

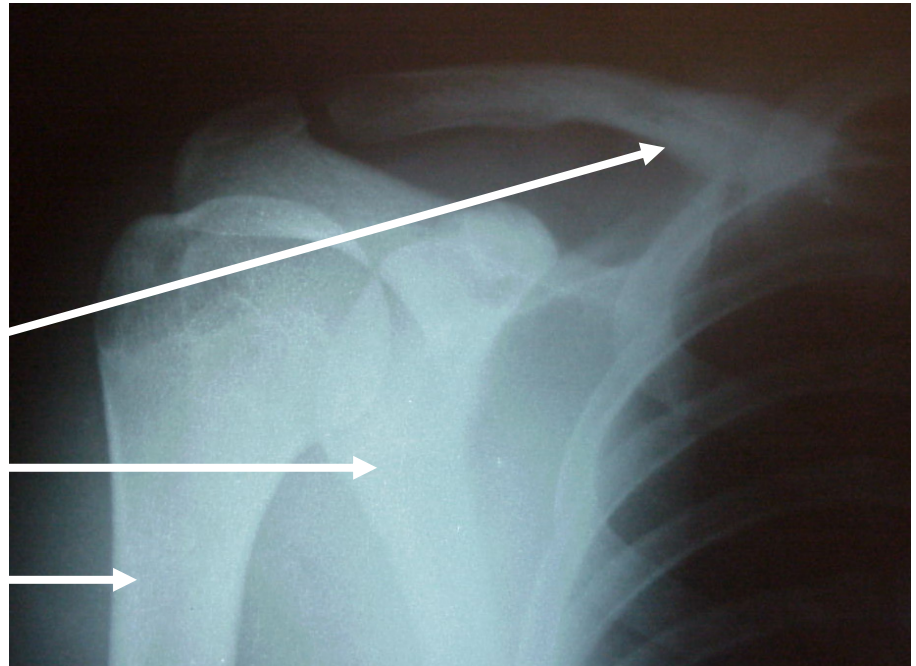
Shoulder Injury Evaluation

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Basic Anatomy & Kinesiology

- 3 Bone Structures

- Clavicle
- Scapula
- Humerus



Evaluation Principles

- Always follow a standard progression
 - Determine the target tissue
 - What area is injured
- Get a History
 - is this a new injury, old chronic injury
- Assessment
 - Correlate signs, symptoms, biomechanical info

- Assessment
 - what is the primary problem ?
- Plan
 - Treatment
 - Referral
 - Short and Long Term Goals
- Follow up

- Always follow the same plan
- Evaluation Order

History

Observation

Palpation

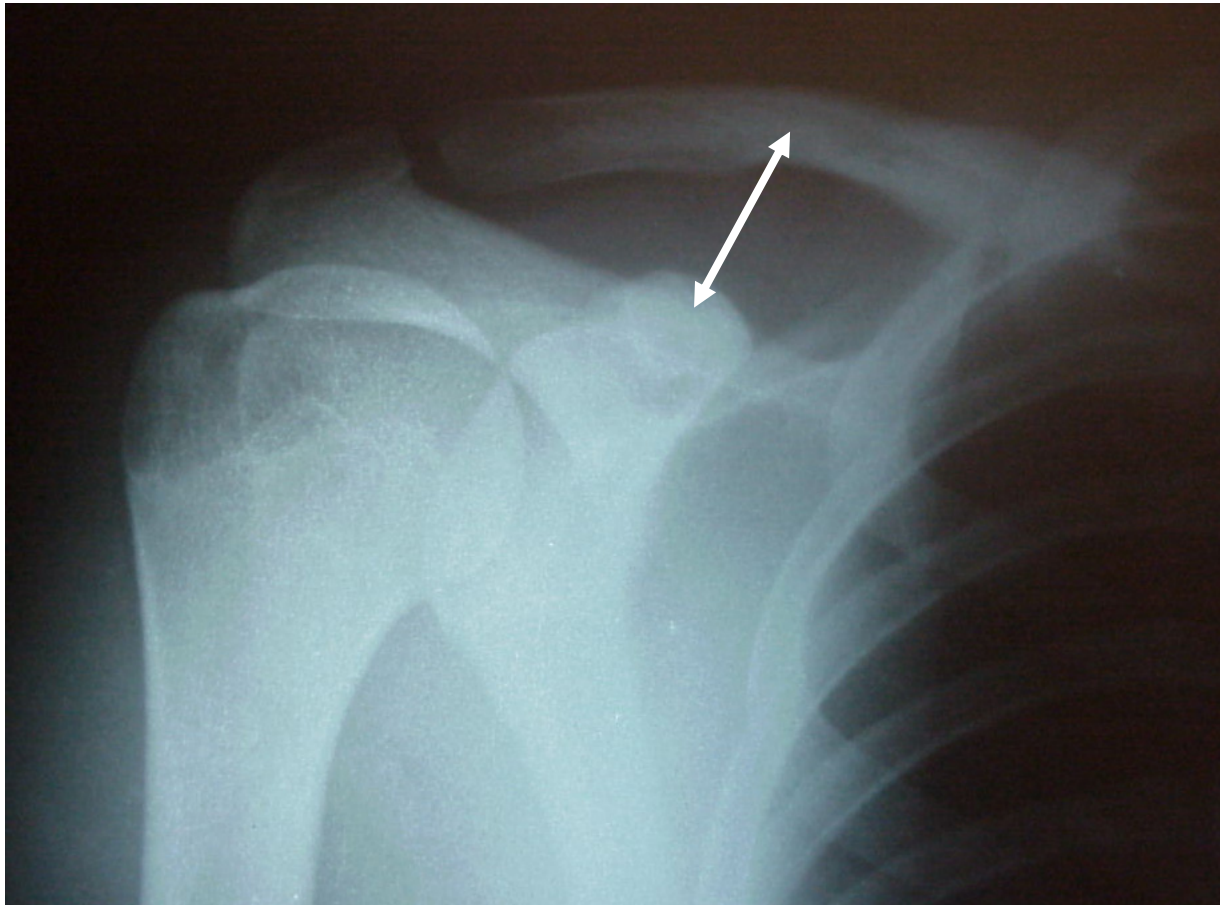
Stress



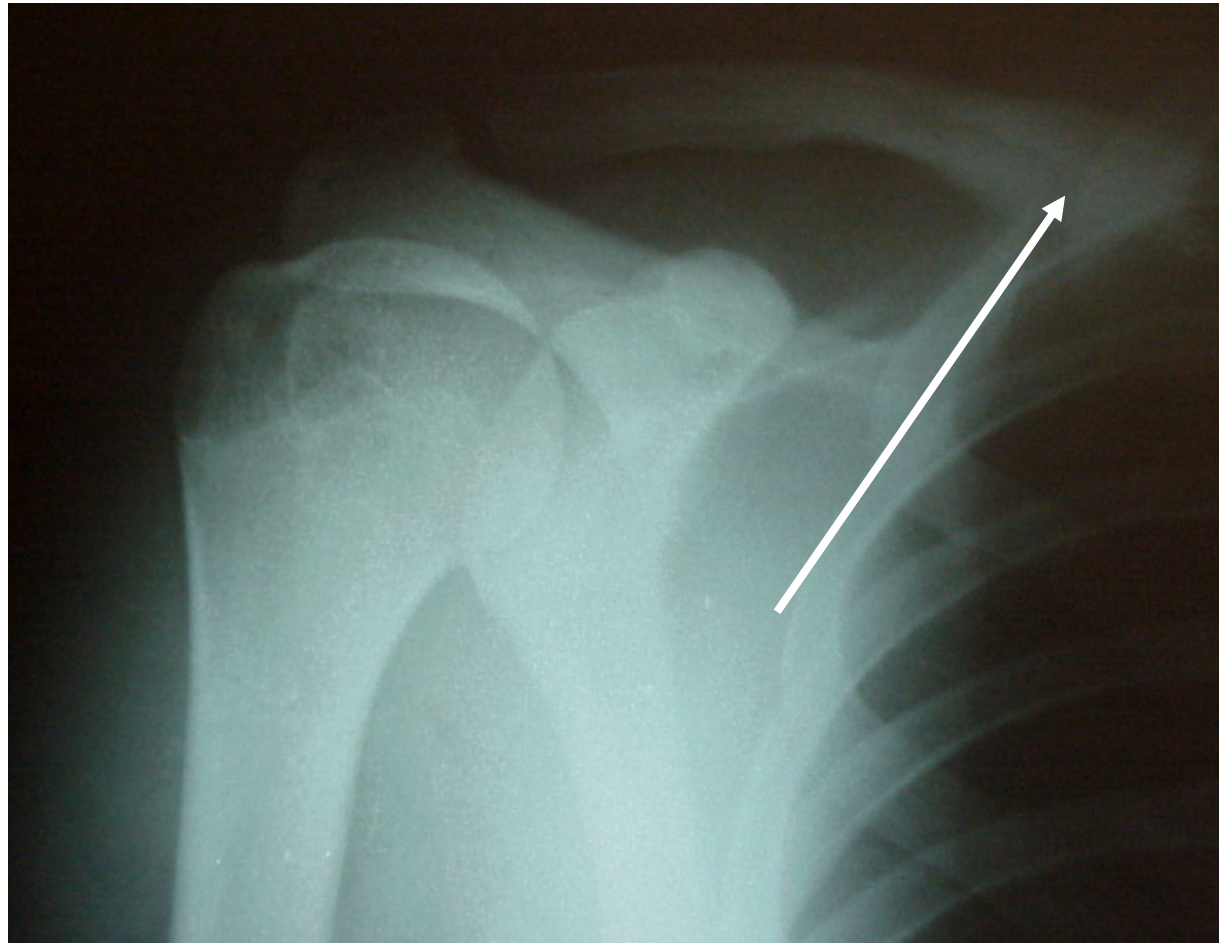
6 Articulations or Joints

- Coraco Clavicular
- Sterno Clavicular
- Acromio Clavicular
- Gleno Humeral
- Scapulo Thoracic
- Sub Acromial Space

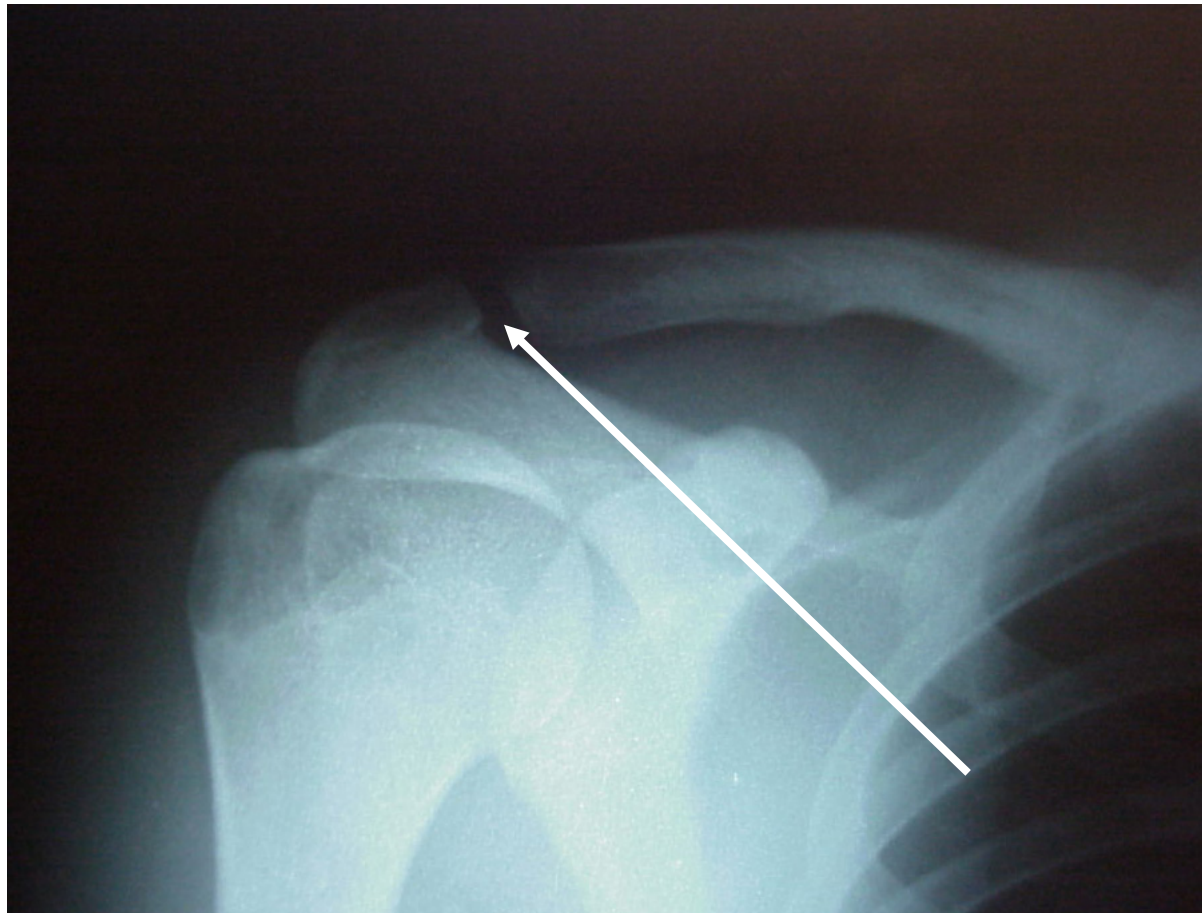
Coraco Clavicular



Sterno Clavicular



Acromio Clavicular

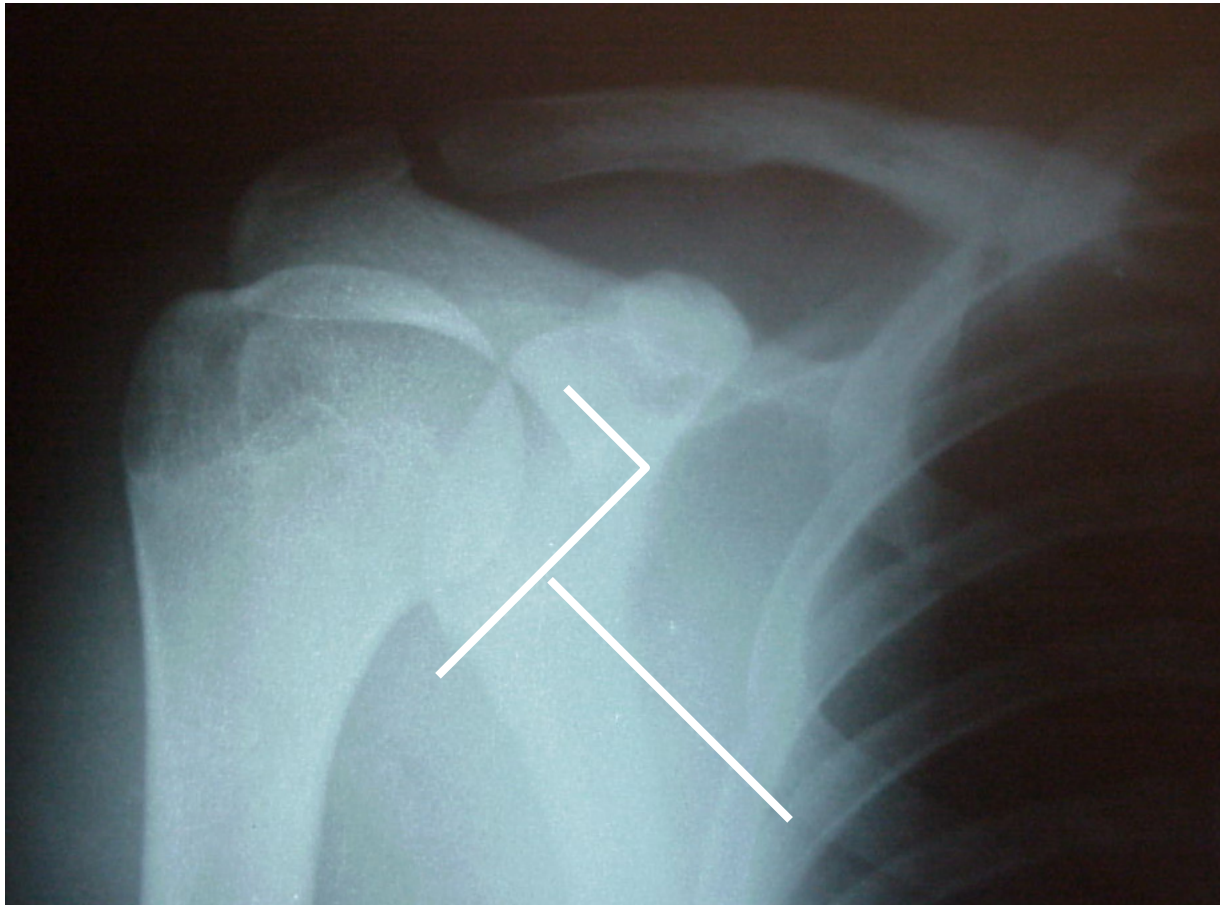


A/C Joint

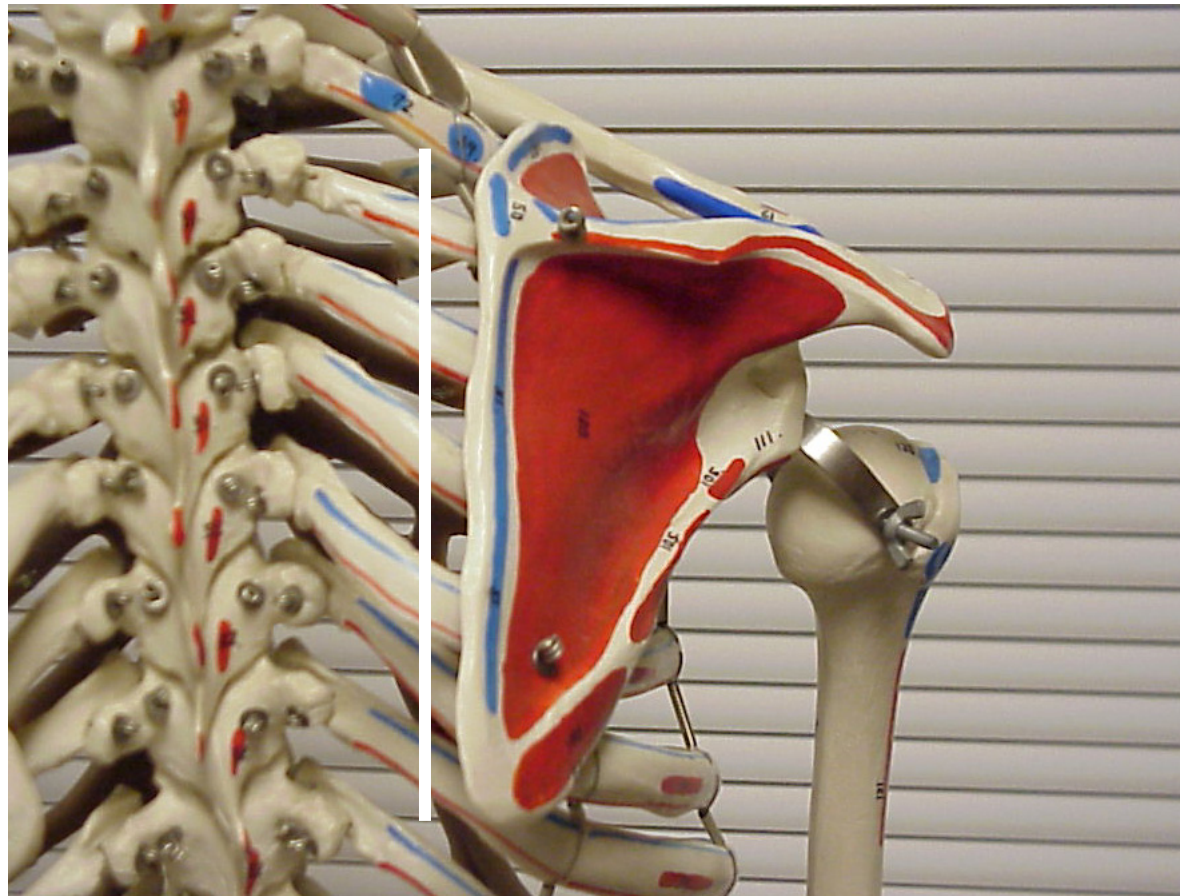


Grade 1+ A/C Separation

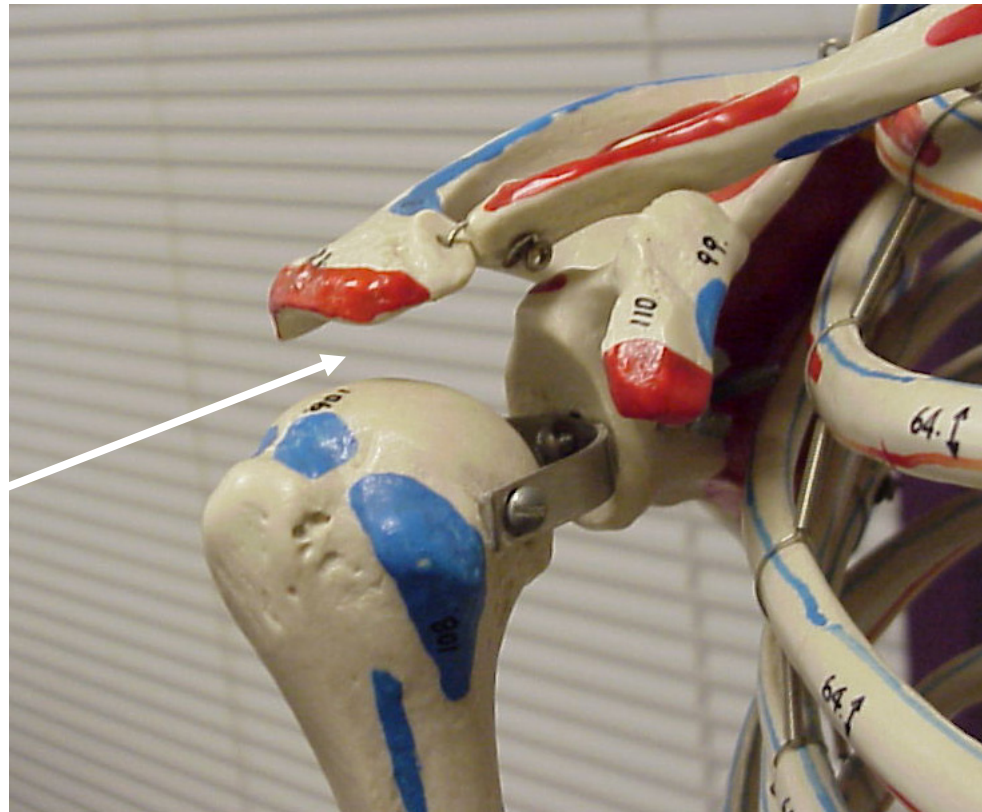
Gleno Humeral



Scapulo Thoracic



Sub Acromial



Functional Stability

- Shoulder is very unstable from a bony standpoint
- Stability is almost totally dependent upon the synergism of the musculotendinous units
- The only true bony articulation to the thorax is the S/C Joint

Muscles

- 15 muscles move and stabilize the scapula
- 9 muscles provide for GH motion
- 6 support the scapula on the thorax

The muscles and a lack of restrictive bony or ligamentous structure give the shoulder tremendous range of motion.



It also makes the shoulder very vulnerable to outside forces.



Anterior Capsule

- Subscapularis Tendon
- Labrum
- Anterior Capsular Ligaments
 - Coraco Humeral, GH, Inferior GH Ligament
 - *Inferior may be the most important ligament in the shoulder*
- Anterior Synovial pouches and bursae

Rotator Cuff Muscles

- Supraspinatus - abduction
- Infraspinatus - external rotation
- Teres Minor - depression, external rotation, extension

Spells SIT

- Subscapularis - internal rotation

Cuff Functions

- Anterior Posterior Stability
- Internal and External Rotation
 - eccentrically and concentrically
- Elevation - Depression
- Protraction
- Retraction
- Joint Translation

- Fine Tuners

- Stabilizers

- Maintain joint contact areas

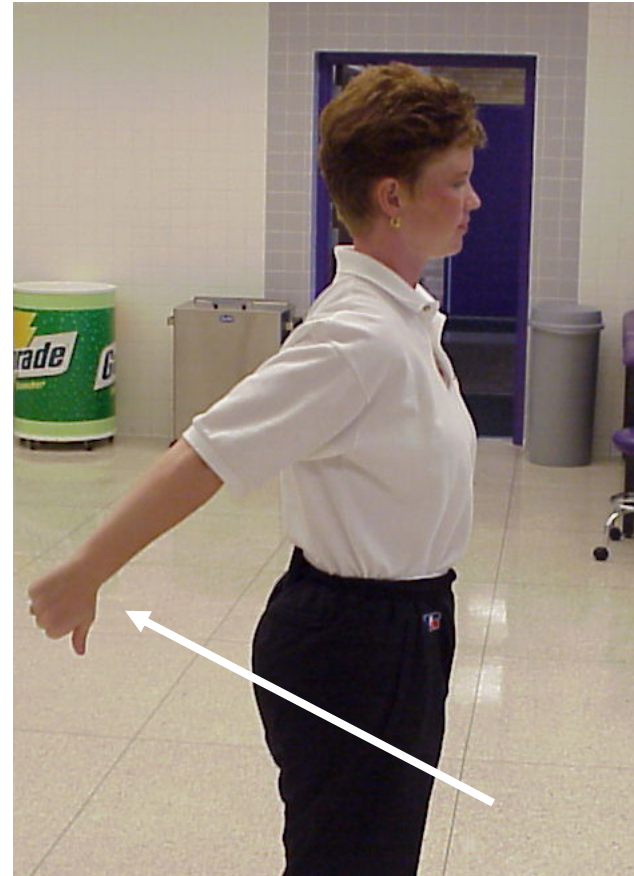
Movements

- Flexion
 - 90 degrees
- Primary Flexors
 - Anterior Deltoid
 - Coracobrachialis
 - Pectoralis Major
 - Biceps



Movements

- Extension
- Primary Extensors
 - Latissimus dorsi
 - Teres Major
 - Teres Minor
 - Triceps



Abduction

- Primary Abductors
 - Supraspinatus
 - Mid Deltoid
 - Serratus Anterior
 - Infraspinatus



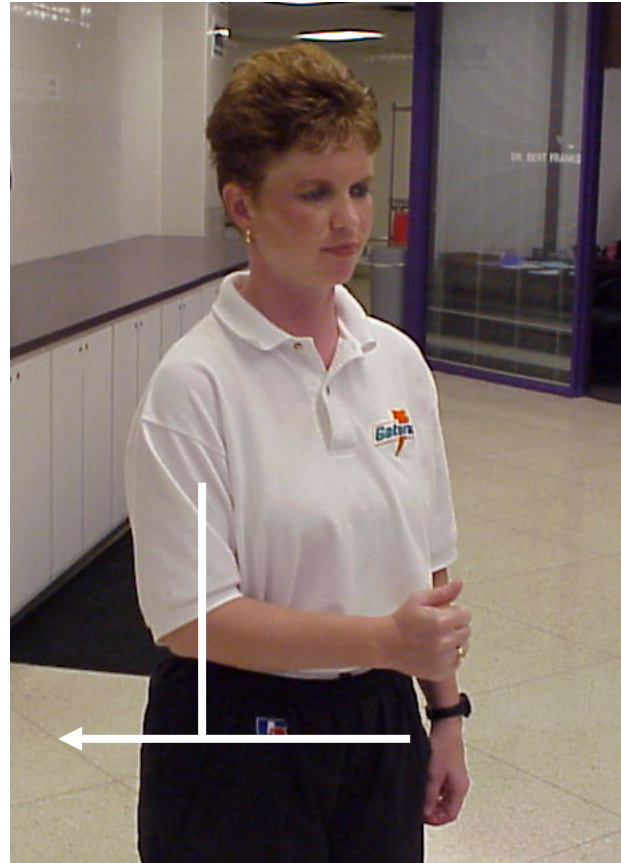
Adduction

- Primary Adductors
 - Anterior Deltoid
 - Pectoralis Major
 - Subscapularis



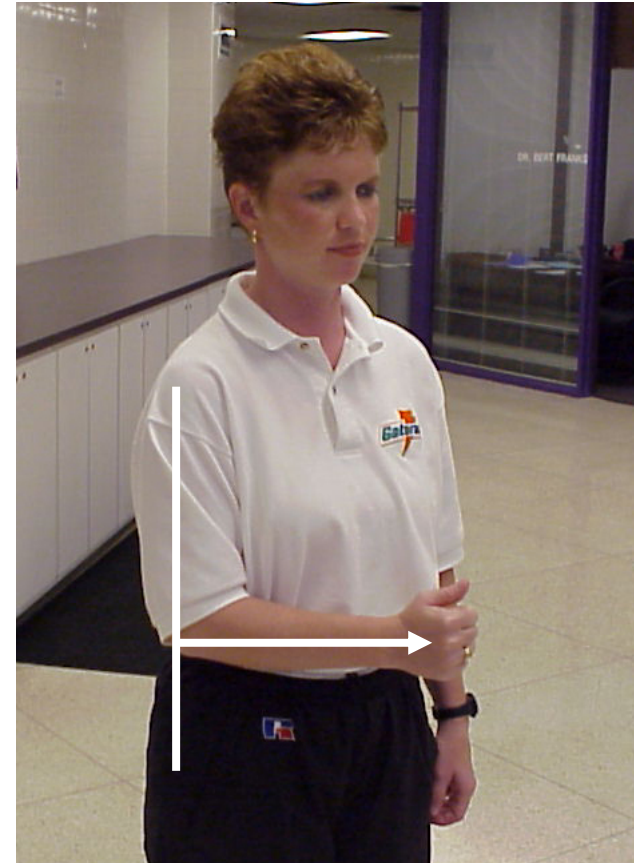
External Rotation

- Primary External Rotators
 - Posterior Deltoid
 - Infraspinatus
 - Teres Minor



Internal Rotation

- Primary Internal Rotators
 - Subscapularis
 - Pectoralis Major
 - Latissimus Dorsi
 - Teres Major
 - Anterior Deltoid



Internal Rotation

The body limits internal rotation - thus placing the arm behind the body increases the amount of internal rotation



Evaluation Tests

- Yergason Test 1



- Yergason Test 2



Yergason Test

- Positive Findings

pain

popping

Transverse Humeral Ligament

Long Head of the Biceps irritation

- Speed's Test



Speed's Test

Positive Findings

Pain

Weakness

Long Head of Biceps Tendon

- Drop Arm Test



Drop Arm

- Findings

Pain

Dropping of Arm

Supraspinatus Tendon

- Apprehension Test



Apprehension Test

- Positive Findings
 - Pain
 - Feeling of Apprehension about the shoulder potentially re subluxating or dislocating

- Relocation Test - Fowler's Test



Relocation Test

- The relocation test eliminates the pain found with an apprehension test. This test acts to re center the Humerus in the Glenoid Fossa

- Throwers Test



Throwers Test

- Reproduces anterior capsule pain which is indicative of anterior capsular laxity

- Rowe Test



Rowe Test

Multi Directional Instability

Very similar test to the Sulcus Test and it also produces a Sulcus sign

- Empty Can Test



Empty Can

- Specific for trauma to the Supraspinatus muscle
 - tendon irritation
 - impingement and or tear

- Impingement Test



Primary



Secondary

Impingement

- Does not occur singularly in a bio mechanical sense
 - Joint Laxity
 - Outside trauma

- Adson, Allen Test - Maneuver



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Adson's, Allen Test

- Thoracic Outlet Syndrome

- Stress Testing Joints

A/C Joint Stress Testing

Counter force weights should be applied to the wrist and not gripped.

Bilateral X-Ray comparisons are required

- MRI Scans





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