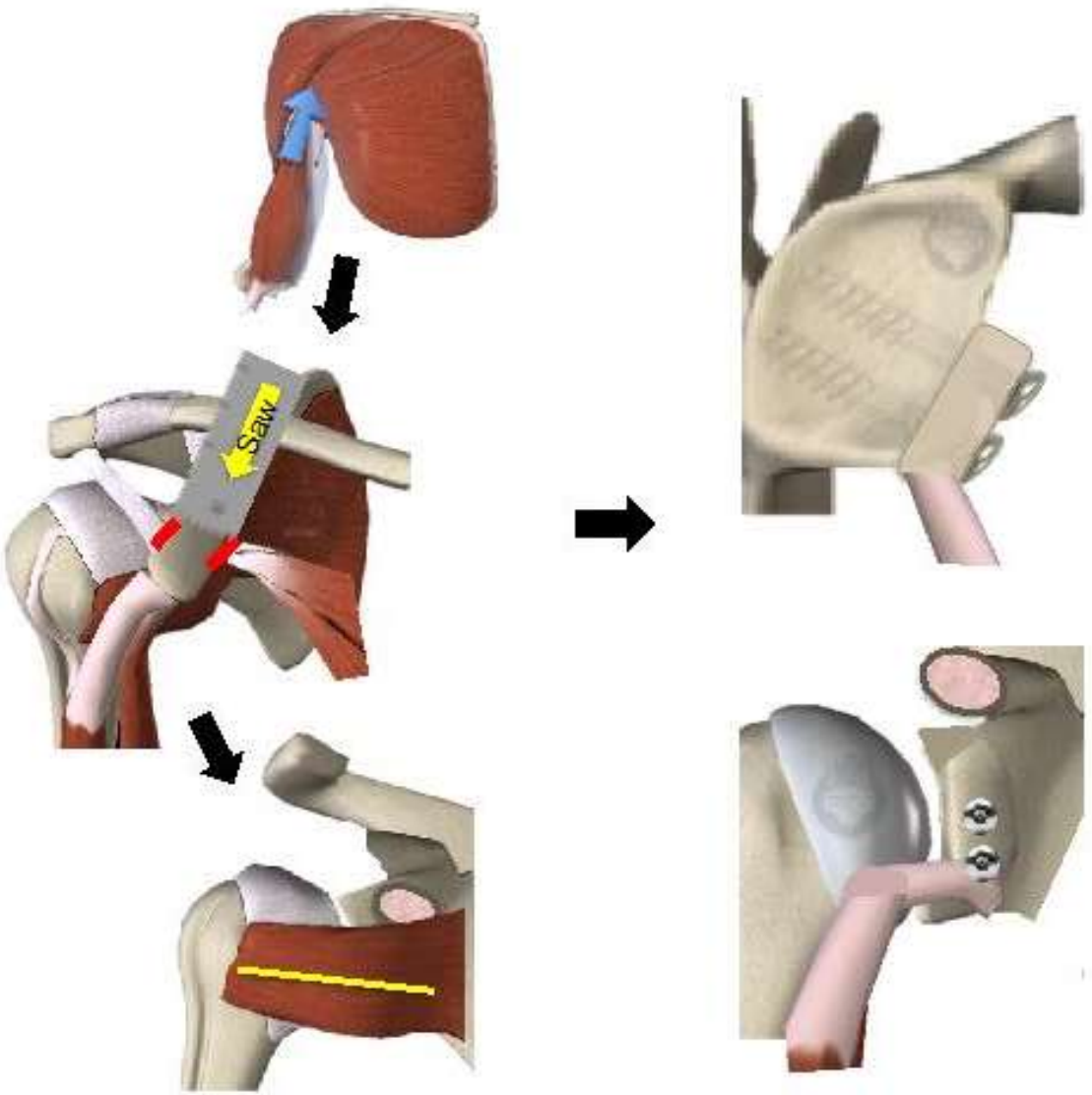
Source: Parcus Medical – Youtube https://www.youtube.com/watch?v=T5Hr5-PXQYw&feature=emb_logo



SURGICAL TREAMTENT

- Recurrent Dislocators
- Boney Bankhart Lesions
- Contact Athletes

- Open Labral Repair and Capsulorraphy
- Recurrent Dislocators
- Contact Athletes
- Boney Bankhart Lesions

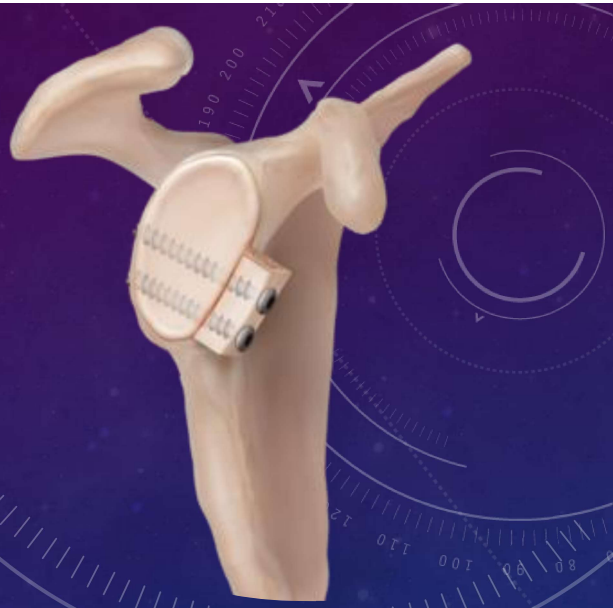


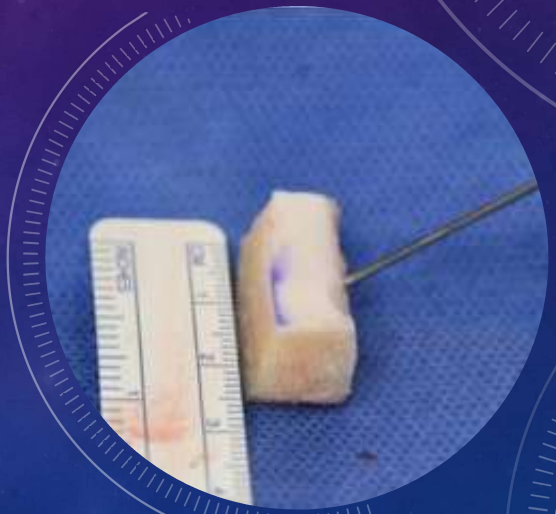
SURGICAL TREATMENT

- Latarjet Procedure
- Bone Loss Greater than 15-20%
- Engaging Hill Sahcs Lesion

SURGICAL TREATMENT

- Allograft Reconstruction of Glenoid
- Salvage Procedure
- Excessive Glenoid Bone Loss





THANK YOU!

EXPEDITED SCHEDULING FOR SPORTS INJURIES

EMAIL OR CALL

732-660-6248

MGIBSON@SEAVIEWORTHO.COM