

*2023 Napa Primary Care Conference*

# **Evaluation of the Painful Shoulder**

**Robert Sallis, MD, FAAFP, FACSM**

Director; Sports Medicine Fellowship

Kaiser Permanente Medical Center

Fontana, California

Clinical Professor of Family Medicine

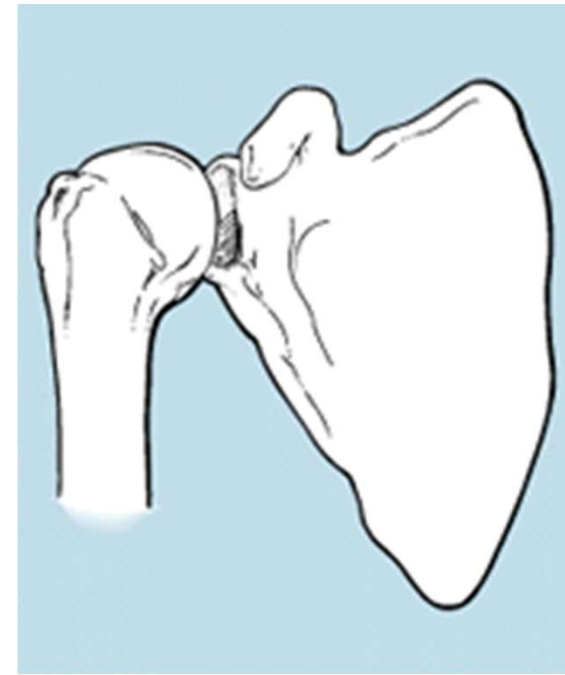
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# Lecture Overview

- Review essential history questions in the evaluation of shoulder complaints.
- Discuss important physical exam techniques.
- Explain useful radiographic tests.
- Make you feel more comfortable evaluating the patient with shoulder pain.

# The Shoulder

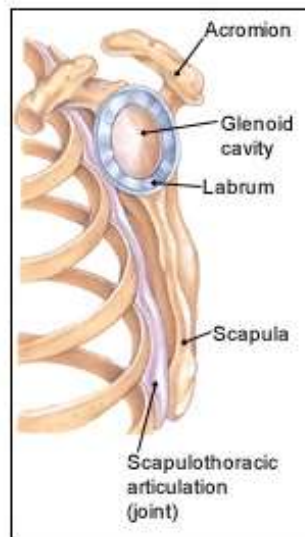
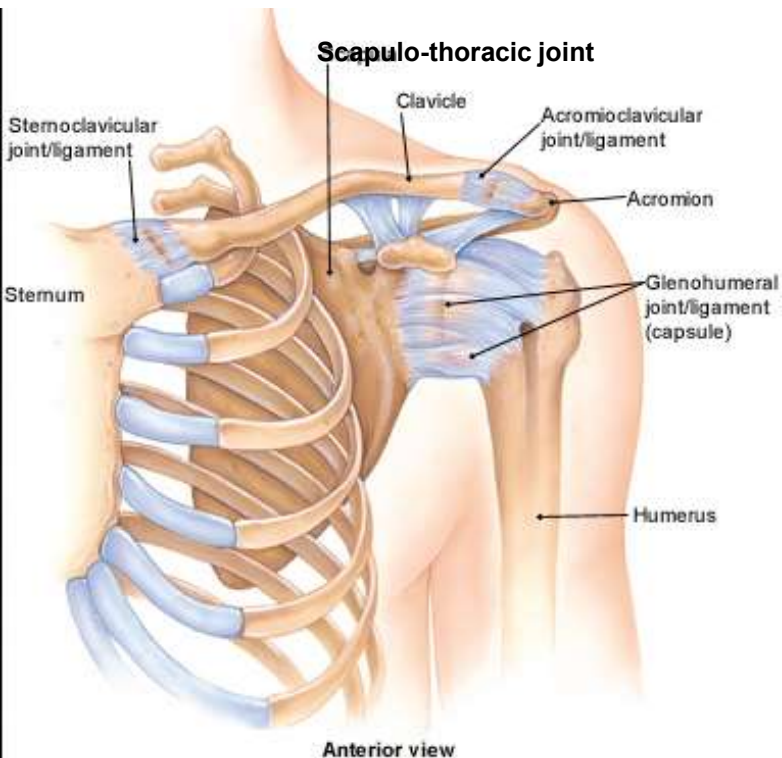


- Most mobile joint in body.
- Balance between functional mobility and adequate stability.
- Static Stabilizers: Capsule, Labrum, G.H. Ligaments, Vacuum effect.
- Dynamic Stabilizers: Rotator Cuff Muscles, Scapular Rotators.

# Shoulder Anatomy



## 4 Joints in Shoulder



Anterolateral view

# Majority of Shoulder Pain Caused by 3 Things:

- Rotator Cuff Pathology
- A.C. Joint Pathology
- Glenohumeral Instability
- These may occur together



# Common Causes of Shoulder Pain by Age

- Children and Adolescents:
  - Proximal Humeral Apophysitis
  - Shoulder contusion or strain
- Adults:
  - Rotator cuff tendonitis & Impingement syndrome
  - Glenohumeral instability
  - Labrum tear (SLAP tears)
- Older Adults:
  - Degenerative or traumatic rotator cuff tear
  - AC joint or Glenohumeral Osteoarthritis
  - Frozen shoulder

# History: Mechanism of Injury

- Chronic Problem (overuse) or Acute Injury (trauma)?
- Activity Causing The Pain?
- Do Symptoms Improve With Rest?
- Any Associated Symptoms?



# History:

## Symptoms of Instability

- Have you ever dislocated your shoulder?
- Does it ever feel like your shoulder slips out?

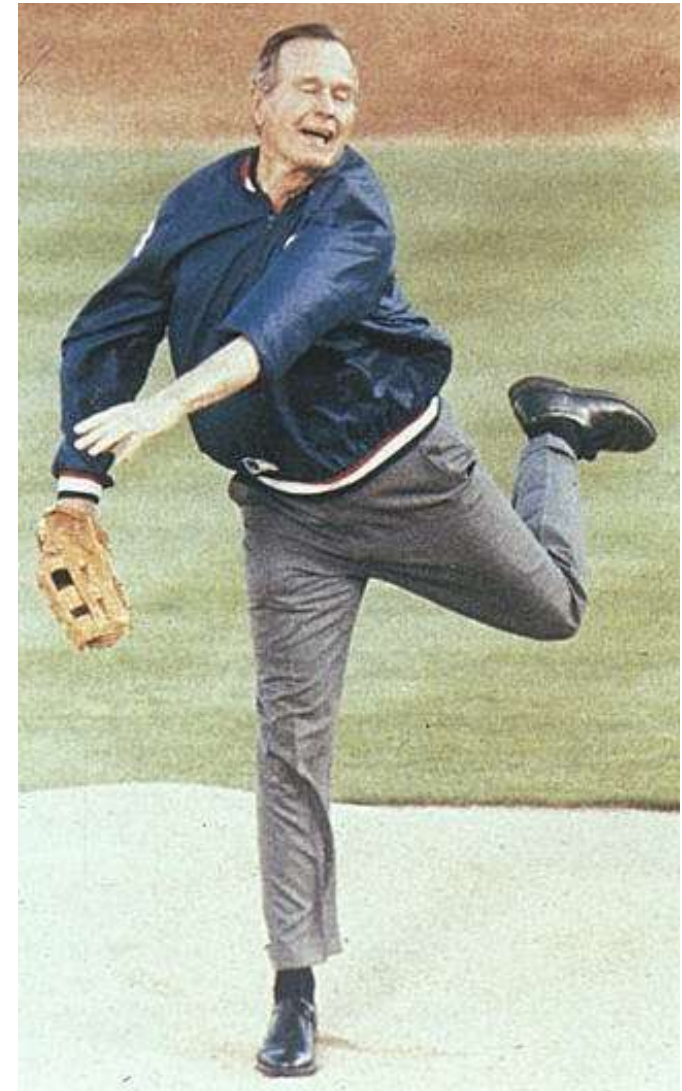




# History:

## Character and Location of Pain

- R.C. tendonitis - pain worse with activity, improves with rest
- Impingement - pain worse with overhead activity, hard to sleep
- R.C. tear - severe ache, night pain



# History:

## Mechanical Symptoms

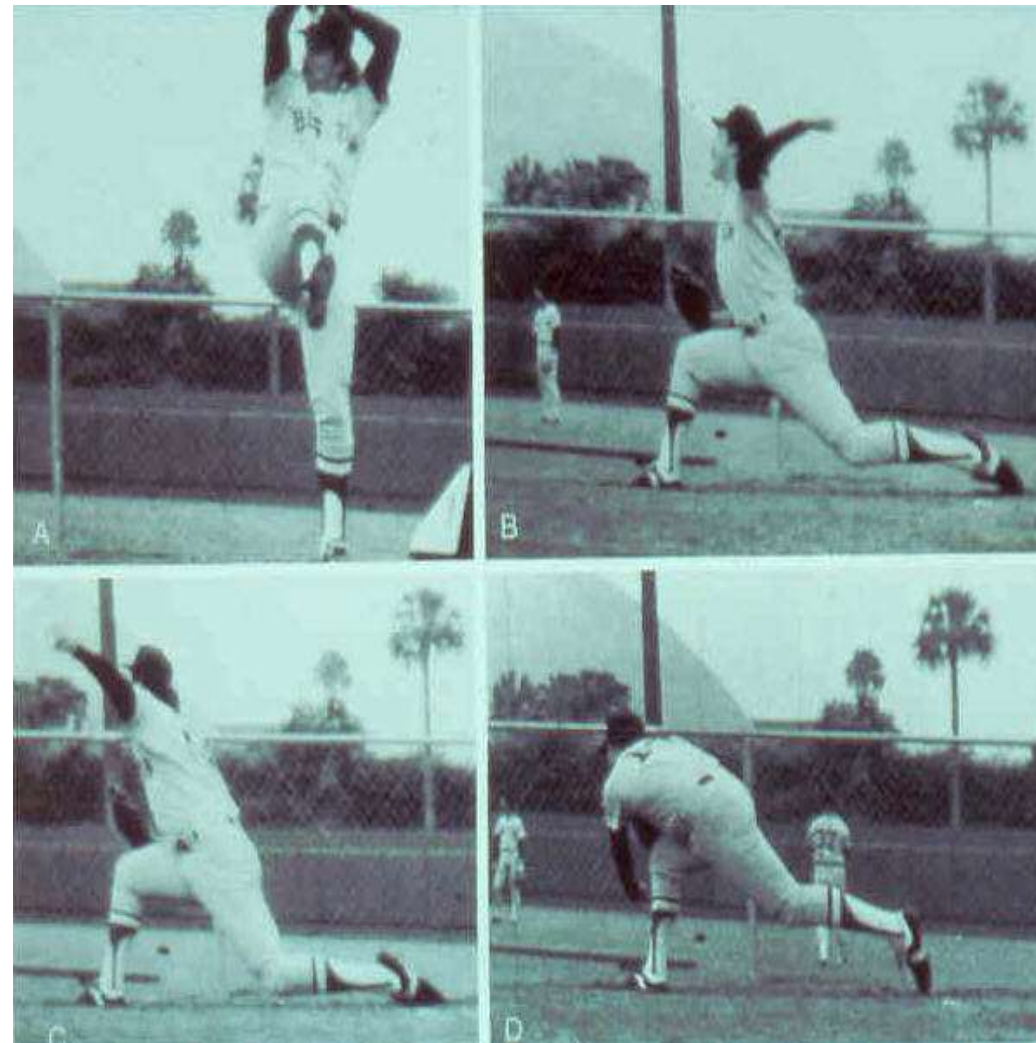
- Any catching or popping in the shoulder? (significant if associated with pain)
- Any locking of the shoulder with overhead activity?
- These symptoms may suggest labrum tear



# History:

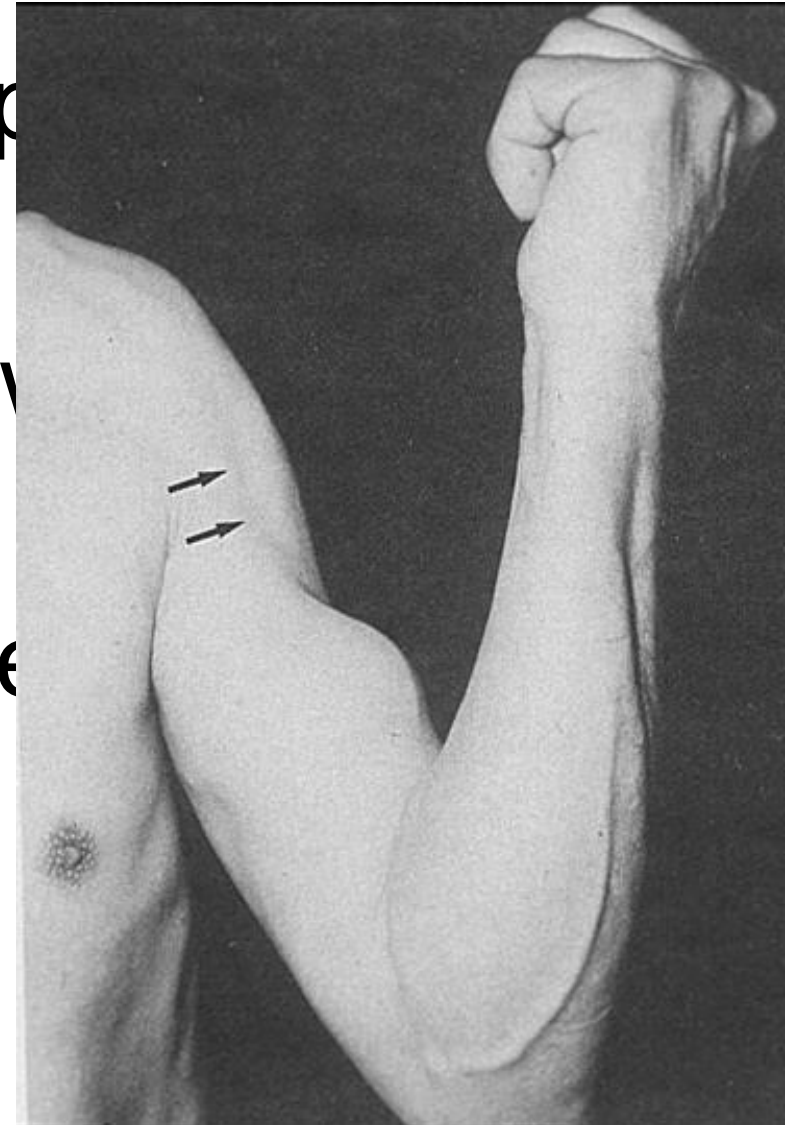
## Pain with Throwing

- Cocking - anterior cuff tendonitis, anterior subluxation
- Acceleration - R.C. tendonitis, impingement
- Release - posterior cuff tendonitis, posterior subluxation



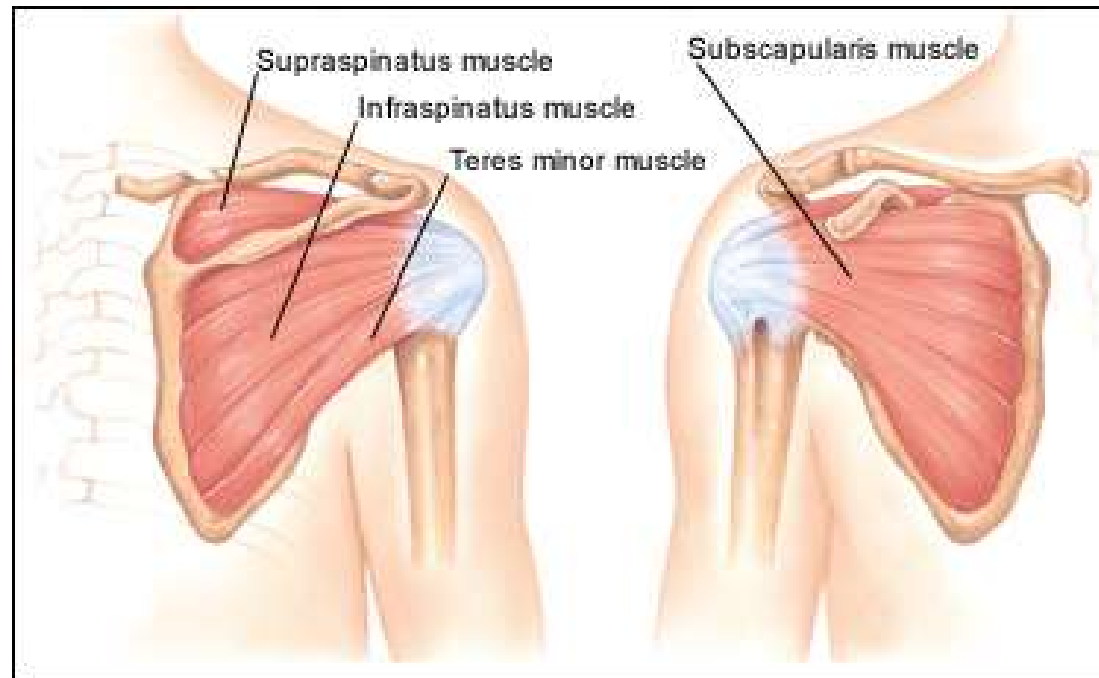
# Exam: Inspection

- Asymmetry - look for atrophy or swelling.
- Ecchymosis - associated with trauma.
- Venous distension - suggests thrombosis.



# Exam: Palpation

- Sternoclavicular Joint
- Acromioclavicular Joint
- Clavicle
- Ant/Post Glenohumeral Joint line
- Ant/Lat/Post Sub-Acromial space
- Biceps Tendon
- Scapula



# Shoulder Palpation



# Exam: Range of Motion

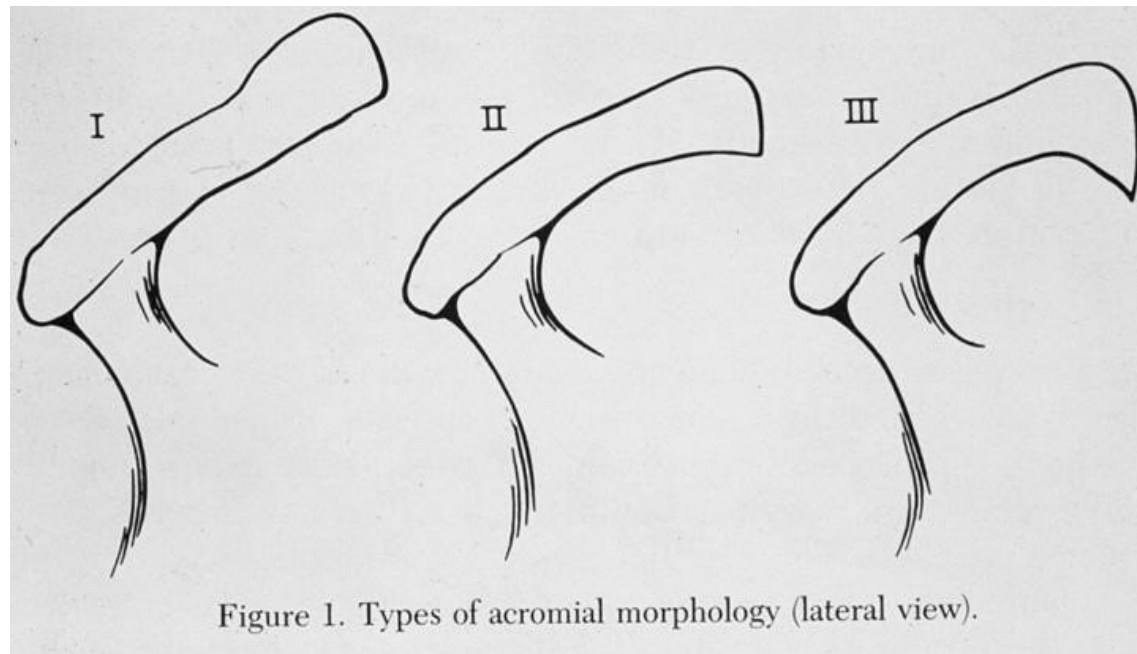
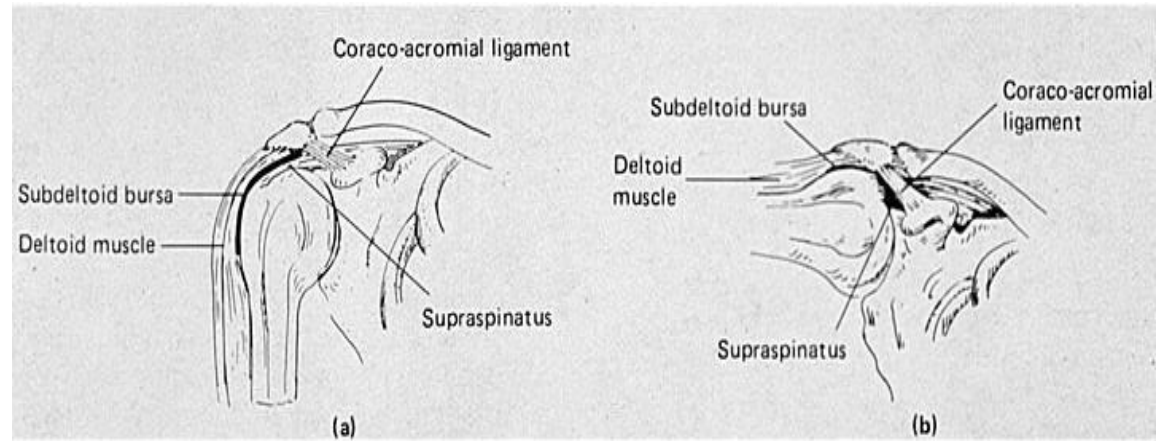
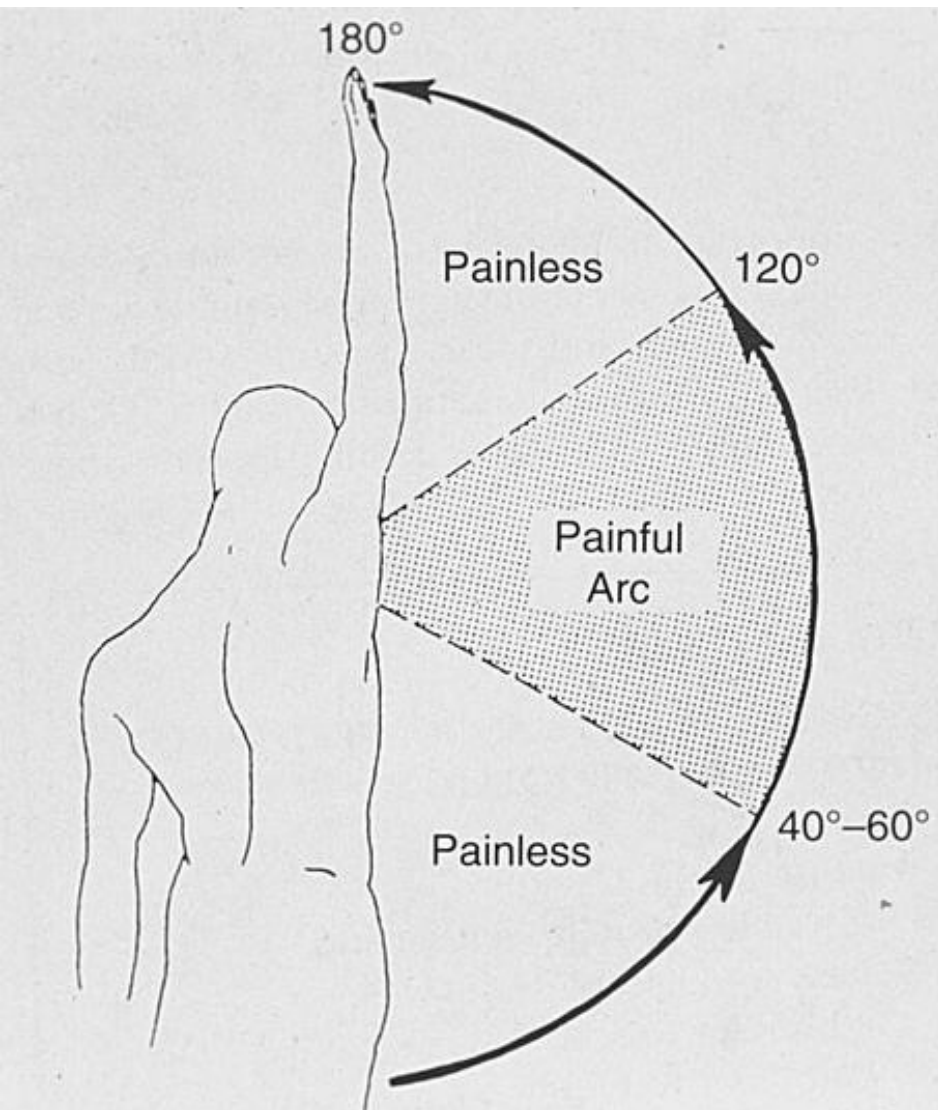
- Should be assessed both actively and passively
- Evaluate:
  - Forward Flexion
  - Extension
  - Abduction
  - External Rotation
  - Internal Rotation
  - Horizontal Adduction





# Range of Motion

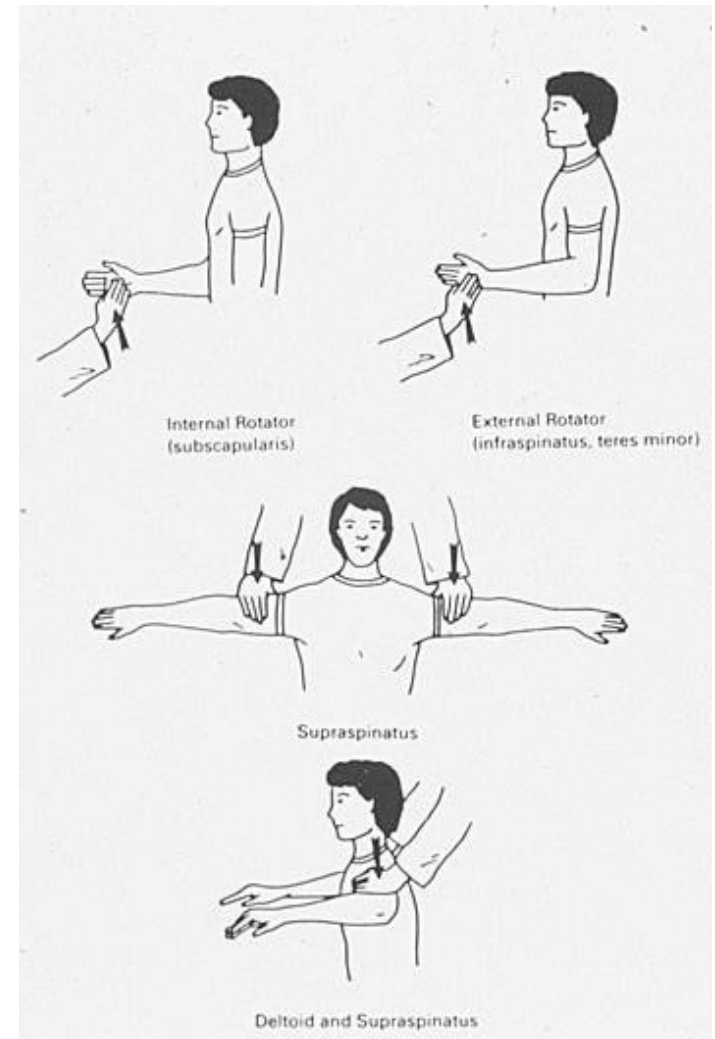
## Painful Arc



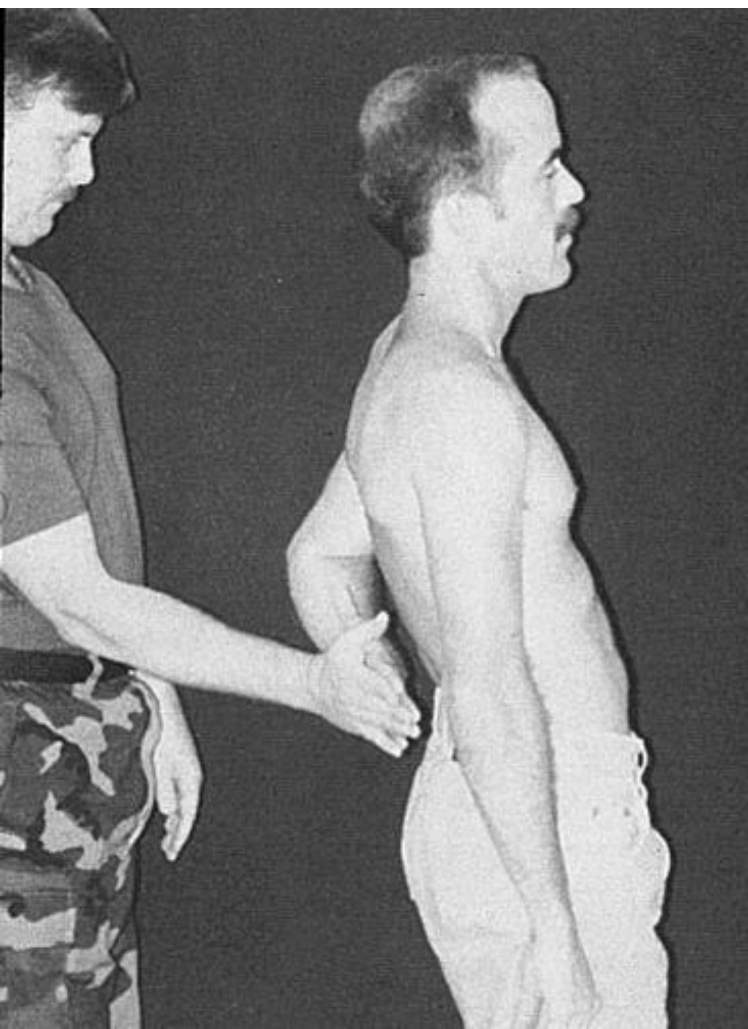


# Exam: Strength Testing

- Done with resisted motion.
- Pain suggests tendonitis.
- True weakness suggests R.C. tear.
- “Drop Arm Test” indicates large R.C. tear.



# or Cuff Strength



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- Internal rotation:  
*subscapularis*



# Biceps Strength

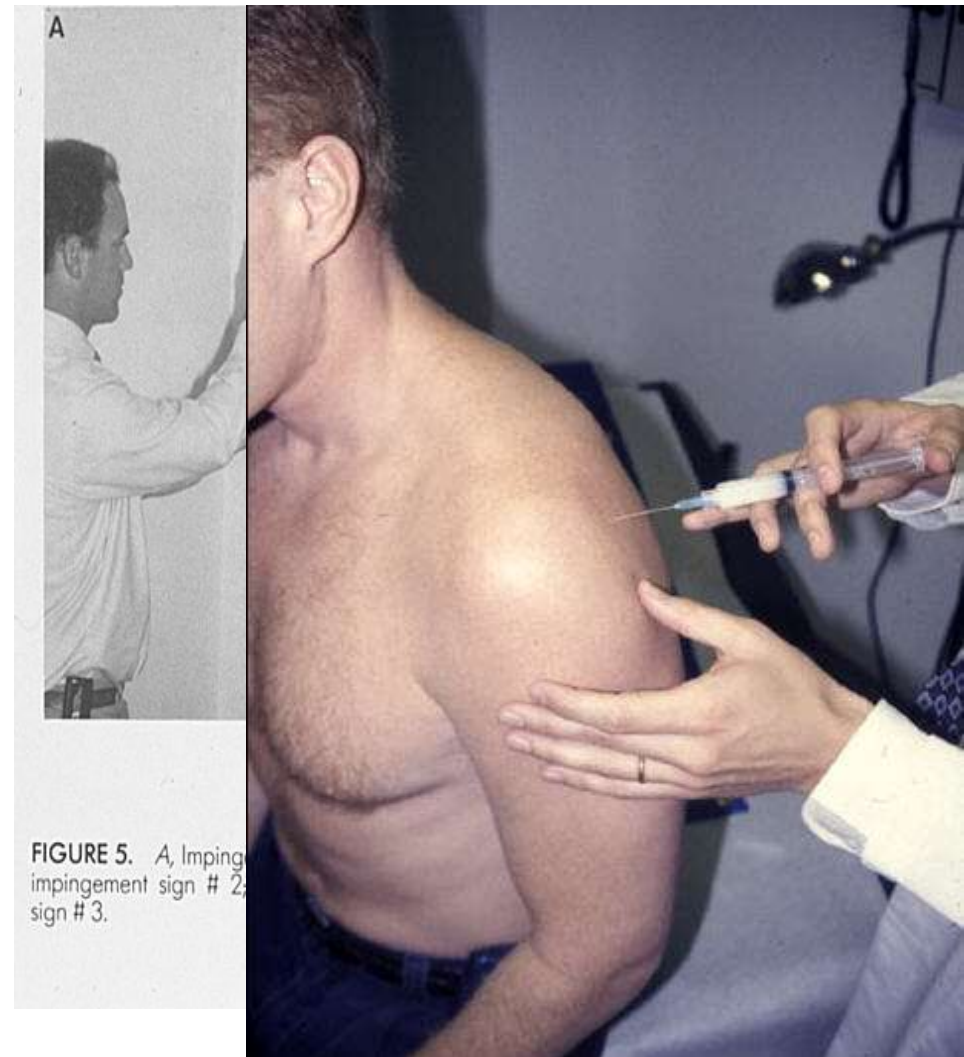
- Speeds & Yergeson's test



# Exam:

## Impingement Signs / Test

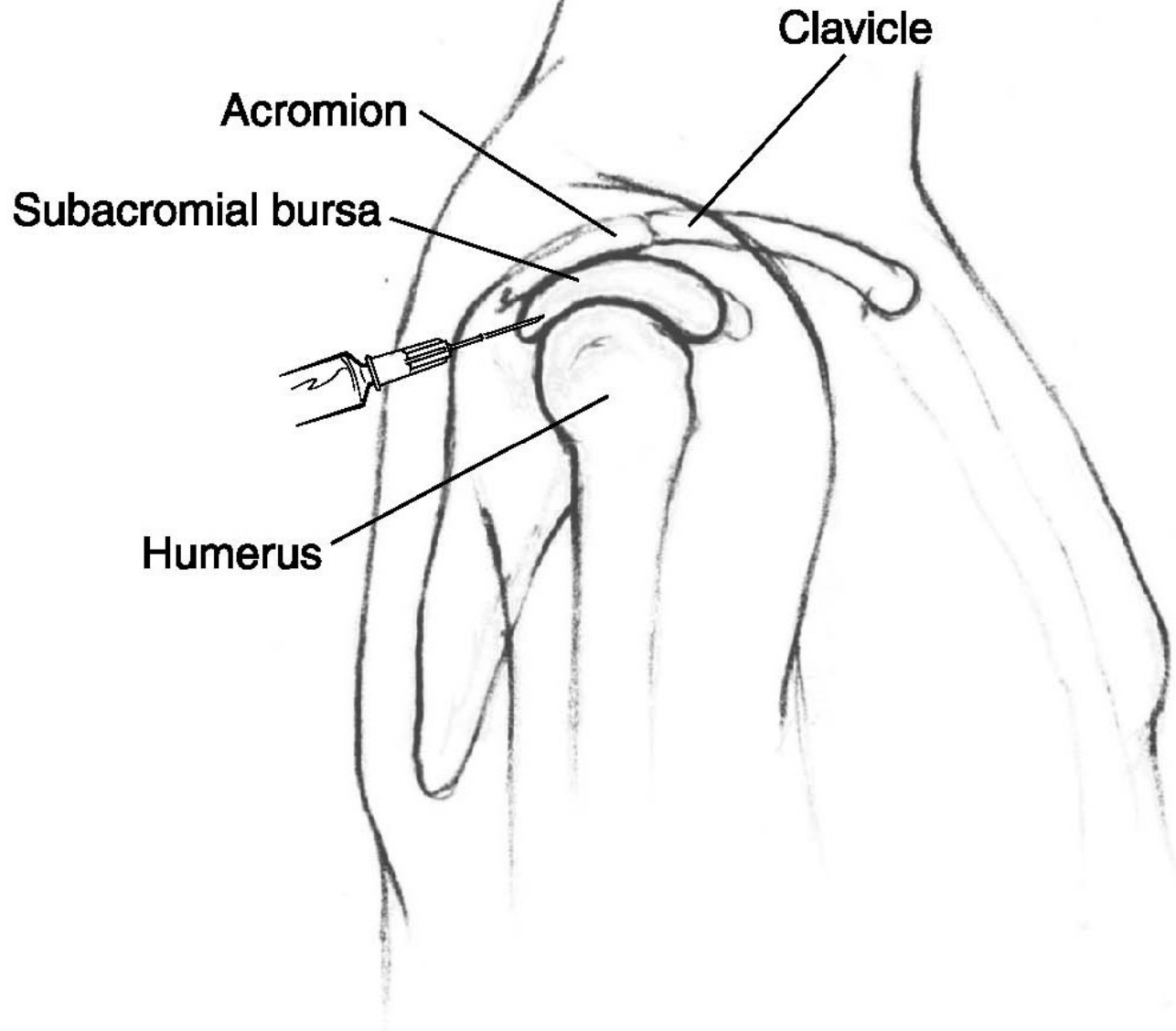
- Painful Impingement Signs suggest the Impingement Syndrome.
- A *positive* Impingement Test means that pain resolves after Lidocaine injection.



# Subacromial Injection

- Indications: rotator cuff tendonitis, bursitis, impingement syndrome, rotator cuff strength testing.
- Supplies:
  - 25-gauge, 1½ needle.
  - 5cc syringe.
  - 4cc 1% Lidocaine and 1cc Triamcinalone (20 mg/ml).

# Subacromial Bursa



# Exam:

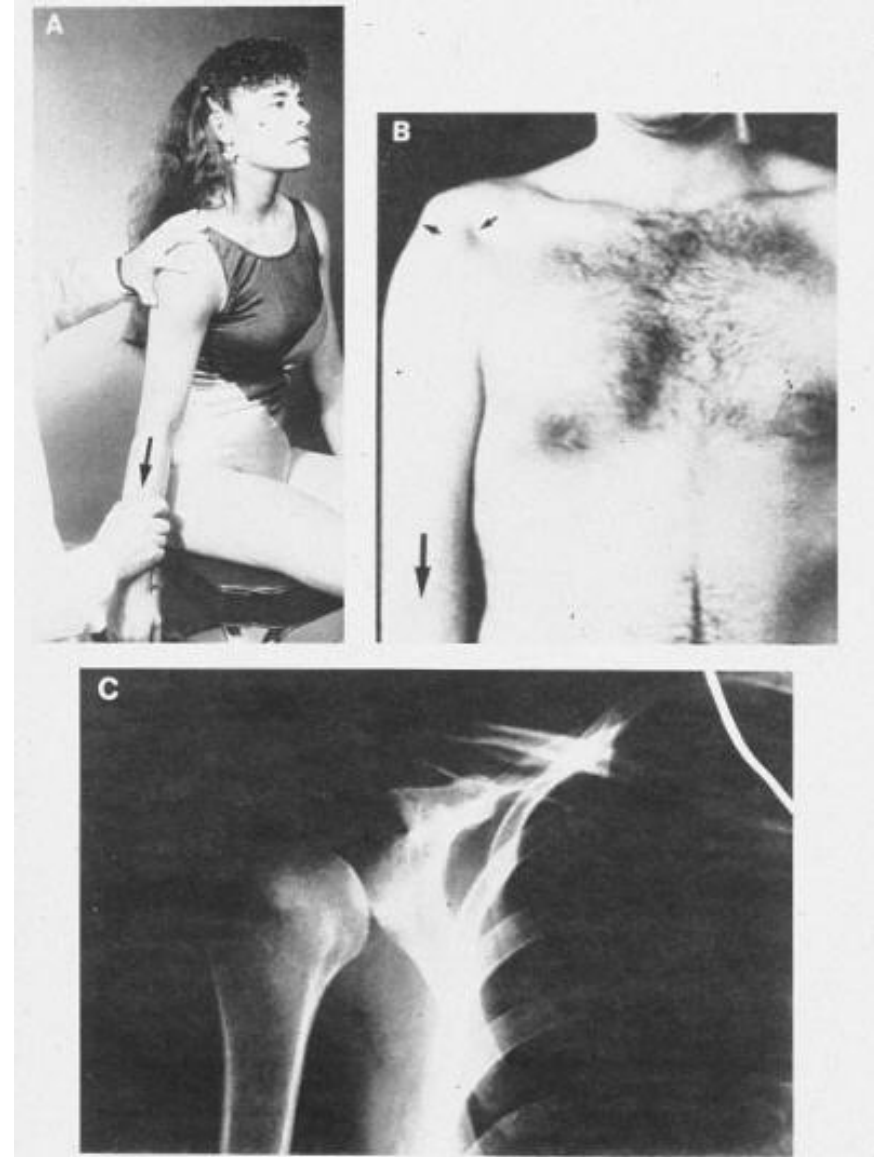
## 3 Impingement Signs

- Neer's
- Hawkins
- Cross-over



# Exam: Instability

- Apprehension test - for anterior or posterior instability.
- Sulcus Sign - for inferior instability (often multi-directional).
- Relocation Test - for anterior instability (vs Impingement).





# Instability Exam

- Apprehension Sign – anterior and posterior



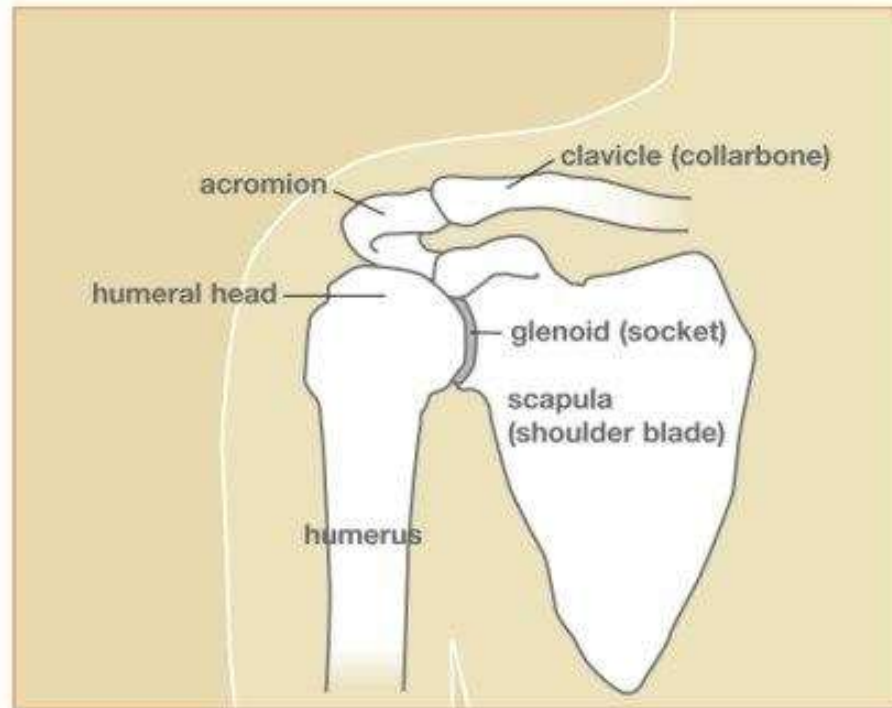
# Instability Exam

- Sulcus sign – inferior instability.
- Relocation test – anterior instability vs. primary impingement.



# Spectrum of Shoulder Stability

Lax ↔ Flexible ↔ Normal ↔ Tight ↔ Stiff



# Shoulder Instability Classification

## TUBS vs AMBRI

- Traumatic
- Unilateral & Unidirectional
- Bankart lision
- Surgical treatment
- Atraumatic
- Multidirectional
- Bilateral
- Rehab as treatment
- Inferior Capsular Shift (surgery)

# Exam: Labrum Tests

- Clunk test
- Labrum grind
- O'Brien's test



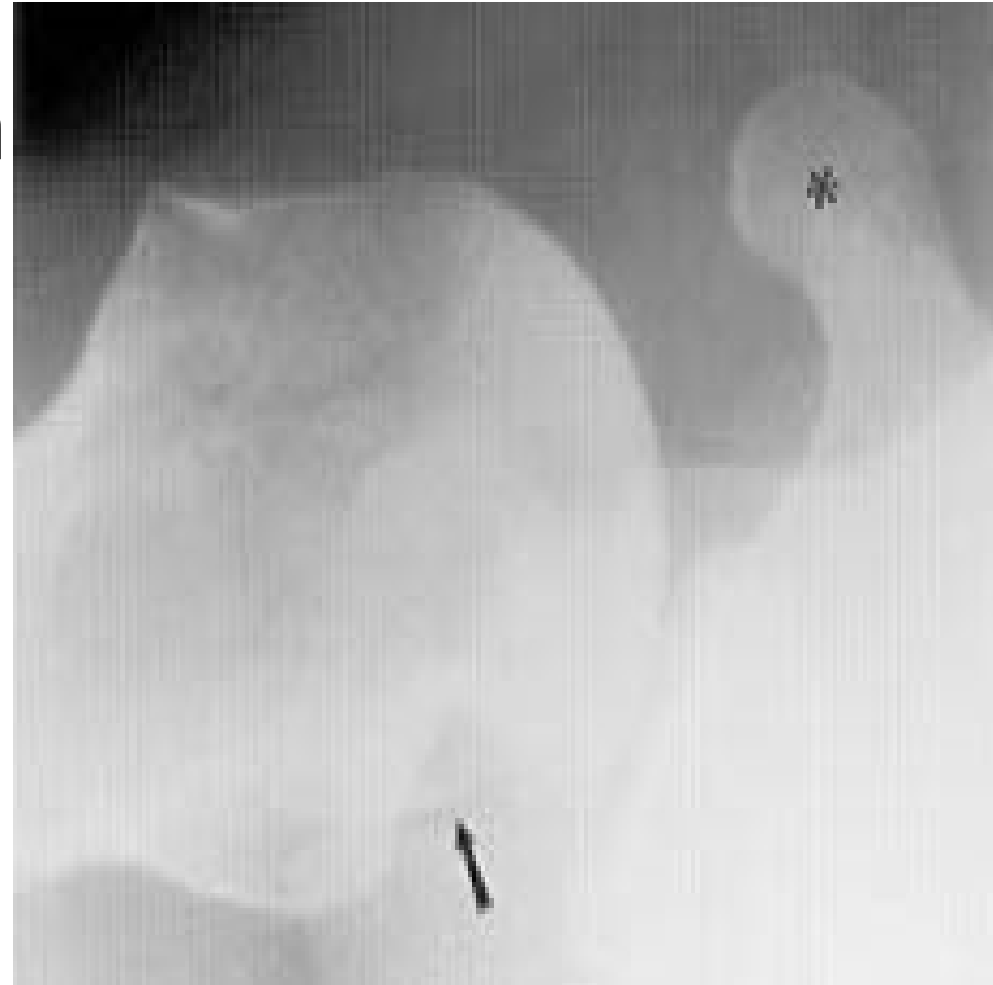
# Exam: Cervical Spine

- Assess ROM
- Check for Tenderness
- Spurling's Test



# X-rays

- AP view - look for humeral head migration with RC tear
- Outlet view - done if impingement; look for spurs or type III acromion
- Axillary view - done if instability; look for Bankart lesion or *Hill-Sachs* deformity



# Other Radiographic Tests:

- MRI - can show rotator cuff and labrum tears.
- MRI arthrogram - useful to show labrum tears.
- Traditional Arthrogram - shows only complete R.C. tears.



# Shoulder Evaluation: Summary

- History is essential in making the correct diagnosis.
- Essentials include inspection, palpation, range of motion and strength testing, along with tests for impingement, instability and labrum injury.
- Various radiographic tests may be helpful when diagnosis in doubt

# Questions?

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