Shoulder Examination

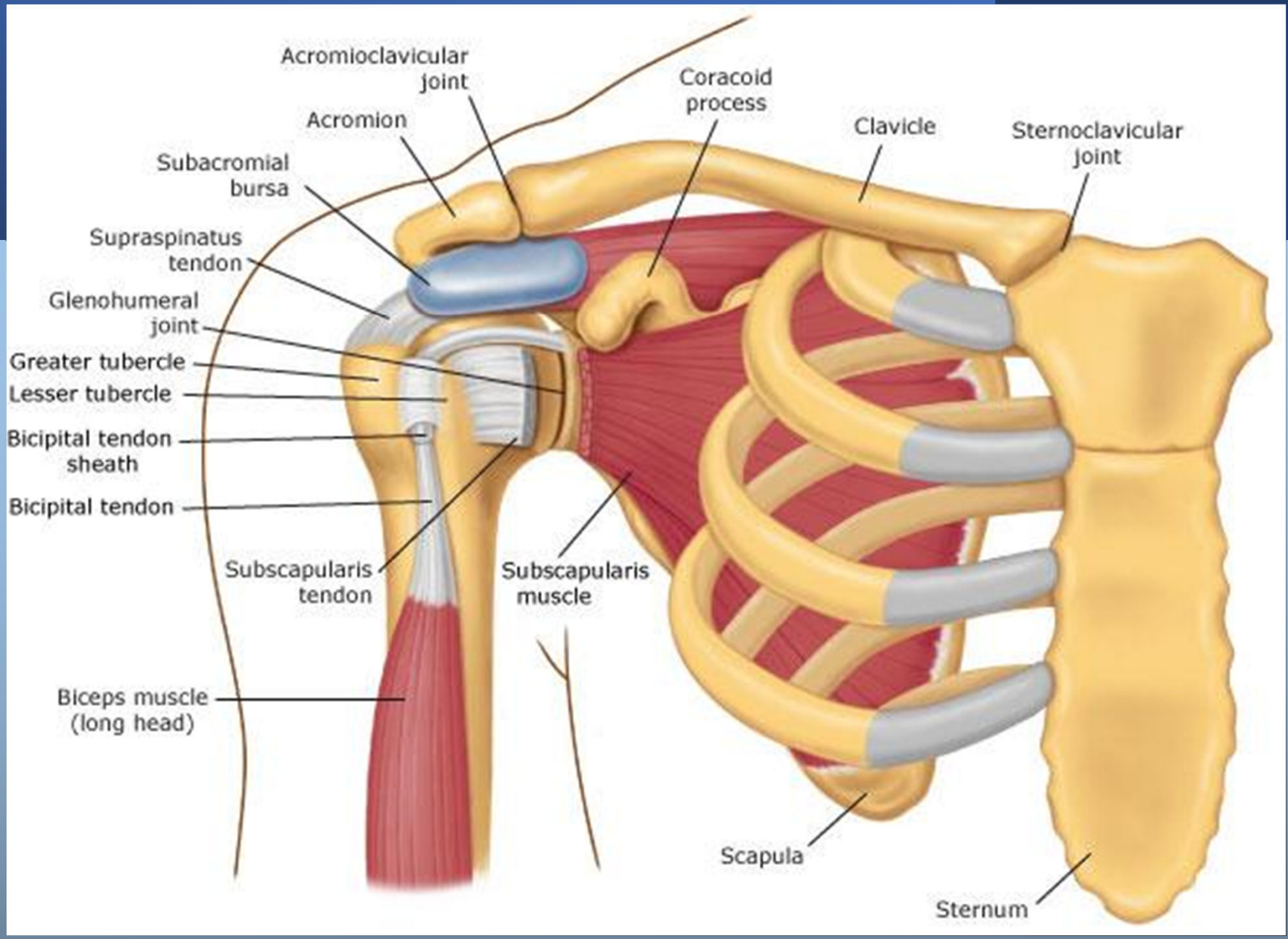
Objectives

- Review anatomy of the shoulder
- Consider differential diagnosis of shoulder complaints
- Develop skills in clinical history and physical examination of the shoulder
- Review common shoulder injuries

Brief Epidemiology

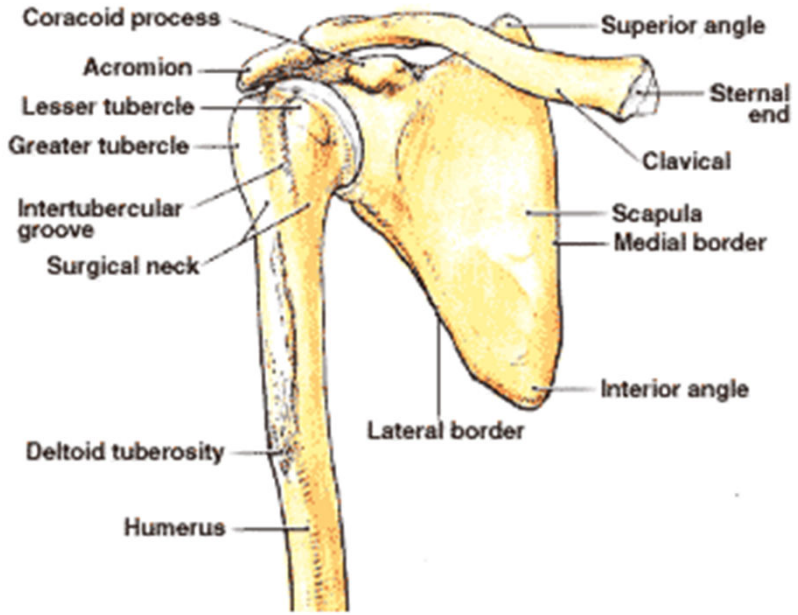
- Shoulder pain: a common complaint in primary care
  - 2nd only to knee pain for specialist referrals
  - Most common causes in adults (peak ages 40-60)
    - Subacromial impingement syndrome
    - Rotator cuff problems

- Athletic injuries
  - Shoulder: 8-13% of all
  - athletic injuries


Acromioclavicular joint
Coracoid process
Acromion
Clavicle
Sternoclavicular joint
Subacromial bursa
Supraspinatus tendon
Glenohumeral joint
Greater tubercle
Lesser tubercle
Bicipital tendon sheath
Bicipital tendon
Subscapularis tendon
Subscapularis muscle
Biceps muscle (long head)
Scapula
Sternum

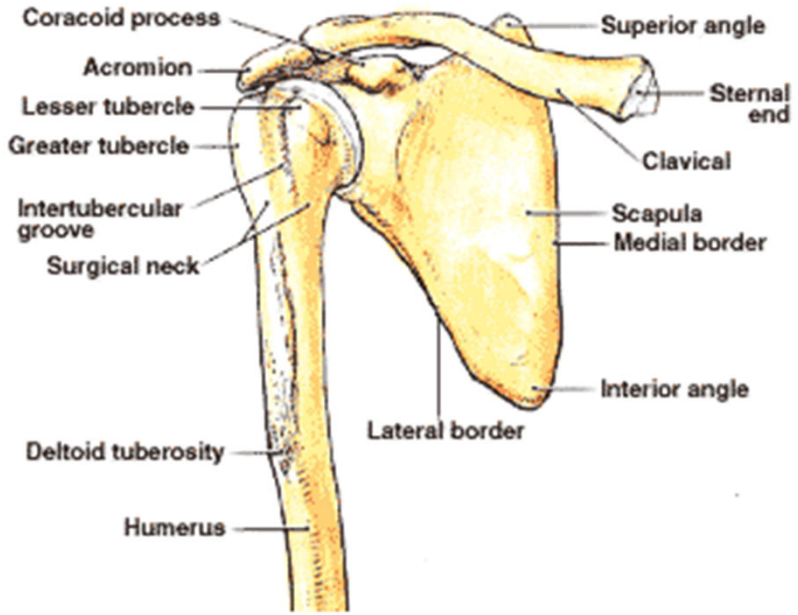
Anatomy

- 3 Bones
  - Humerus
  - Scapula
  - Clavicle
- 3 Joints
  - Glenohumeral
  - Acromioclavicular
  - Sternoclavicular
- 1 “Articulation”
  - Scapulothoracic

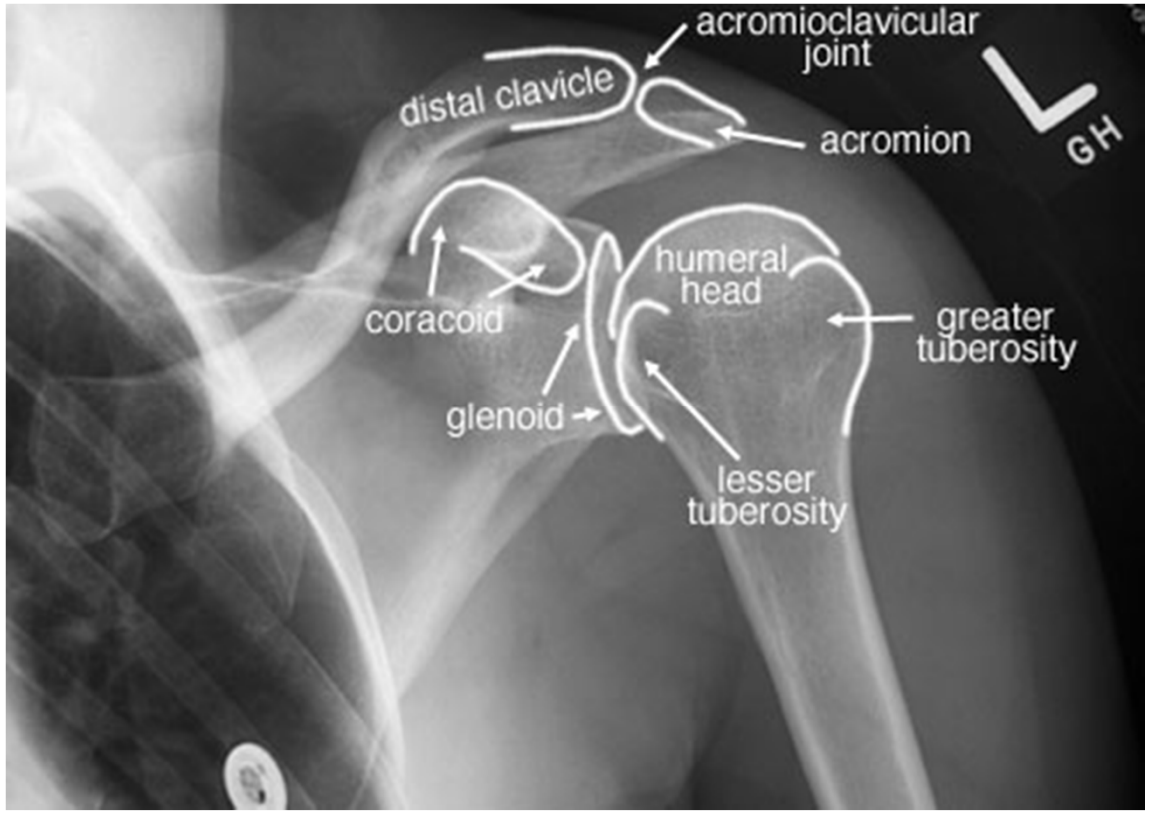


Anatomy

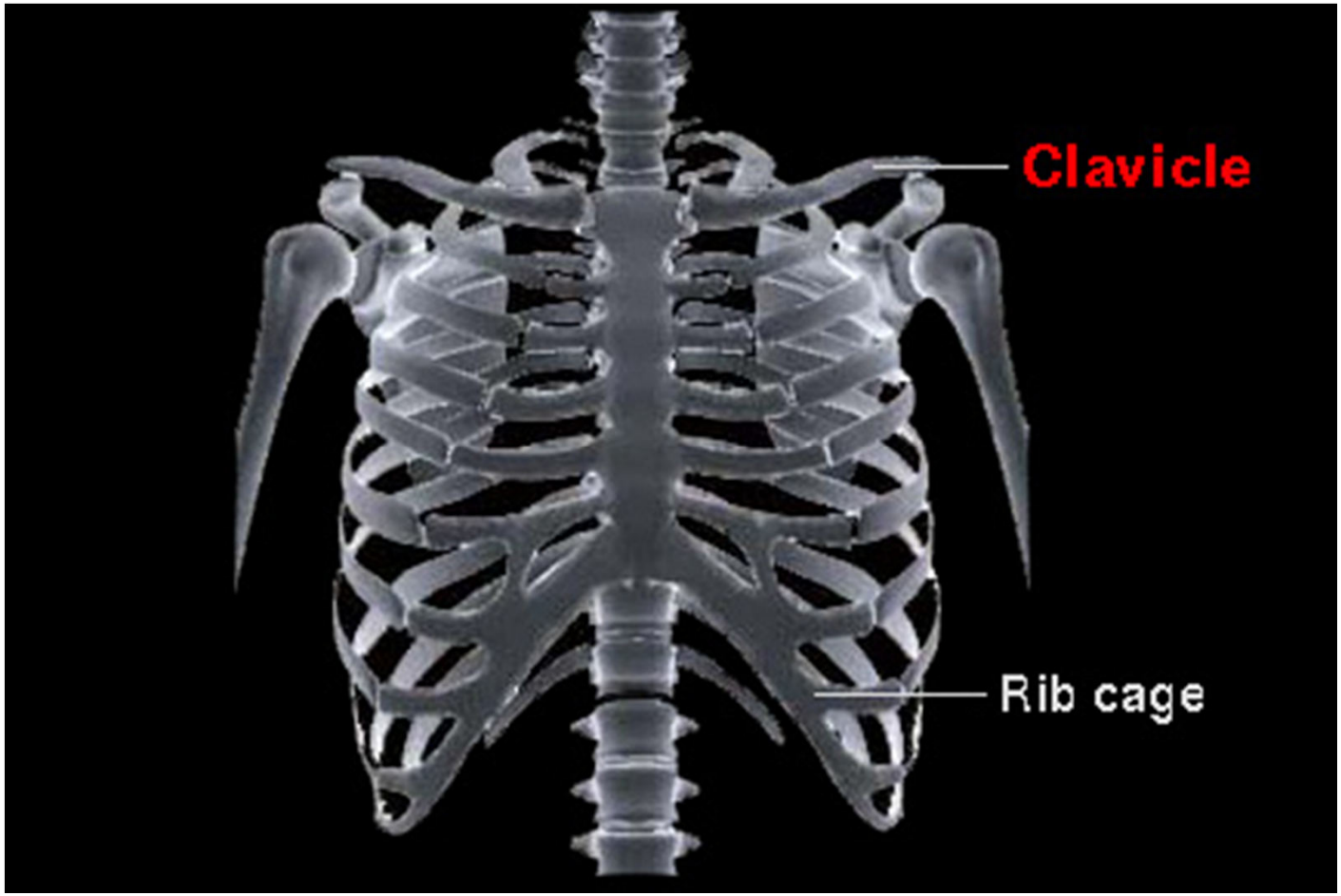
- Humerus
  - Head *
  - Greater tubercle*
  - Lesser tubercle*
  - Intertubercular (bicipital) groove
  - Deltoid tuberosity
- Scapula
  - Angles
    - Superior
    - Inferior
    - Lateral (Head)



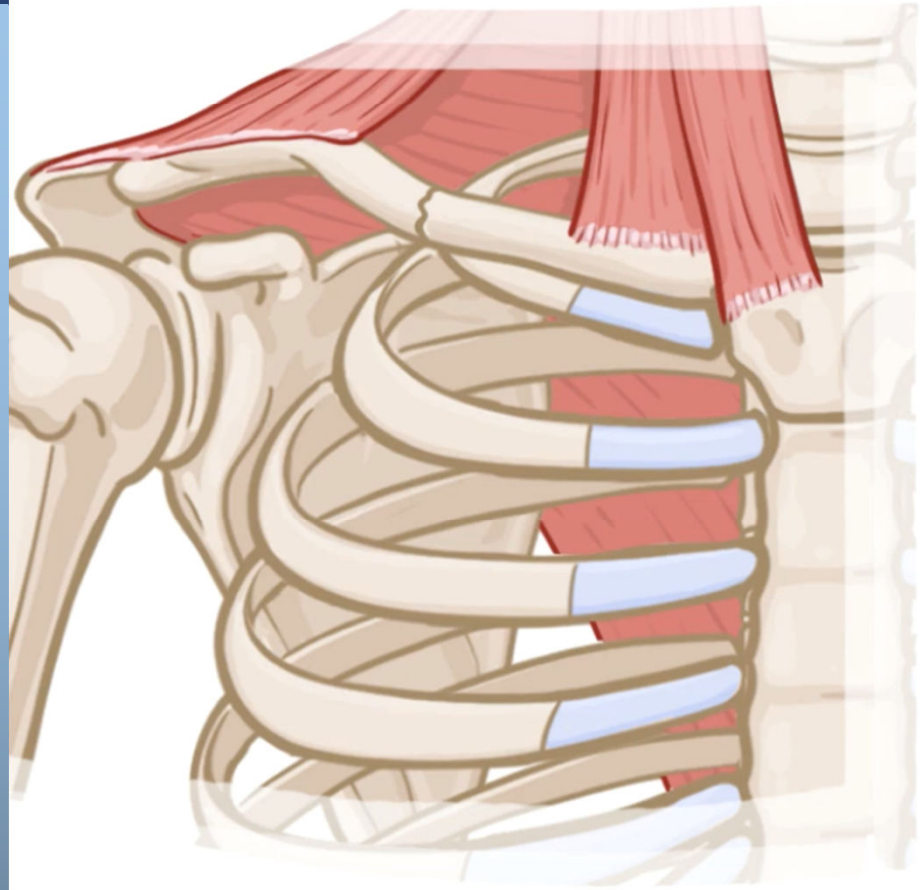
Shoulder Girdle (IR)



Clavicle



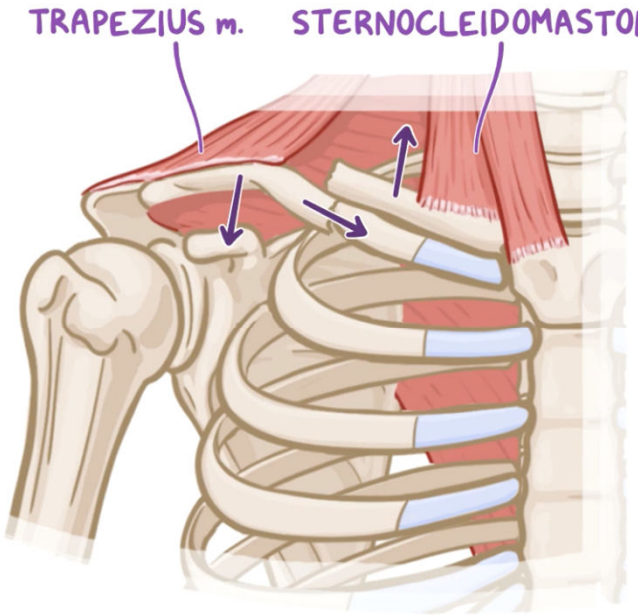
CLAVICLE



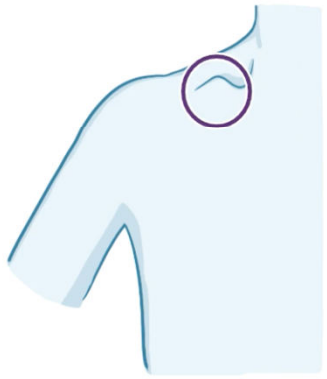
* PRONE to FRACTURES

DIRECT TRAUMA

CLAVICLE

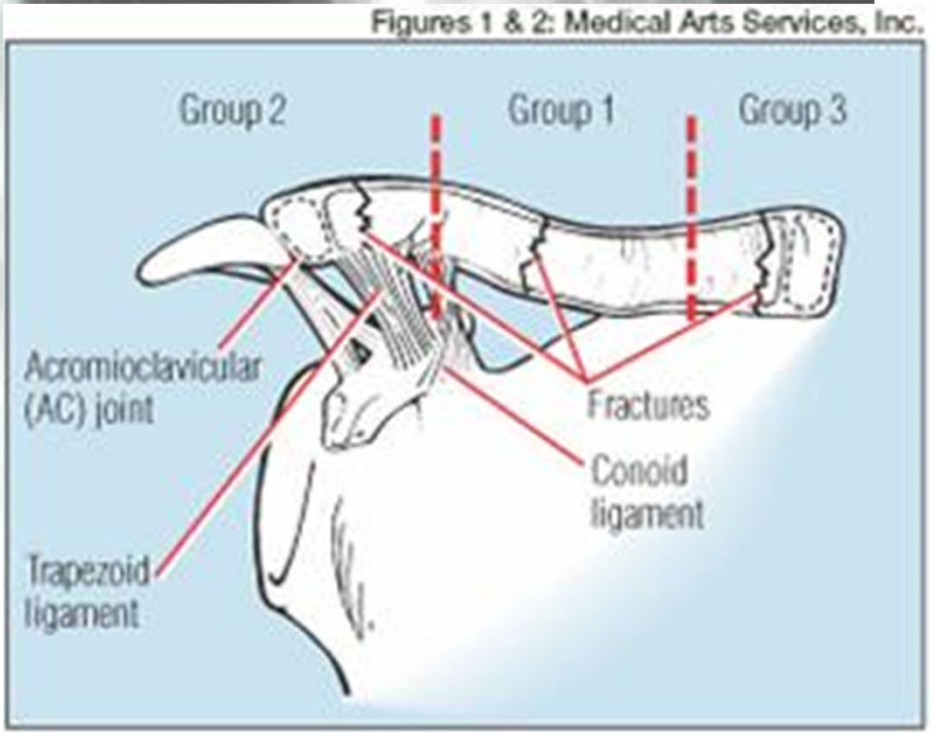


* MEDIAL FRAGMENT PULLED UP
  - APPARENT to NAKED EYE & PALPABLE
* SHOULDER DROPS
* CLAVICLE is SHORTENED



* SKIN ABOVE FRACTURE is TENTING
  - may become OPEN FRACTURE
    - SURGICAL STABILIZATIO

- Clavicle Fractures
- Mostly conservative treatment
- Consider surgery for:
  - Group II Fx's (esp if medial to CCL)
  - Open fractures
  - Neurovascular compromise
- Severe associated injuries
  - E.g. flail chest, mult rib fx's, scapulothoracic dissociation
- Nonunion / malunion



Figures 1 & 2: Medical Arts Services, Inc.

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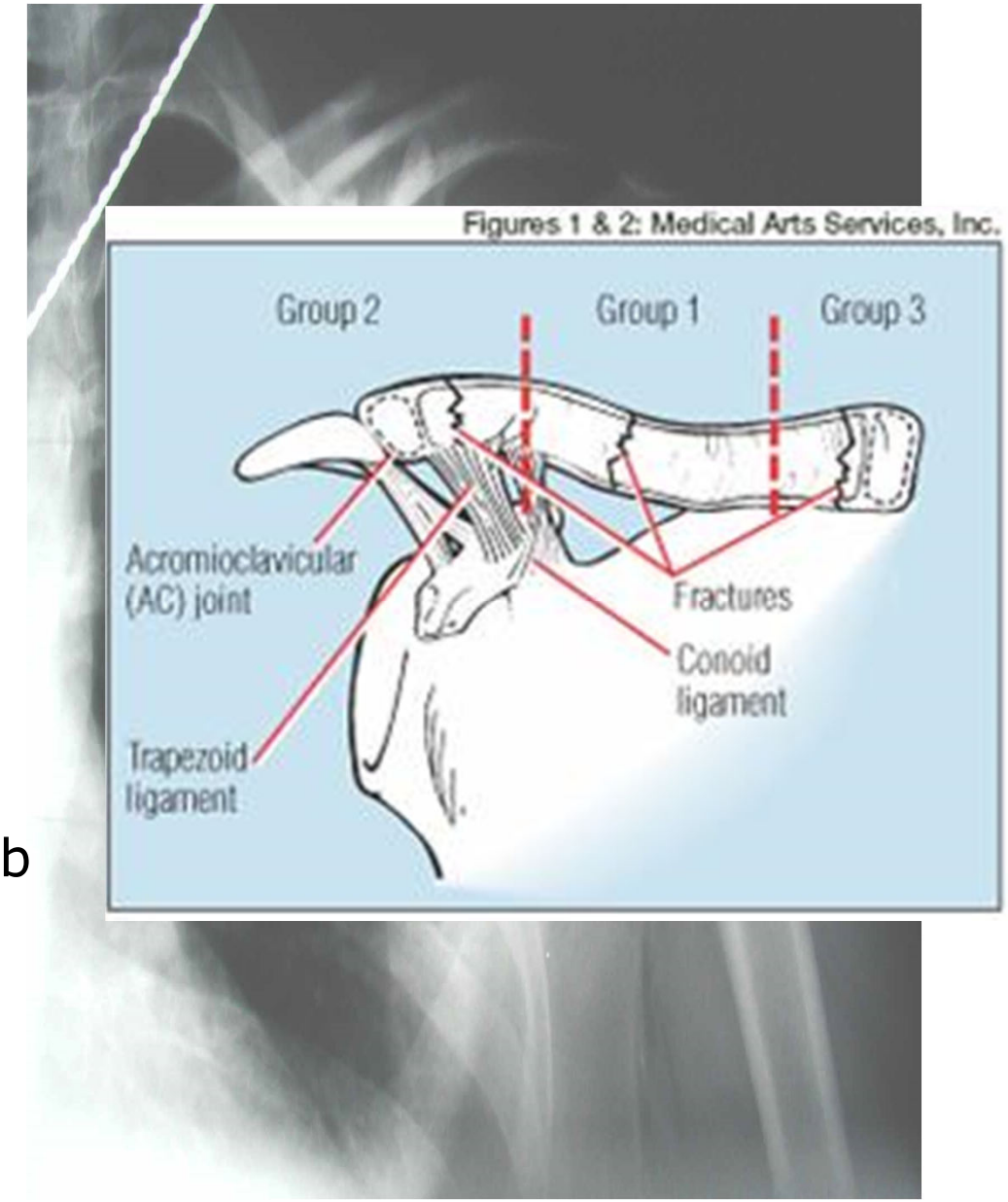
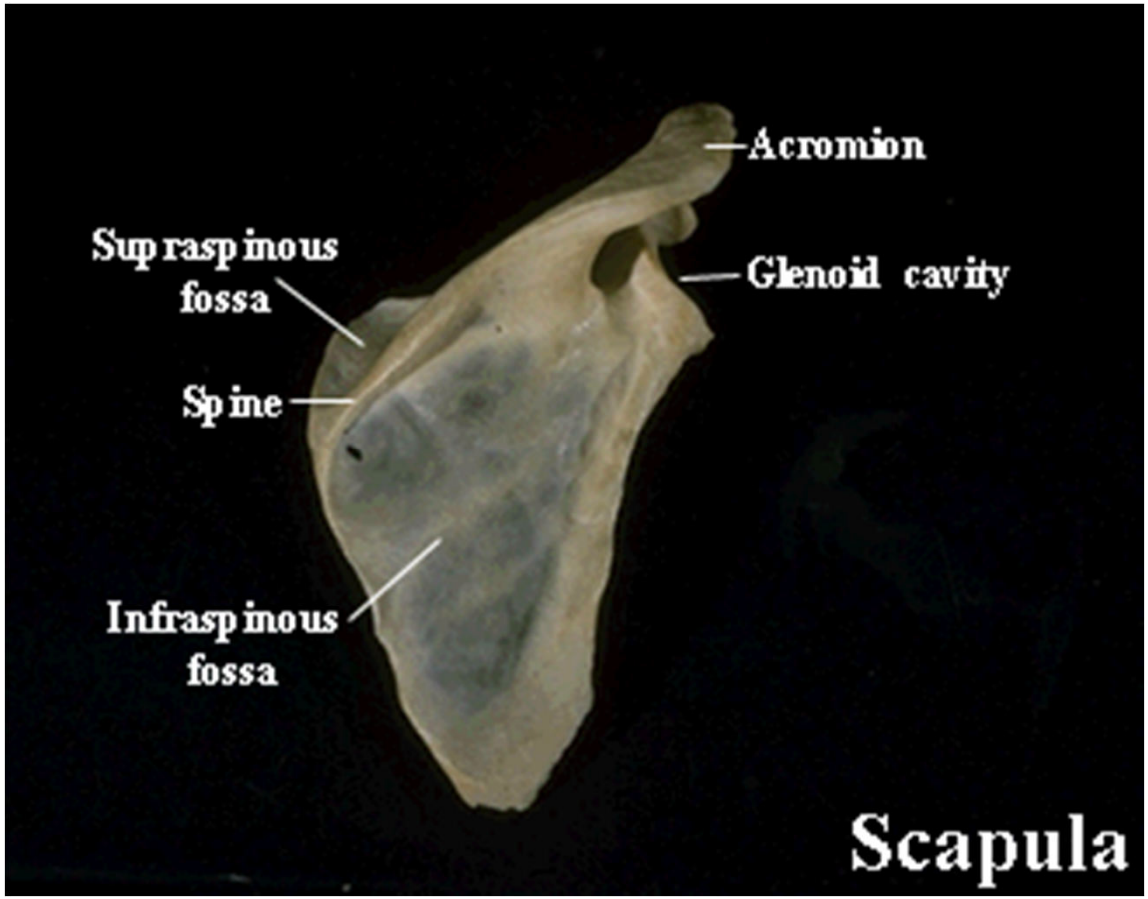


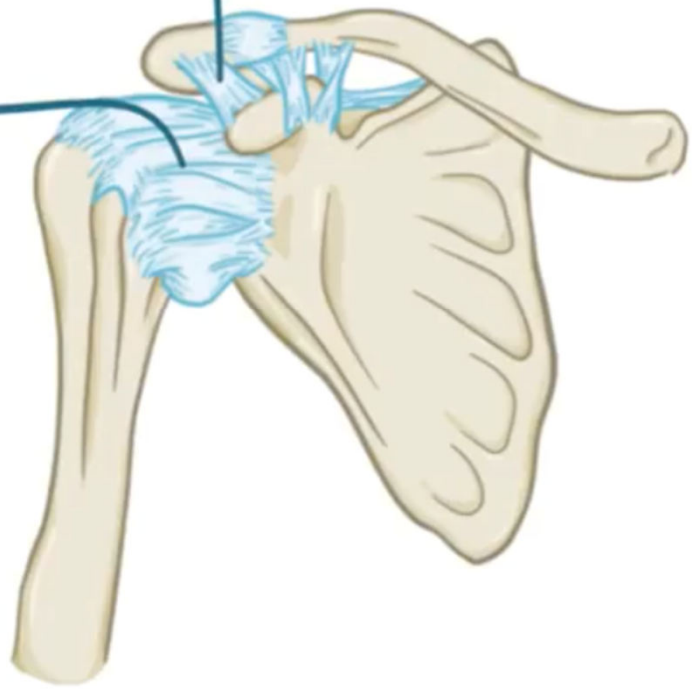

Acromion
Glenoid cavity
Supraspinous fossa
Spine
Infraspinous fossa
Scapula

CORACOACROMIAL LIGAMENT

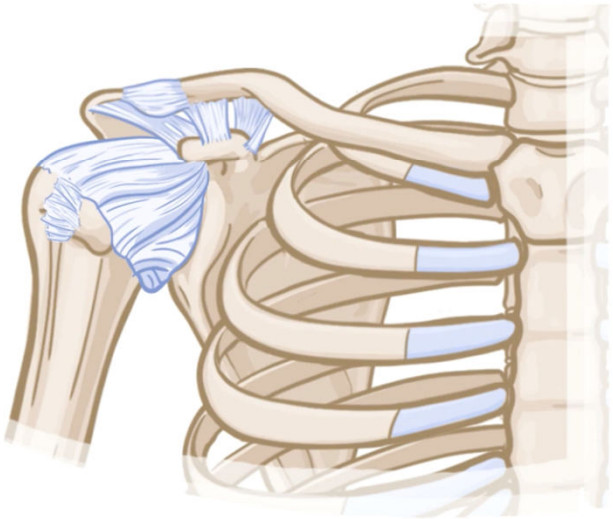
PREVENTS UPWARD DISLOCATION

CAPSULE of the **GLENOHUMERAL JOINT**

HOLDS the **HEAD** of the **HUMERUS** inside the **GLENOID CAVITY**



ACROMIOCLAVICULAR DISLOCATION
"SHOULDER SEPARATION"



* CLAVICLE & ACROMION PROCESS SEPARATE

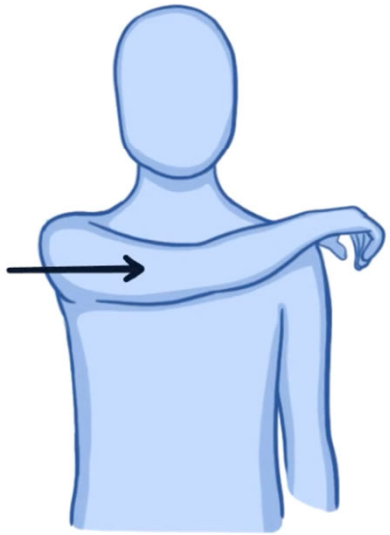
SEEN in CONTACT SP

ACROMIOCLAVICULAR DISLOCATION

CLINICAL FEATURES

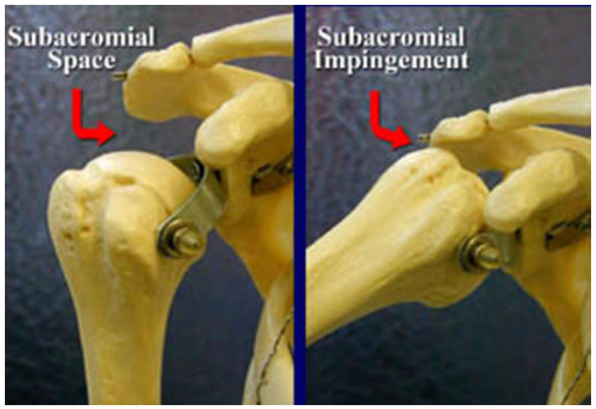
* SWELLING of ACROMIOCLAVICULAR JOINT
* PAIN that WORSENS w/:
  - OVERHEAD ARM MOVEMENT
  - LYING on AFFECTED SIDE
* OSTEOARTHRITIS of AC JOINT

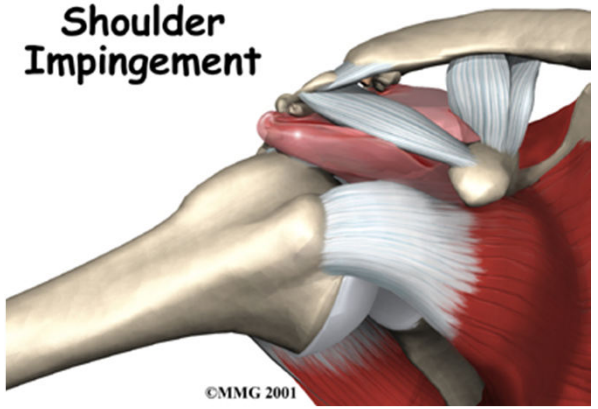
SCARF TEST



Subacromial Impingement Syndrome

- Impingement of:
  - Subacromial bursa
  - Rotator cuff muscles and tendons
  - Biceps tendon
- Between
  - Acromion
  - Coracoacromial ligament
  - AC joint
  - Coracoid process
  - Humeral head
- Rotator cuff tendonosis





Shoulder Impingement

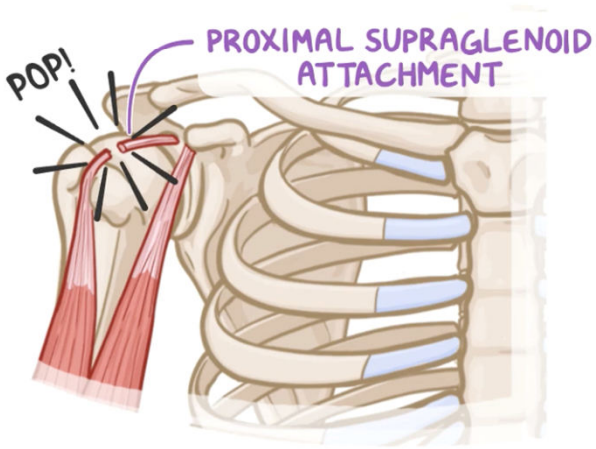
- Supraspinatus tendon is inflamed as a consequence of repetitive trauma to its subacromial portion.
- Any processes that reduce the subacromial space together with repetitive overhead motion of the shoulder may contribute to the development of this condition.
- It usually manifests as shoulder pain, particularly at night, and weakness in the overhead extension of the arms

BICEPS TENDON

PROLONGED TENDONITIS

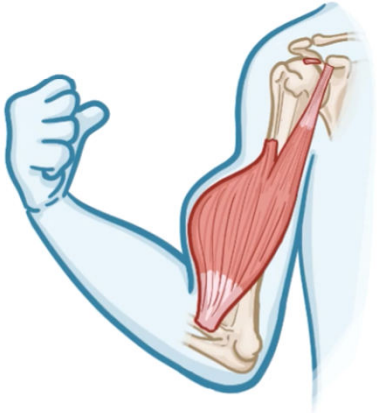
FORCEFUL FLEXION against RESISTANCE

BICEPS TENDON RUPTURE

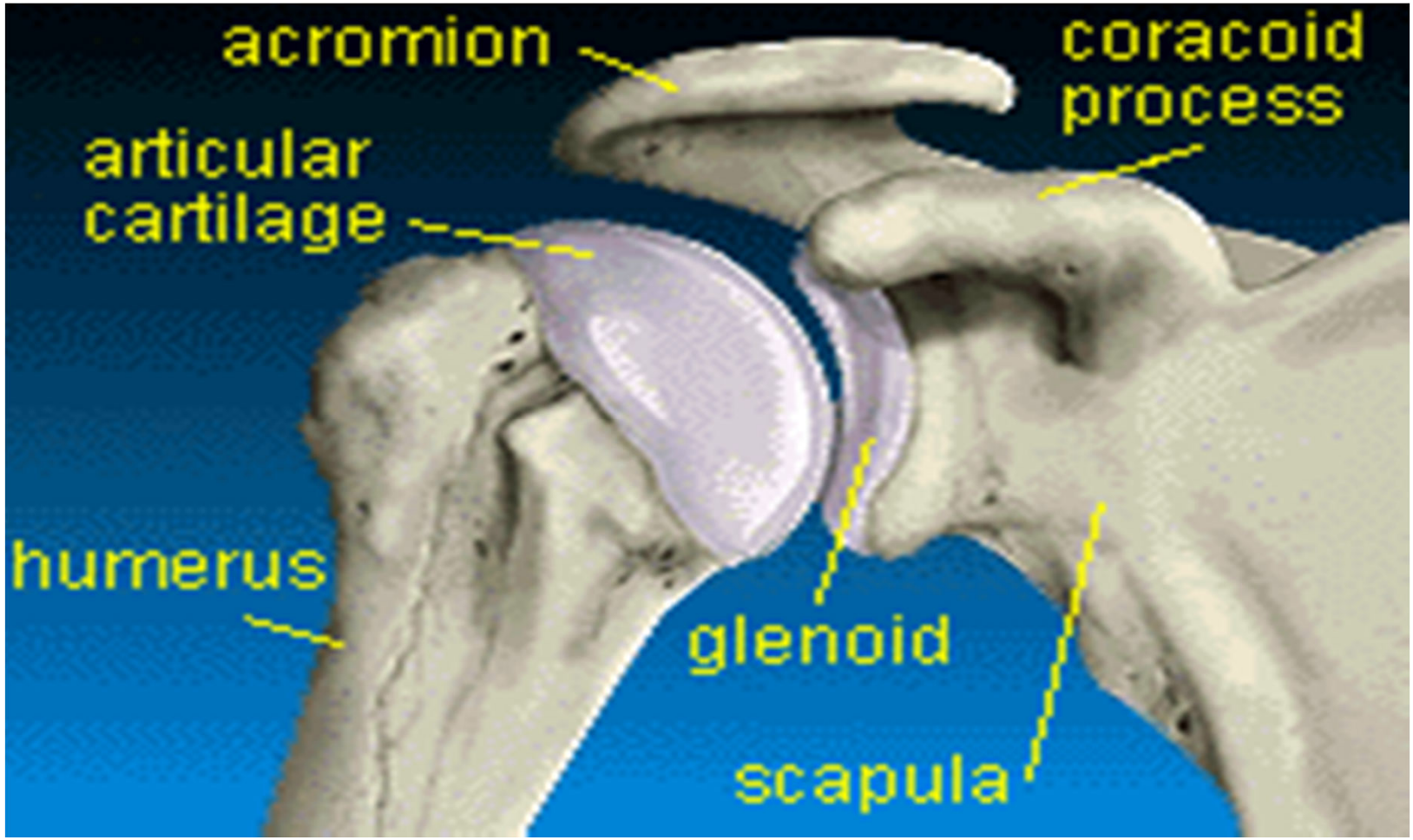


CLINICAL FEATURES

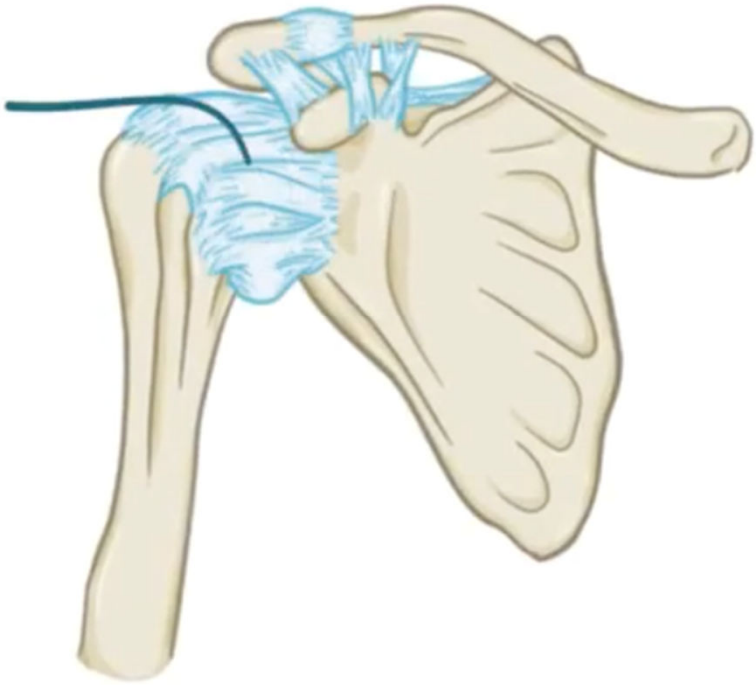
"POPEYE DEFORMITY"



Glenohumeral Joint (GH)

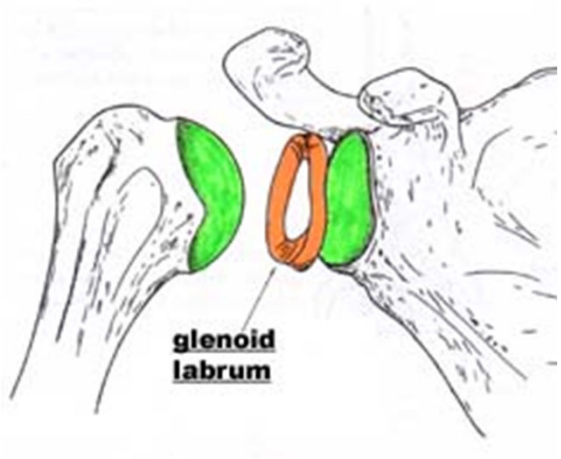


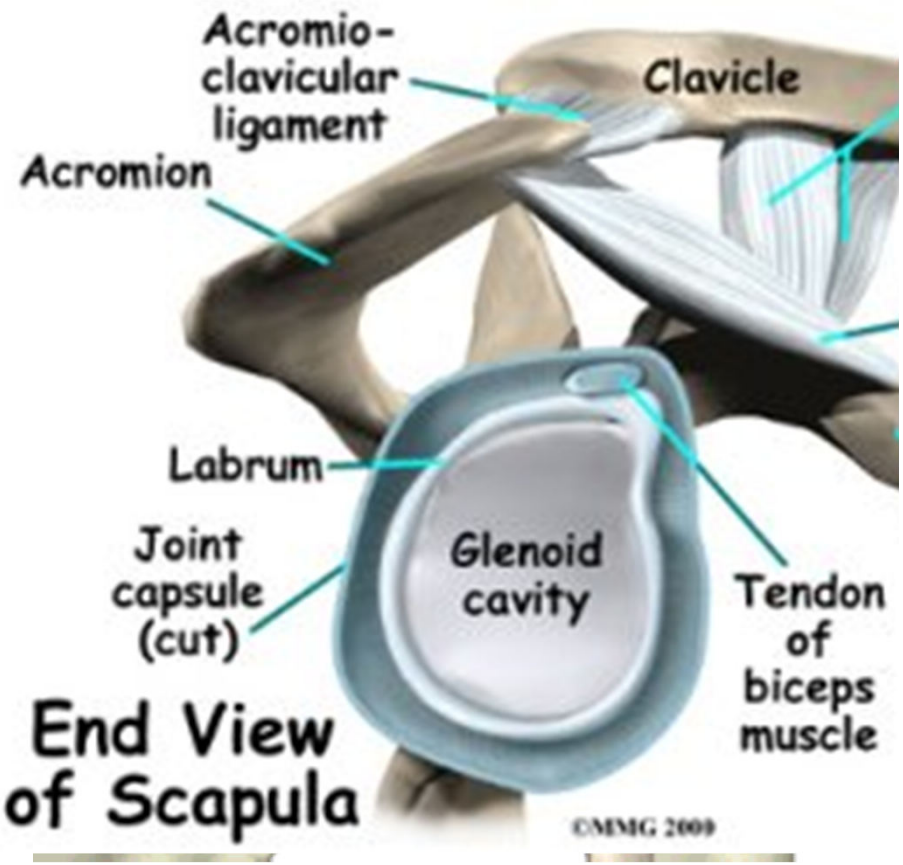
CAPSULE of the
GLENOHUMERAL JOINT



Glenohumeral Joint

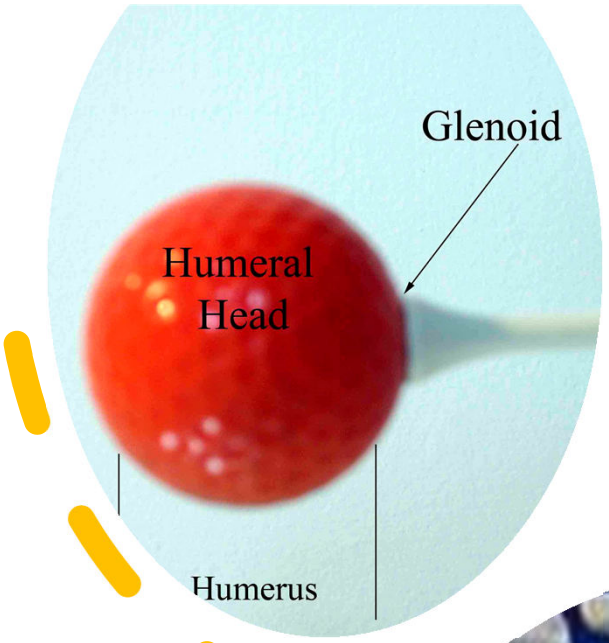
- Passive stability
  - Joint conformity
  - Glenoid labrum (50%)
  - Joint capsule
  - Ligaments
  - Bony restraints





Glenohumeral Joint

- “Ball and socket” vs “Golf ball and tee”
- Very mobile
- Price: instability
- 45% of all dislocations
- Joint stability depends on multiple factors

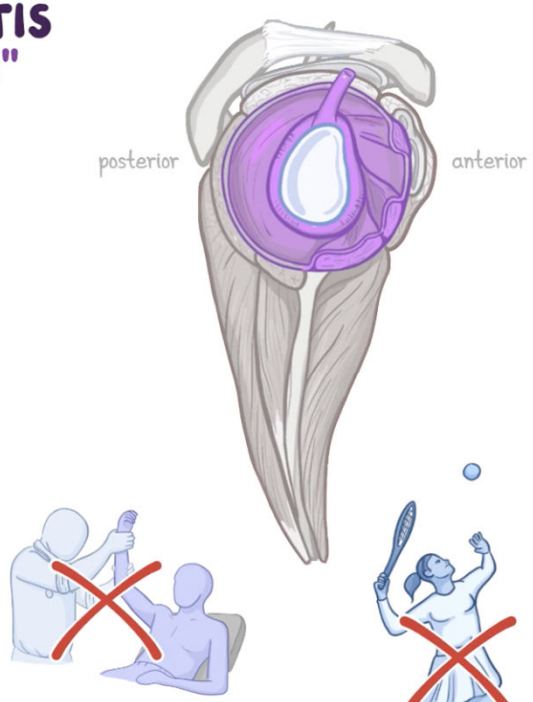


ADHESIVE CAPSULITIS
"FROZEN SHOULDER"

* CONNECTIVE TISSUE becomes INFLAMED & STIFF
* USUALLY 40-60
* can be INITIATED by INJURIES
  - GLENOHUMERAL DISLOCATIONS
  - ROTATOR CUFF INJURIES

CLINICAL FEATURES

9 MONTHS - 1	* DISABLING PAIN * INCREASING STIFFNESS
12 MONTHS - 2	* PROGRESSIVE RANGE of MOTION LIMITATION * PAIN is LESS PRONOUNCED
2 YEARS - 3	* RECOVERY PHASE ↳ patients regain their mobility



Shoulder Pain

Pain arising from the shoulder

- Rotator cuff disorders: rotator cuff tendinopathy, impingement, subacromial bursitis, rotator cuff tears
- Glenohumeral disorders: capsulitis ("frozen shoulder"), arthritis, infection (rare)
- Acromioclavicular disease
- Traumatic dislocation

Pain arising from elsewhere

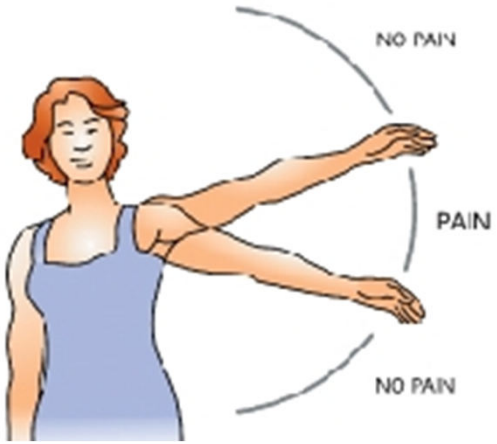
- Referred pain: neck pain, myocardial ischaemia, referred diaphragmatic pain
- Polymyalgia rheumatica
- Malignancy: apical lung cancers, metastases

Frozen Shoulder

"This entity is difficult to define, difficult to treat, and difficult to explain" Codman 1934,

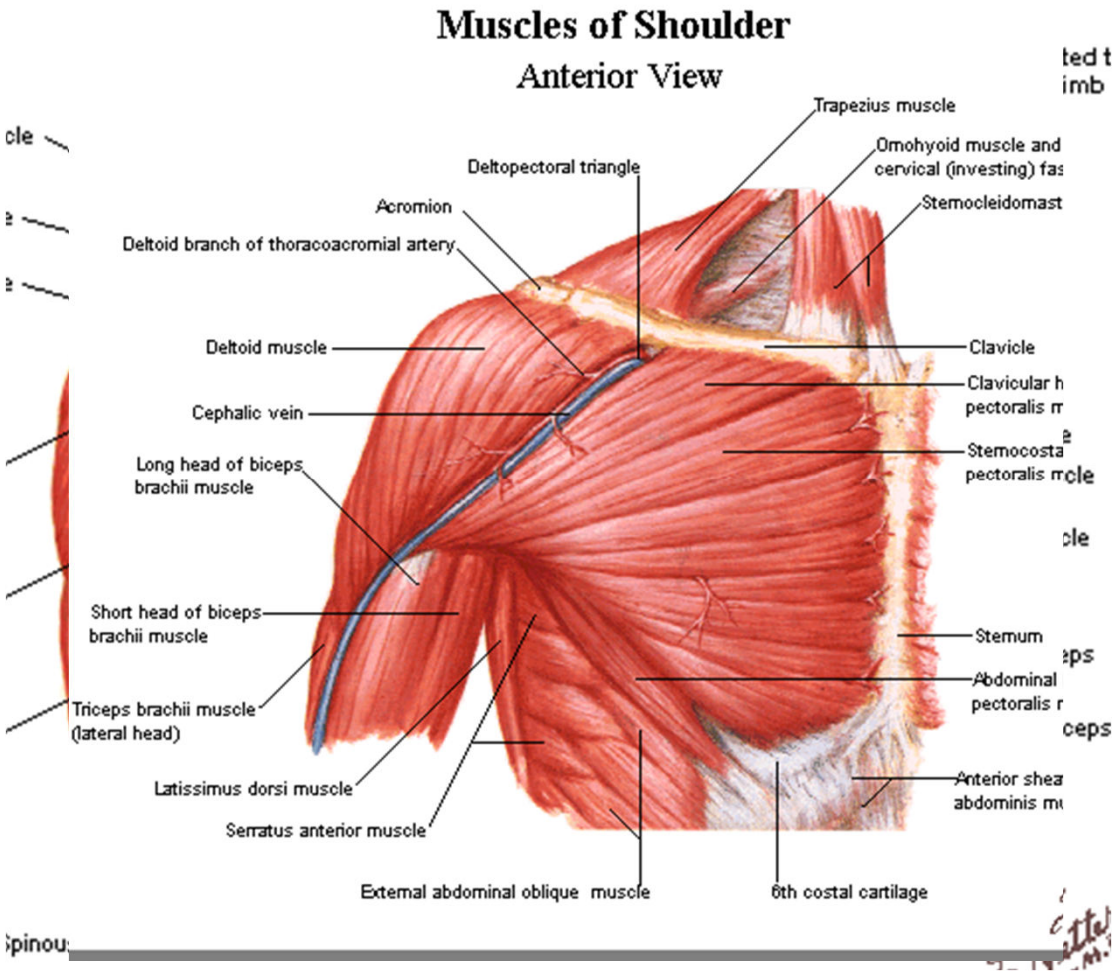
- Symptoms =
  - pain
    - progressive
    - mostly at night
    - end of its range of motion (ROM).
    - lasts 1-2 years in 90% of cases
  - restricted ROM
    - ER>Abd>IR

PAINFUL ARC



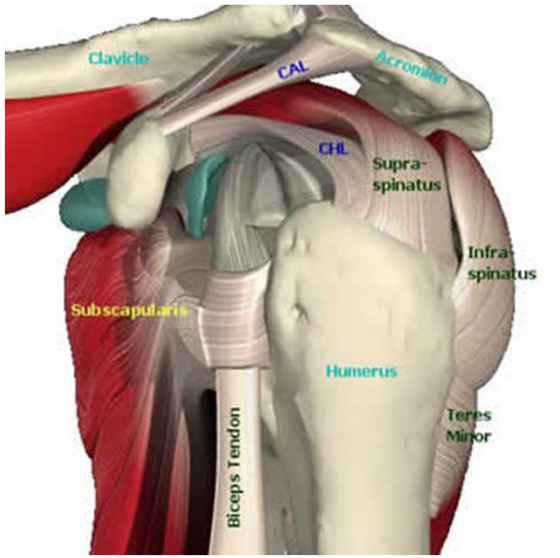
Muscles

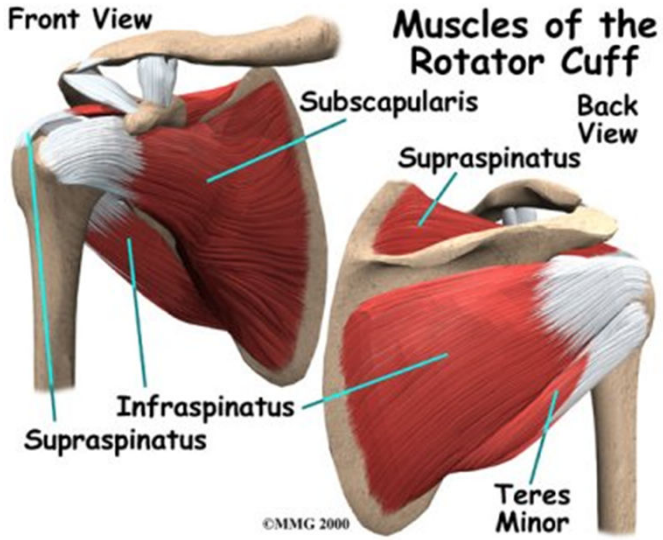
Deltoid	Trapezius *
Rhomboids *	Levator scapulae *
Rotator cuff	Teres major
Biceps	Pectoralis muscles *
Serratus anterior *	



* Scapular stabilizers

Rotator Cuff Muscles





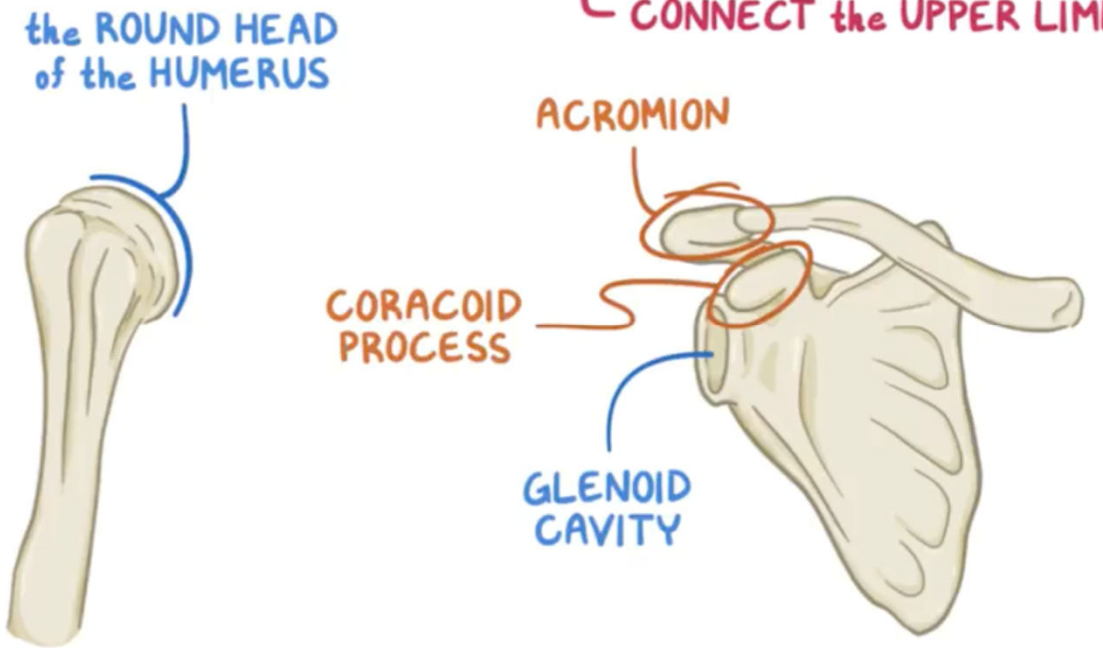
- S – Supraspinatus
- I – Infraspinatus
- t - Teres minor
- S- Supscapularis

ROTATOR CUFF

* 4 MUSCLES & THEIR TENDONS *

- STABILIZES the SHOULDER when MOVING
- CONNECT the UPPER LIMB to the CHEST

ALLOWING **MOVEMENT**
&
PROVIDES **STABILITY**



Rotator Cuff

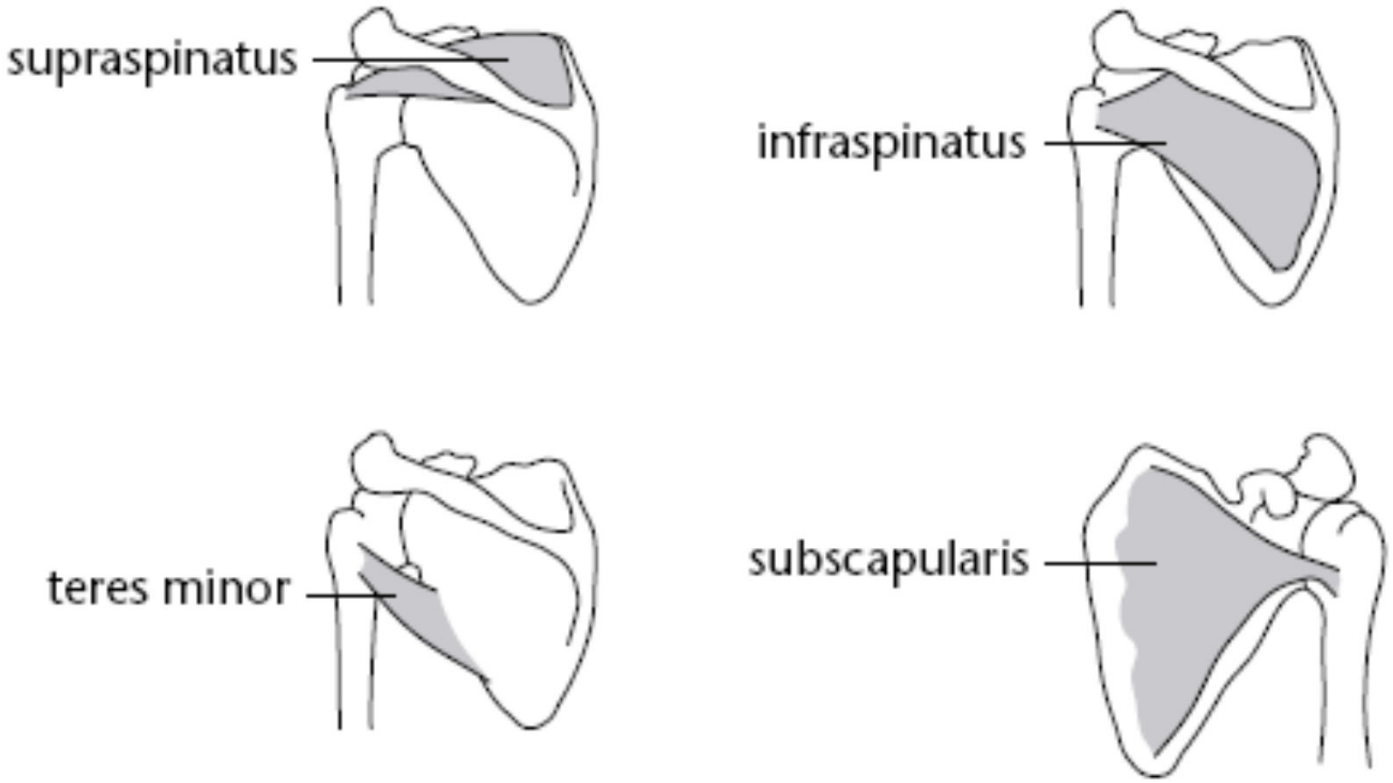
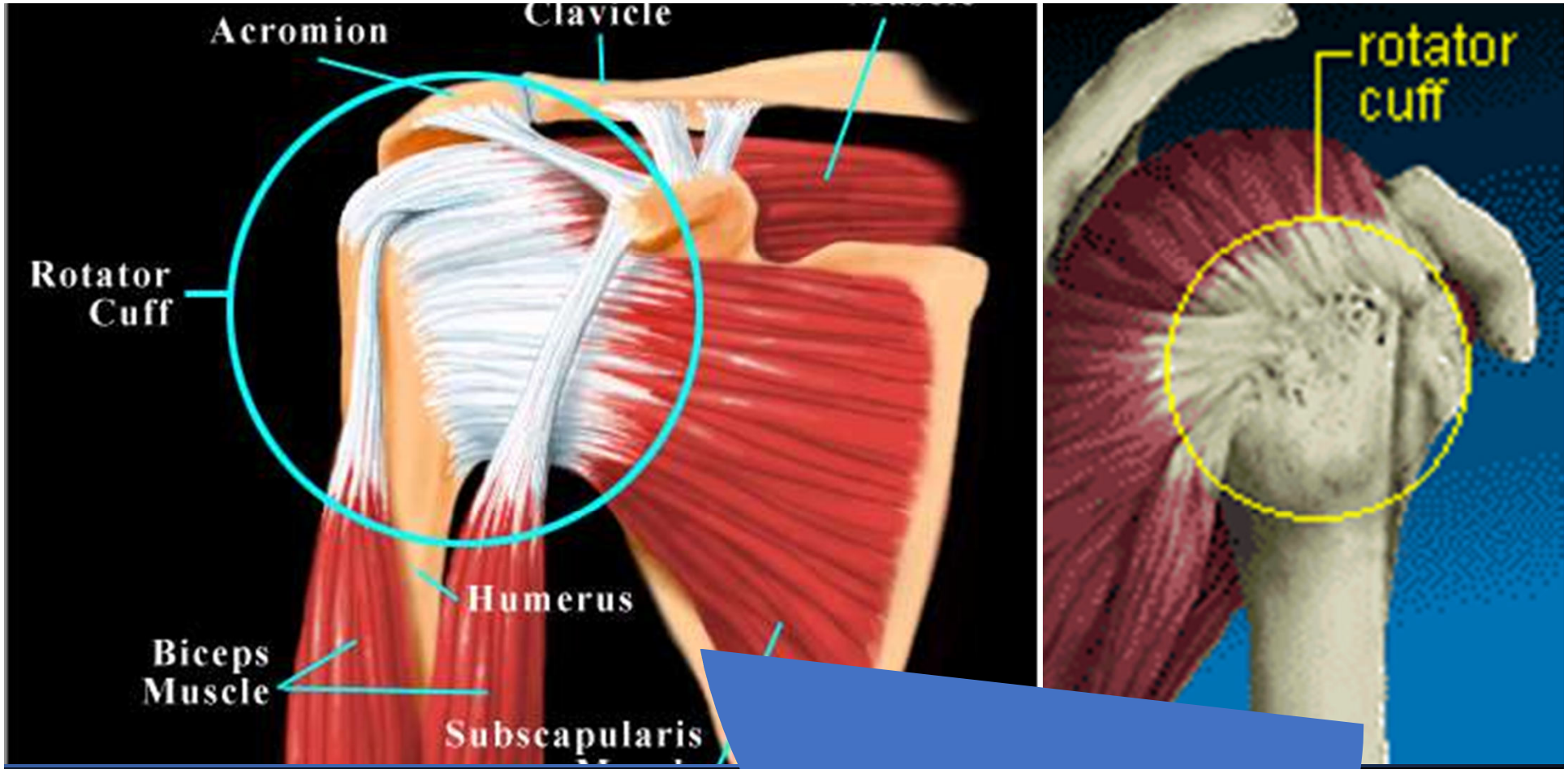
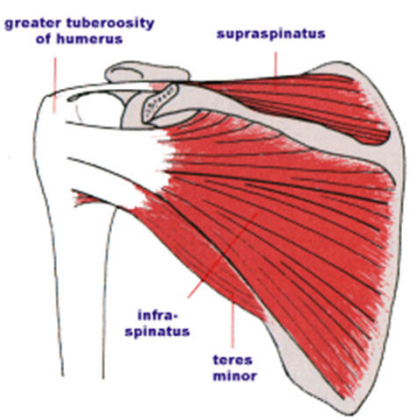


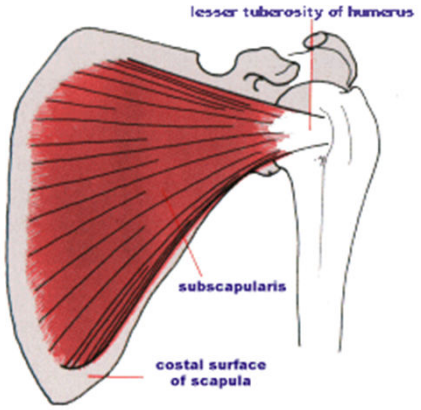
Figure 4.2 The rotator cuff muscles



Rotator Cuff

Rotator Cuff





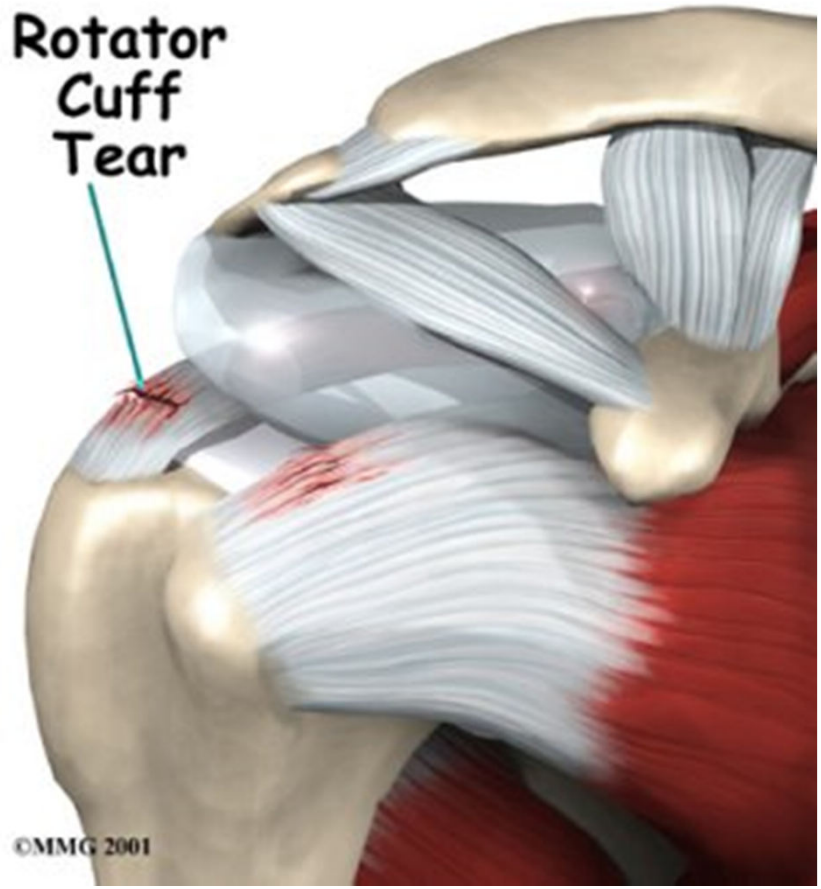
Rotator Cuff Tear

- Partial thickness tear
- Full (Complete) thickness tear

- May be due to:
  - Impingement
  - Degeneration
  - Overuse
  - Trauma

- Partial tears
  - Conservative

- Complete tears
  - Surgery



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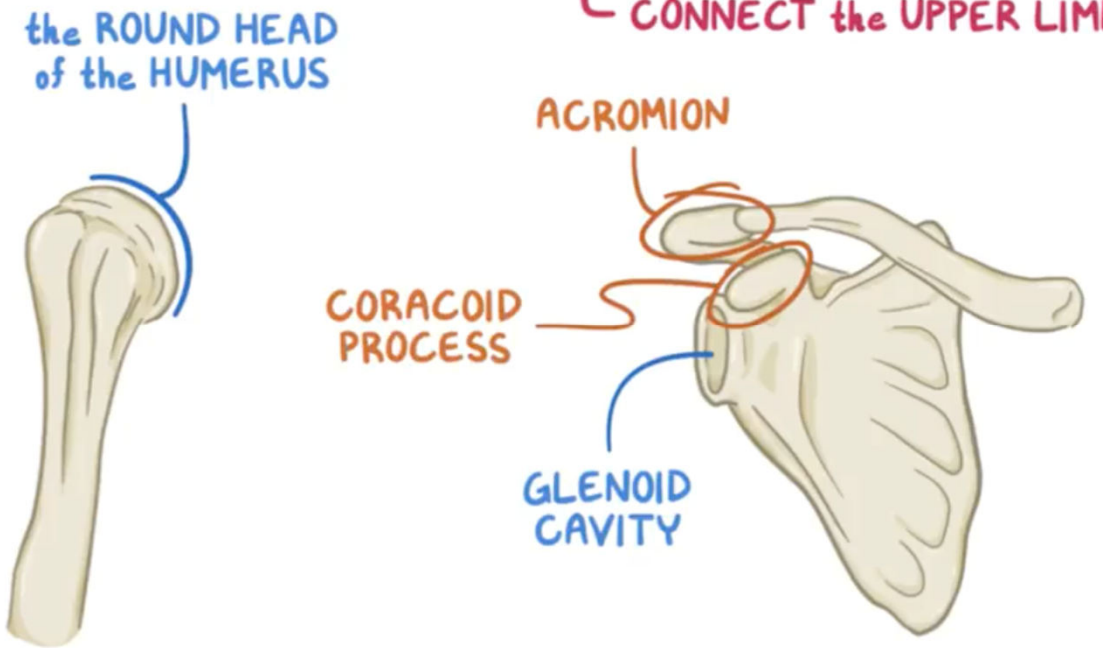
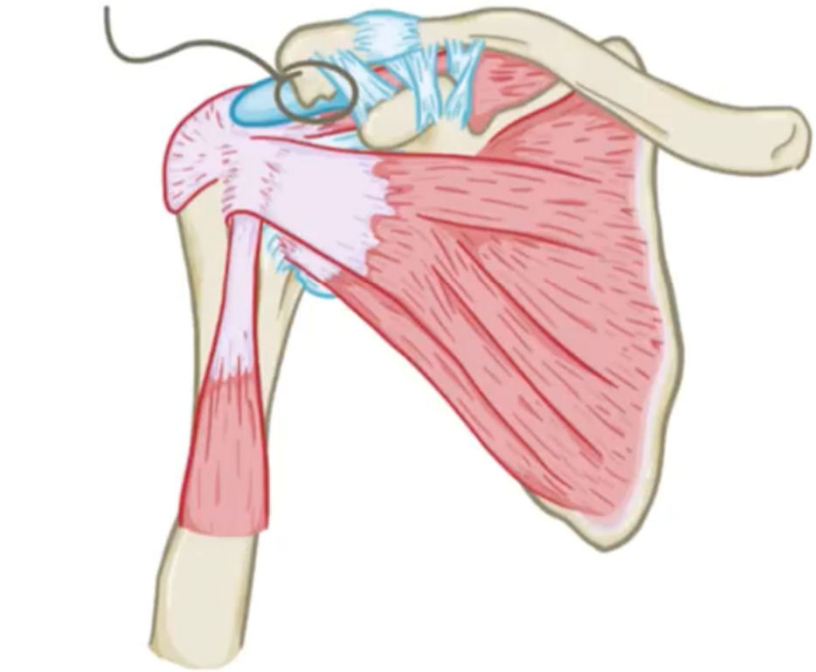


ROTATOR CUFF TEAR

SHOULDER IMPINGEMENT

RUBS ROTATOR CUFF TENDONS
DURING ABDUCTION

:ONE SPUR



ACUTE TEAR

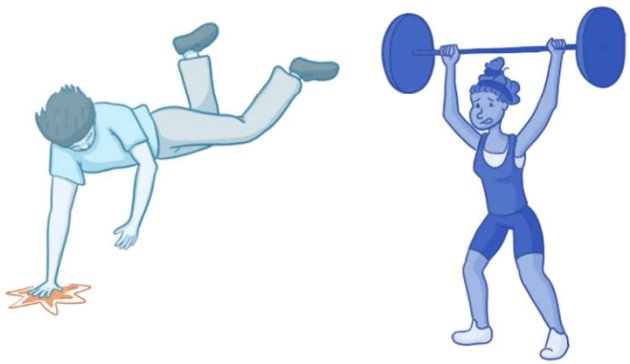
* MAY OCCUR when TENDONS are VIOLENTLY STRETCHED
* **INTENSE** SHOULDE

CHRONIC TEAR

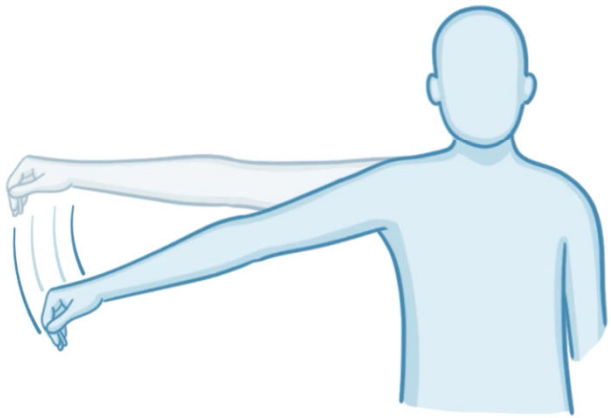
* DUE to REGULAR WEAR & TEAR
* USUALLY ELDERLY
  - BLOOD SUPPLY REDUCES OVER TIME
    - HARDER to HEAL AFTER an INJUR
  - CAN GO UNREPAIRED → WEAKENS the
* e.g. SAME MOTION OVER & OVER (BASEB

ROTATOR CUFF INJURY
ACUTE

* ROTATOR CUFF TEAR
  - MOST COMMON is SUPRASPINATUS

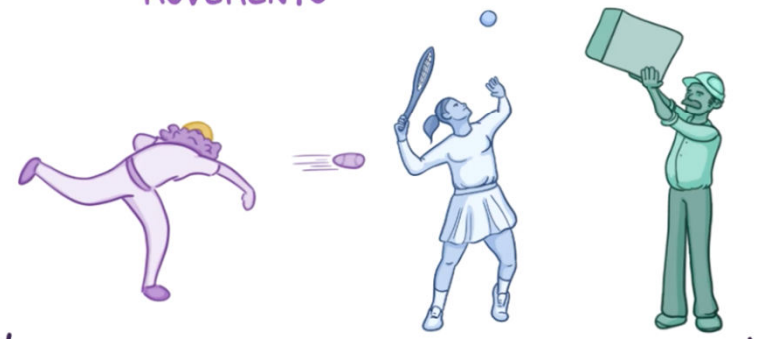


DROP ARM TEST

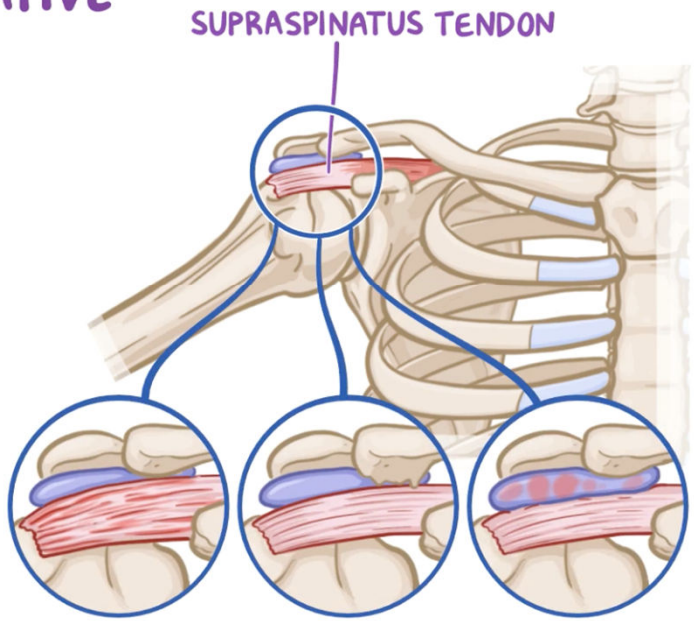


ROTATOR CUFF INJURY
DEGENERATIVE

* REPETITIVE STRESS
  - SPORTS
  - OCCUPATIONS w/ REPETITIVE OVERHEAD MOVEMENTS



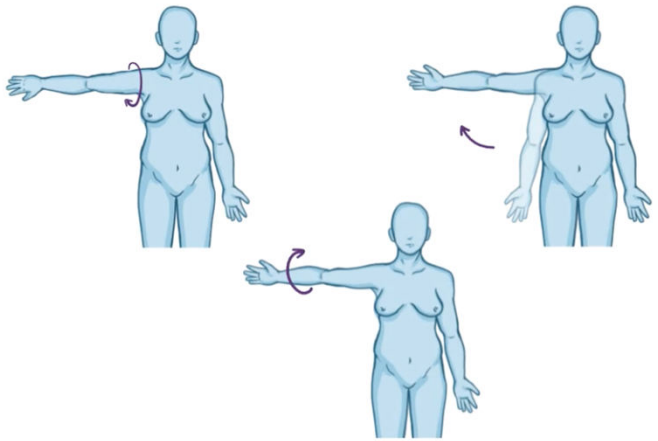
INFLAMMATION & ACCUMULATION of SMALL TEARS in TENDONS

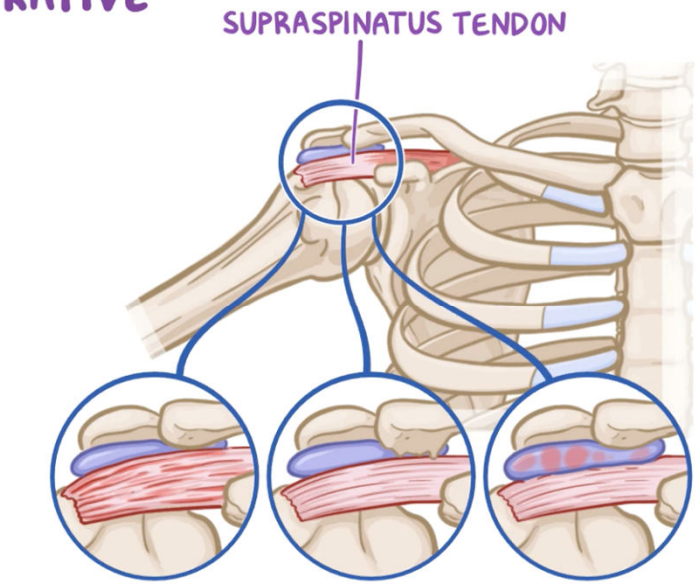


ROTATOR CUFF INJURY
DEGENERATIVE

CLINICAL FEATURES

* CONSTANT PAIN with MOVEMENTS
  - ABDUCTION
  - EXTERNAL ROTATION
  - INTERNAL ROTATION





TENDON REPETITIVELY IMPINGED & IRRITATED

"TENDINOPATHY"

Supraspinatous

- The supraspinatus tendon is the most frequently injured tendon of the rotator cuff. To test for integrity of the supraspinatus we can ask the patient to abduct both arms to 90° and then to bring them anteriorly with a 30° forward flexion. From this position, we will ask the patient to push both arms upwards against our resistance. Any pain or reduced strength, especially if unilateral, will be indicative of a supraspinatus tendon injury.

- Also, starting from this position we can ask the patient to bring both thumbs down, performing the so called *empty can test*. Again, we will be pushing downwards against the patient's resistance, to check for pain and weakness.

Infraspinatus and Teres Minor

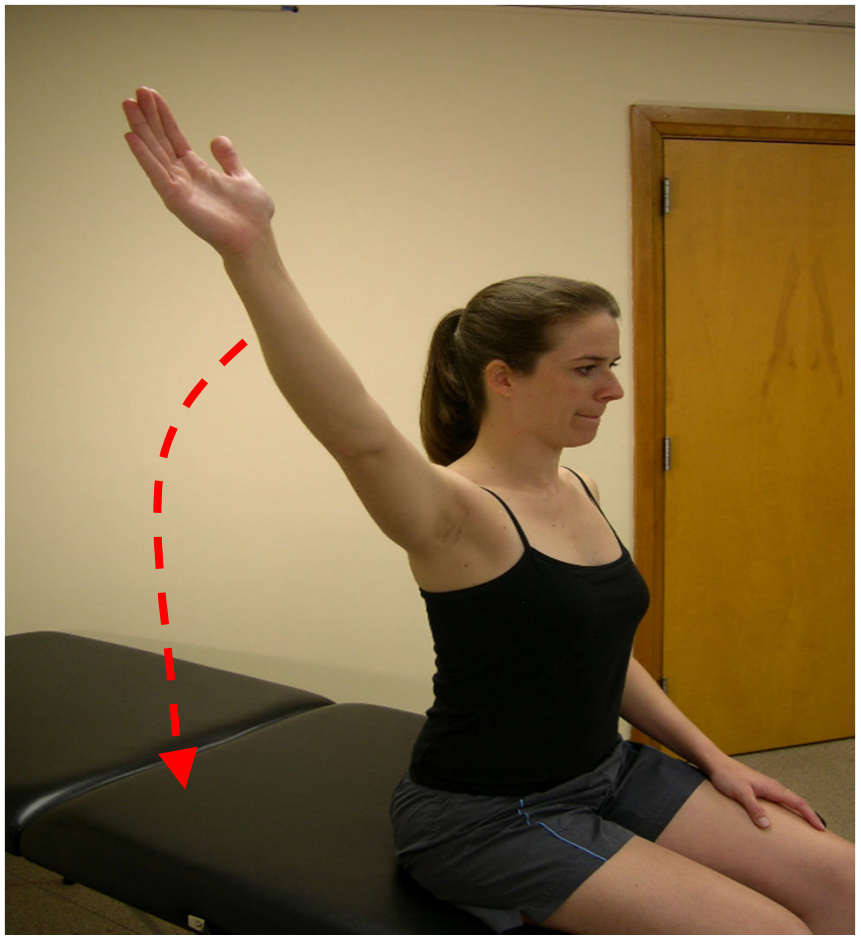
- To check for the integrity of both infraspinatus and teres minor tendons we need to apply resistance to the external rotation of the shoulder.
- To do this, we will ask the patient to flex the forearms at 90° with the palms supinated.
- From this position we will have the patient to externally rotate the shoulders by moving the forearms laterally, against our resistance. Any pain and/or weakness will indicate an injury in one of these tendons.

Subscapularis

- To test for the presence of a subscapularis tendon tear, first have the patient to bring the hand on the back at the level of the lumbar region. Then, passively separate the hand from the back until full internal rotation of the shoulder is achieved. At this point ask the patient to actively keep the hand away from the back. If the patient is unable to do so, this is evidence of a subscapularis tendon tear and it is called *positive internal rotation lag sign*
- **Gerber's Lift Off Test**
- Ask the patient to internally rotate the shoulder by bringing the hand behind the back at the lumbar region with the dorsum of the hand facing the lumbar spine. Then, ask the patient to move the hand away from the back against your resistance. If pain or weakness is elicited, the test is considered positive for a subscapularis tendon tear.

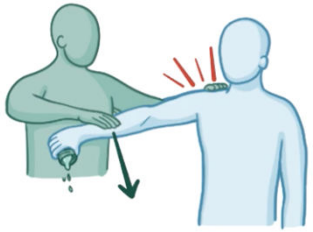
Rotator Cuff Tear: Drop-Arm Test

- Abducted arm slowly lowered
  - May be able to lower arm slowly to 90˚ (deltoid function)
  - Arm will then drop to side if rotator cuff tear
- Positive test
  - patient unable to lower arm further with control
  - If able to hold at 90º, pressure on wrist will cause arm to fall



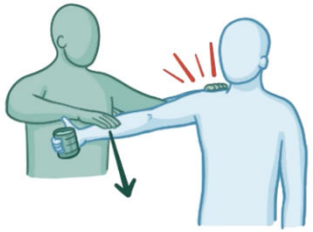
ROTATOR CUFF INJURY
DEGENERATIVE

EMPTY CAN TEST



NEERS TEST

FULL CAN TEST



HAWKINS KENNEDY TEST

Shoulder Impingement

In the shoulder impingement syndrome, the tendon of the supraspinatus is inflamed as a consequence of repetitive trauma to its subacromial portion. Any processes that reduce the subacromial space together with repetitive overhead motion of the shoulder may contribute to the development of this condition. It usually manifests as shoulder pain, particularly at night, and weakness in the overhead extension of the arms.

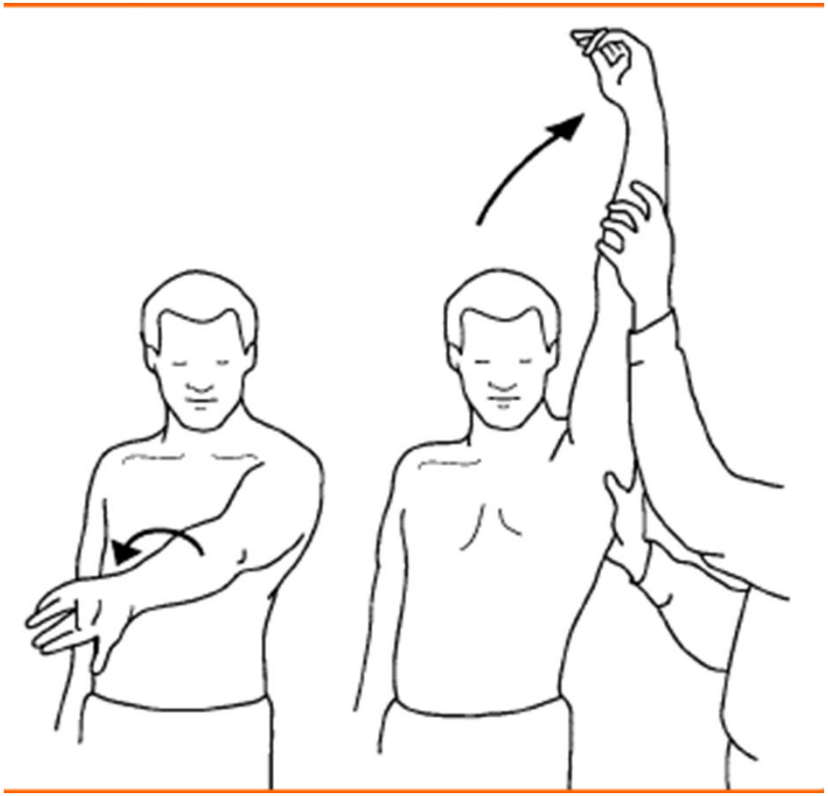
We can use three tests to check for the presence of shoulder impingement:

- Neer's Test
- Empty Can Test
- Hawkins-Kennedy Test

Impingement Signs

- Neer's Test

- In Neer’s test, first we ask the patient to fully pronate the forearm, then we passively flex the arm until it is over the patient’s head.
- This manoeuver reduces the subacromial space and reproduces pain if shoulder impingement is present



Tests for Shoulder Impingement

- Empty Can Test
- This is the same test that is used to check for the supraspinatus tendon integrity. It reduces the subacromial space thus eliciting pain if impingement is present.

- Hawkins-Kennedy Test
- To perform this test both the elbow and the shoulder should be flexed at 90°. The examiner must support the arm of the patient at the level of the elbow so that the upper extremity can be as much relaxed as possible. Then the examiner has to internally rotate the shoulder while at the same time perform a cross-body adduction of the arm. The test is positive if pain is elicited

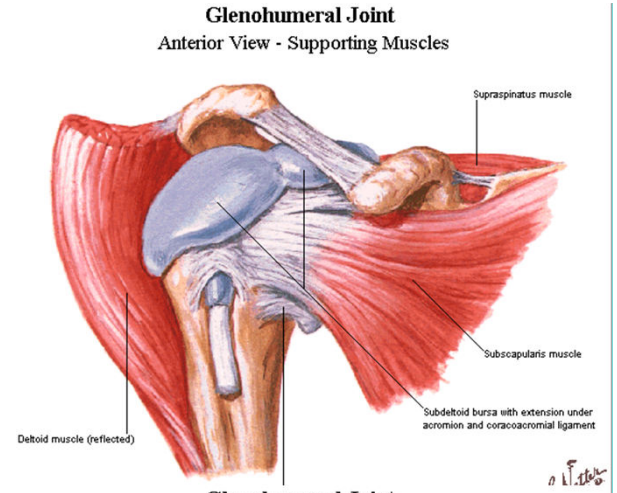
CASE STUDY

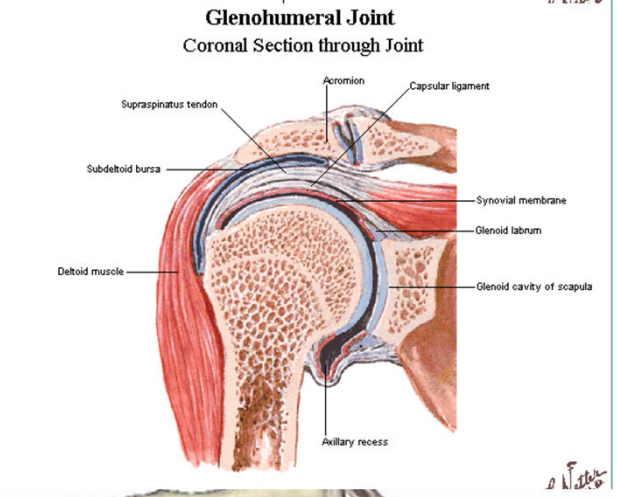
- Your next patient is Mr. S. He is a 60 year-old male who presents to your office with a 2-month history of left shoulder pain. He states that he doesn't remember hurting his shoulder. He states that he began noticing some mild to moderate pain in his shoulder that has since progressed to what he would now consider to be severe. His chief complaint today is that he is unable to sleep. He describes the pain as being localized to the side of his shoulder and he uses his right hand to rub the side of his left arm as he describes the pain.

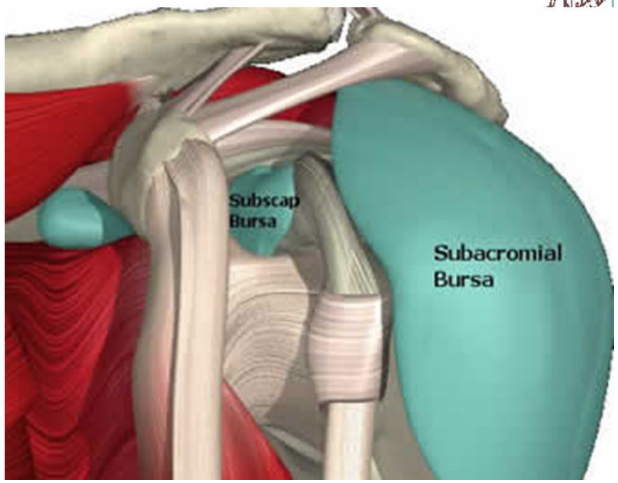
Bursae

- Subacromial
- (Subdeltoid)

- Subscapular



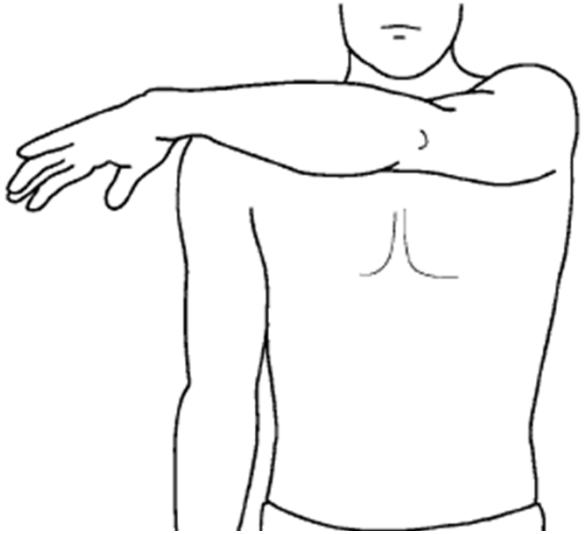


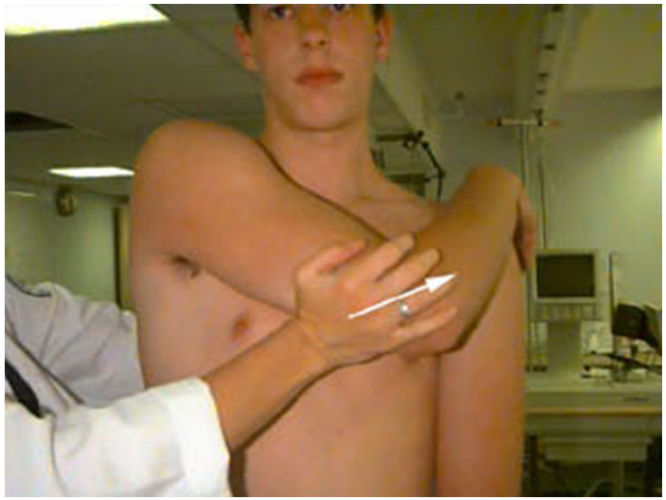


AC Joint: Cross-Arm Adduction Test

- Arm flexed to 90˚
- Arm adducted to > 45˚
- Hyperadduct shoulder (down on elbow)

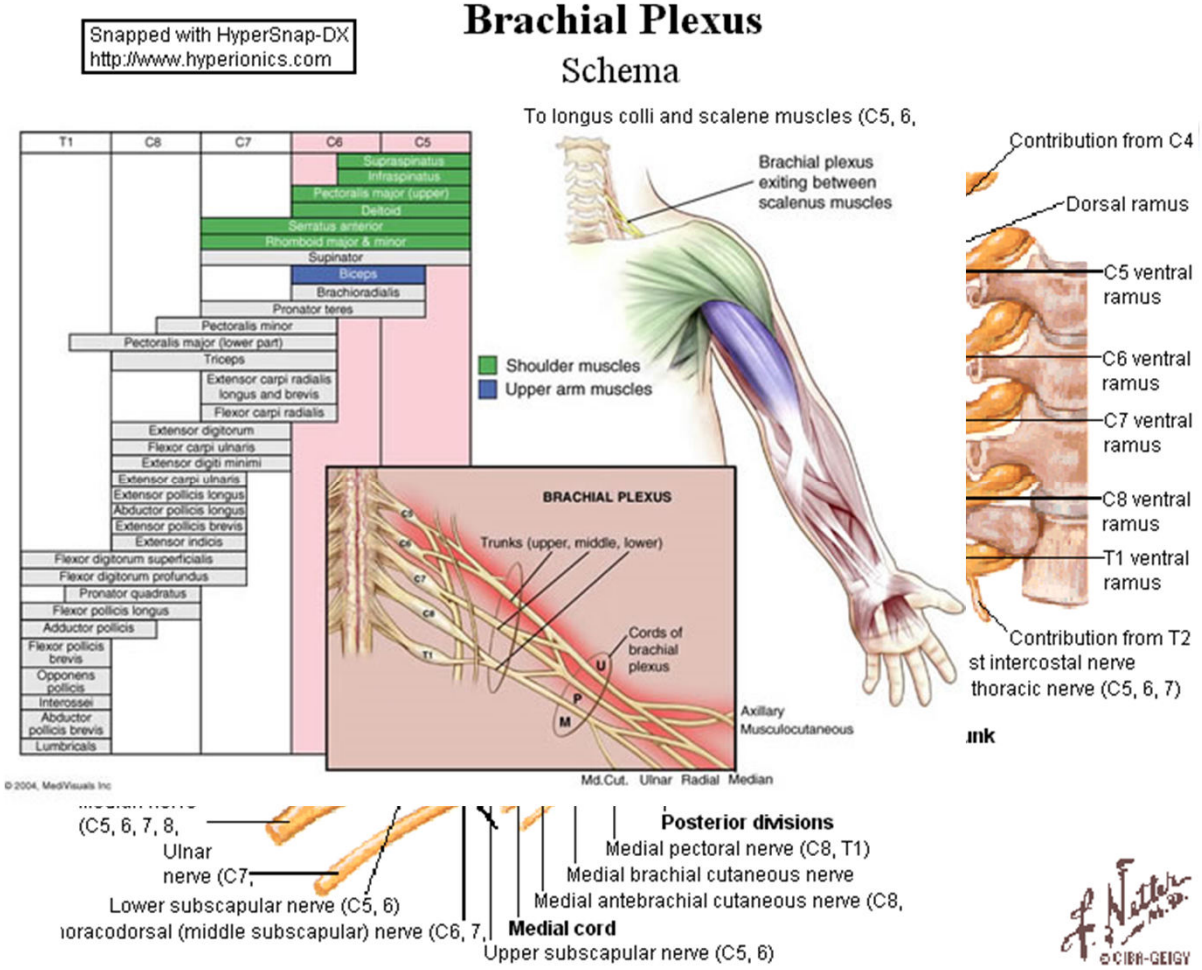
- Positive test is pain in AC joint
- Watch out for false-positives
  - Where is the pain?



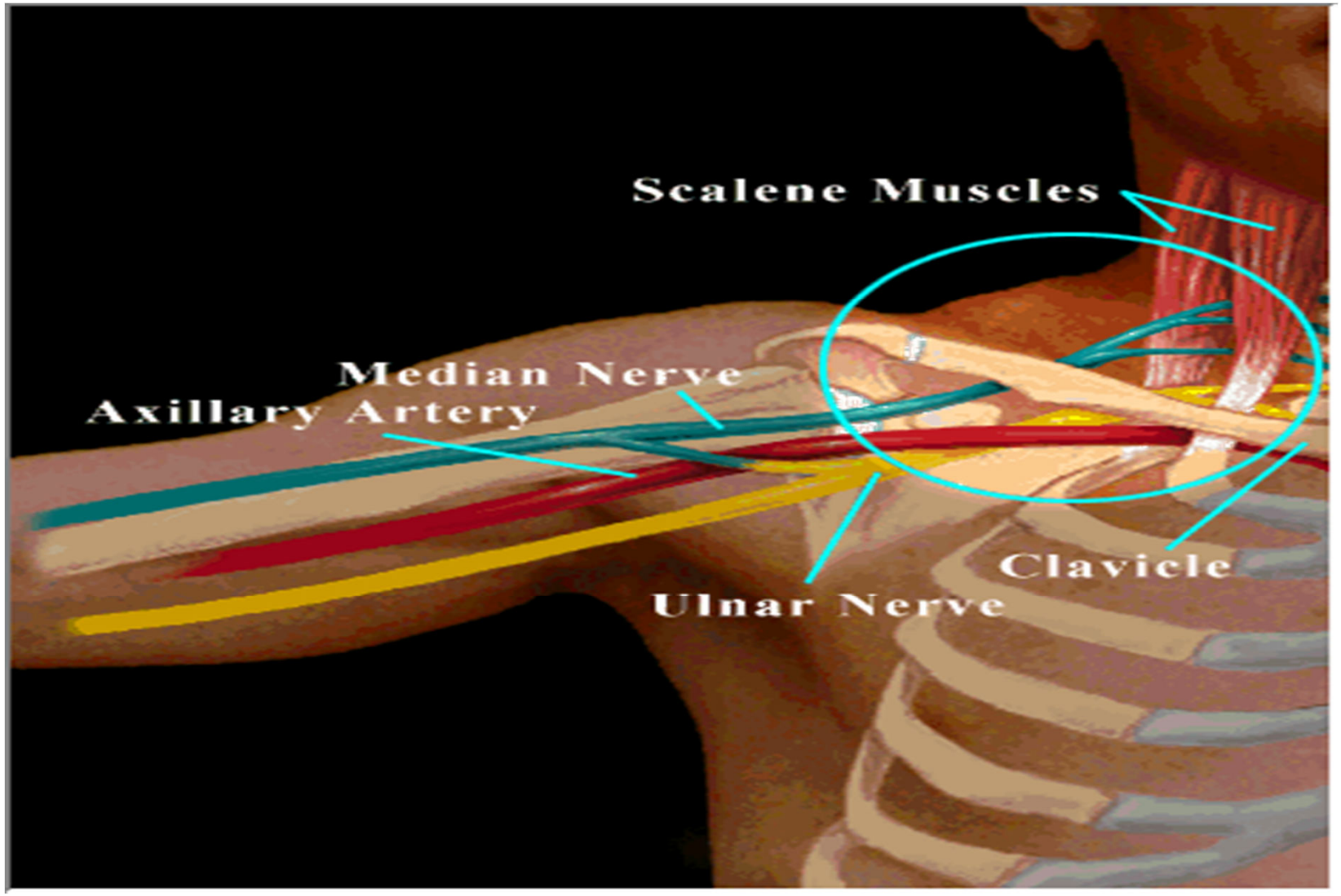


Neurologic

- Nerve roots
- Brachial plexus
- Peripheral nerves



Brachial Plexus



Clinical History

- Characterize pain
- Location of pain
- Night pain
- Weakness
- Deformity
- Instability
- Locking / Clicking / Clunking
- Sport / Occupation
- Previous treatments
- Alleviating / Exacerbating
- Acute vs. Chronic
- Traumatic vs. Overuse
- History of prior injury

Clinical History

Mechanism of Injury

Red Flags

- History of cancer; symptoms and signs of cancer; unexplained deformity, mass, or swelling:? tumour
- Red skin, fever, systemically unwell:? infection
- Trauma, epileptic fit, electric shock; loss of rotation and normal shape:? unreduced dislocation
- Trauma, acute disabling pain and significant weakness:? acute rotator cuff tear
- Unexplained significant sensory or motor deficit:? neurological lesion

Shoulder Examination

Look

Feel

Move

- Active + Passive
- Resisted

Special Tests

- Impingement
- Labral Tear
- Instability
- Thoracic outlet

Physical Exam

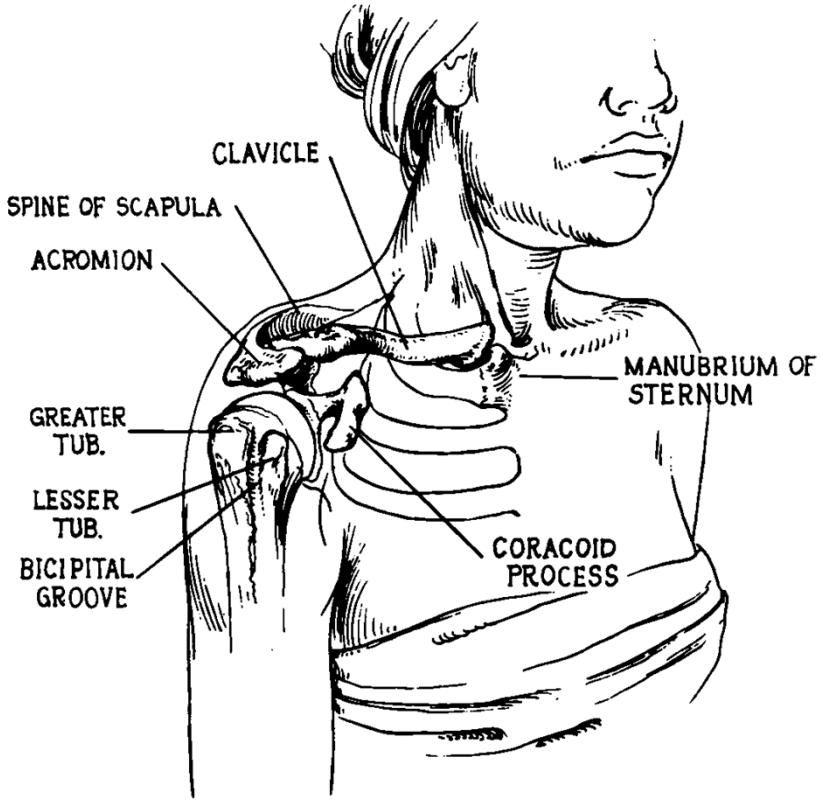
- Observation
- Undress waist → up
- Palpation
- Active & passive ROM
- Strength testing
- Special tests

Physical Exam – Observation / Inspection

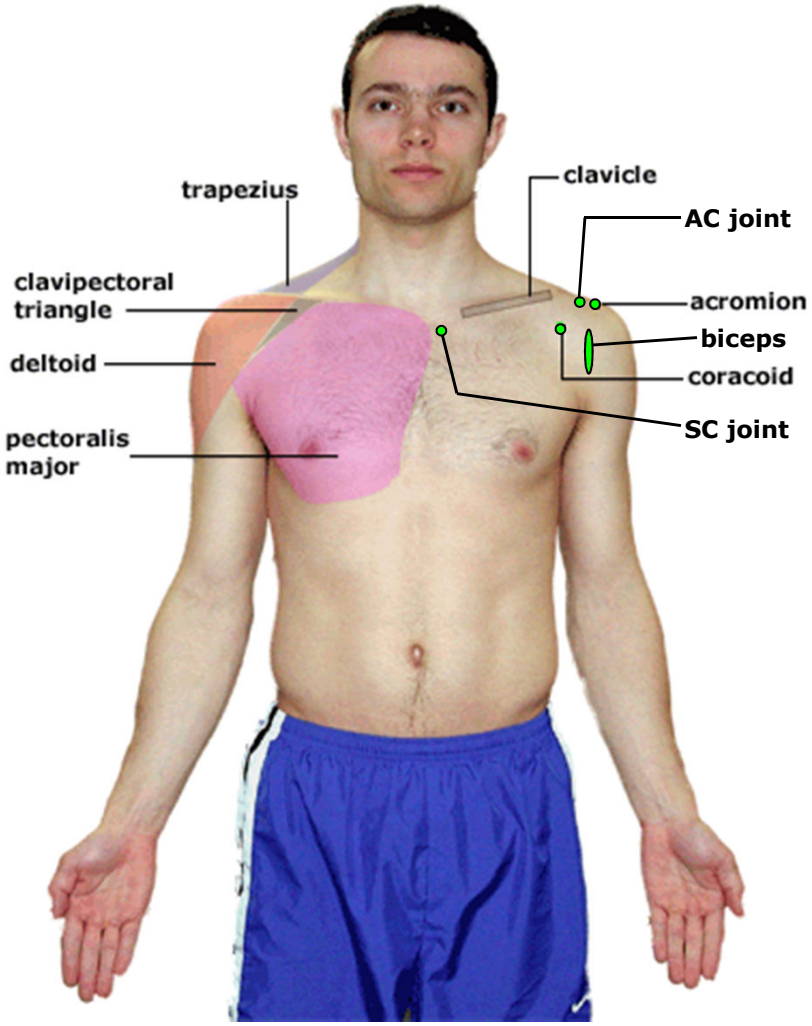
- Front & Back
- Height of shoulder & scapulae
- Asymmetry
- Obvious deformity
- Ecchymosis
- Muscle atrophy
  - Supraspinatus
  - Infraspinatus
  - Deltoid

Palpation

- At rest & with movement
- Bony structures
- Joints
- Soft tissues

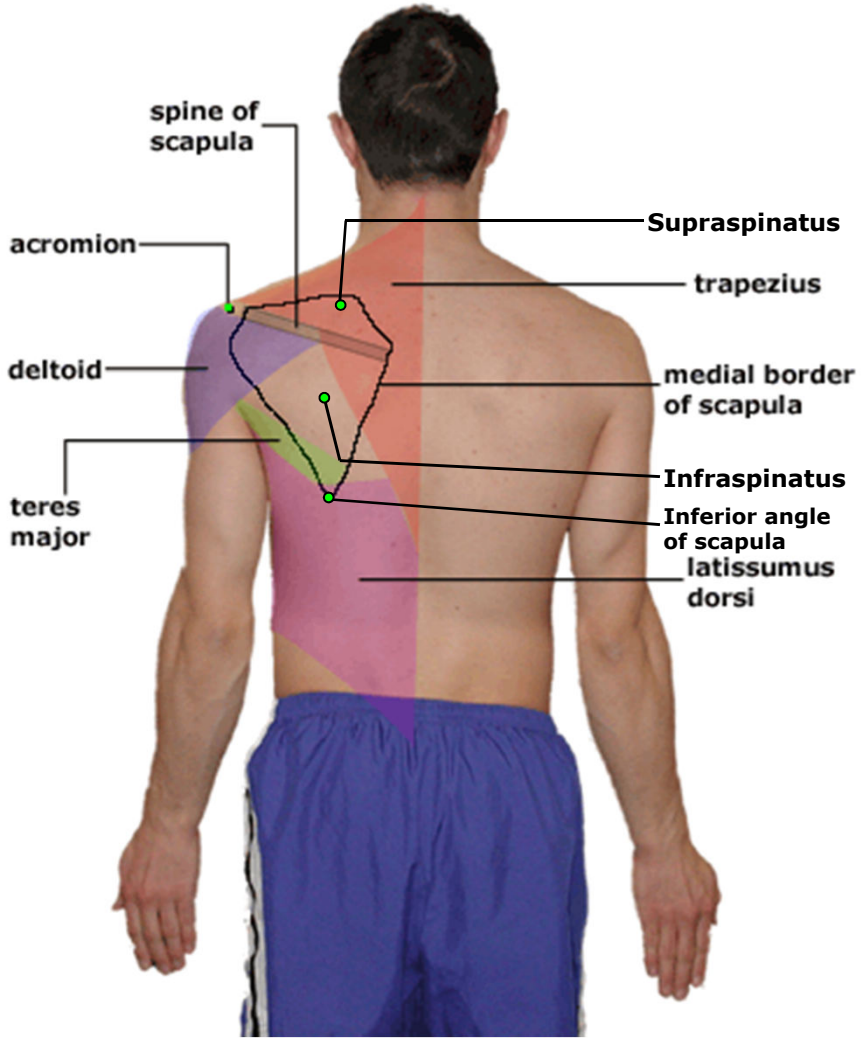


Palpation



- Surface Anatomy (Anterior)
  - Clavicle
  - SC Joint
  - Acromion process
  - AC Joint
  - Deltoid
  - Coracoid process
  - Pectoralis major
  - Trapezius
  - Biceps (long head)

Palpation



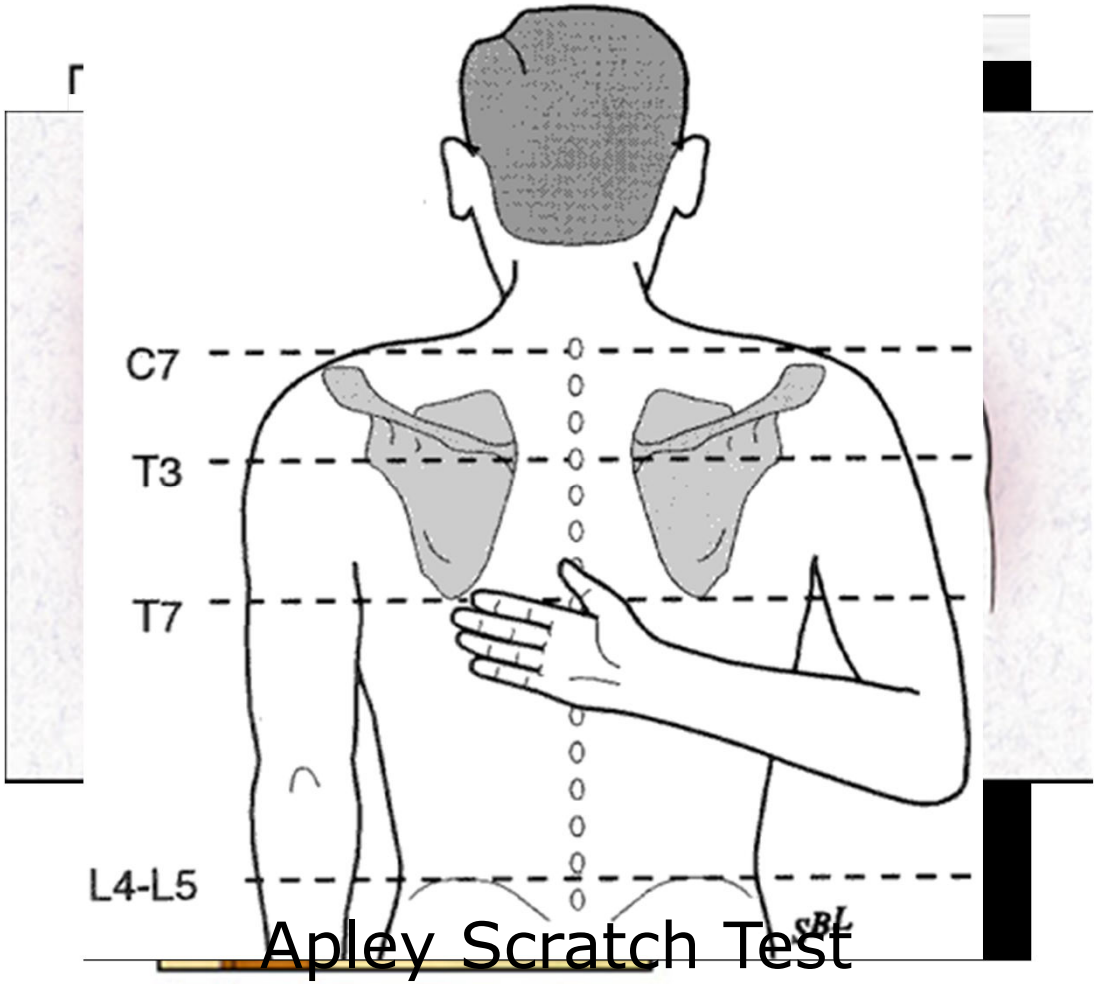
- Surface Anatomy (Posterior)
  - Scapular spine
  - Acromion process
  - Supraspinatus
  - Infraspinatus
  - Deltoid
  - Trapezius
  - Latissumus dorsi
  - Scapula
    - Inferior angle
    - Medial border

Shoulder Joint Movements

Movement	Muscles
Fwd Flex	Deltoid, Pec maj, Coracobrach, Biceps
Extension	Deltoid, Teres maj, Teres min, Lat dorsi, Pec maj, Triceps
Abduction	Deltoid, Supraspin, Infraspin, Subscap, Teres maj
Adduction	Pec maj, Lat dorsi, Teres maj, Subscap
Int rotation	Pec maj, deltoid, Lat dorsi, Teres mja, Subscap
Ext Rotation	Infraspin, Deltoid, Teres min

Range of Motion

- Forward flexion: 160 – 180°
- Extension: 40 – 60
- Abduction: 180◦
- Adduction: 45 °
- Internal rotation: 60 - 90 °
- External rotation: 80 - 90 °



Apley Scratch Test

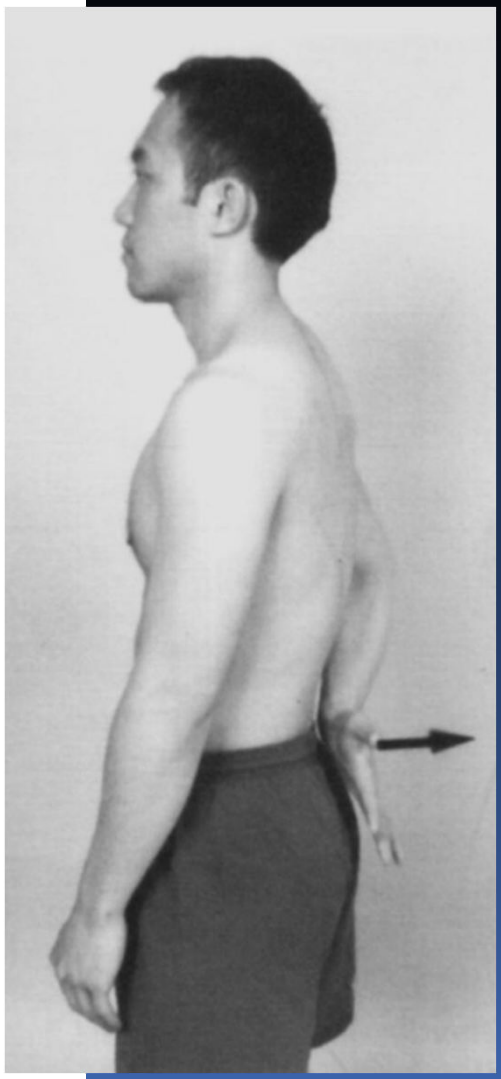
Range of Motion

- Scapular dyskinesis (Scapulothoracic dysfuntion)
  - Compare scapular motion through ROM on both sides
  - Wall push-ups
  - Symmetrical
  - Smooth
  - No or minimal winging

Strength Testing

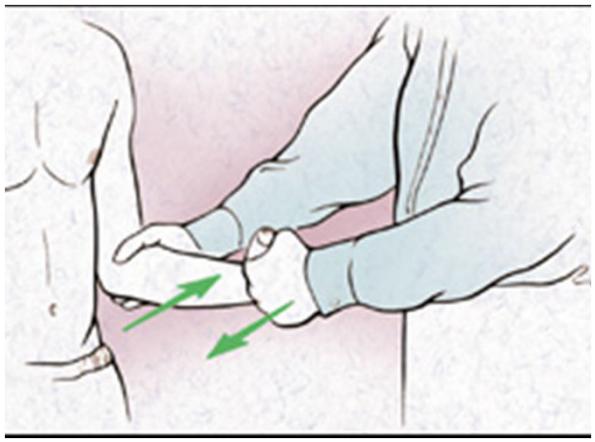
- Test & compare both sides
- Be specific to muscle or muscle group

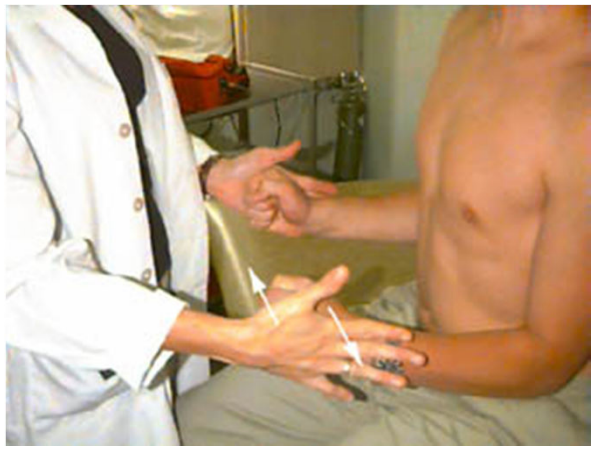
- Grade strength on 0 → 5 scale
  - 0: no contraction
  - 1: muscle flicker; no movement
  - 2: motion, but not against gravity
  - 3: motion against gravity, but not resistance
  - 4: motion against resistance
  - 5: normal strength



Strength Testing

- External rotation
  - Tests RTC muscles that ER the shoulder
    - Infraspinatus
    - Teres minor
  - Arms at the sides
  - Elbows flexed to 90 degrees
  - Externally rotates arms against resistance





Strength Testing

- Supraspinatus
  - “Empty can" test
  - Jobe’s Test
  - Tests Supraspinatus
  - Attempt to isolate from deltoid
  - Positioned sitting
  - Arms straight out
  - Elbows locked straight
  - Thumbs down
  - Arm at 30 degrees (in scapular plane)
  - Attempts to elevate arms against resistance

Special Provocative Tests

- Impingement Signs
- Drop-Arm Test
- Speed's Test
- Yergason Test
- Cross-Arm Adduction
- Sulcus Sign
- Apprehension test
- Relocation test
- O'Brien's Test
- Crank test

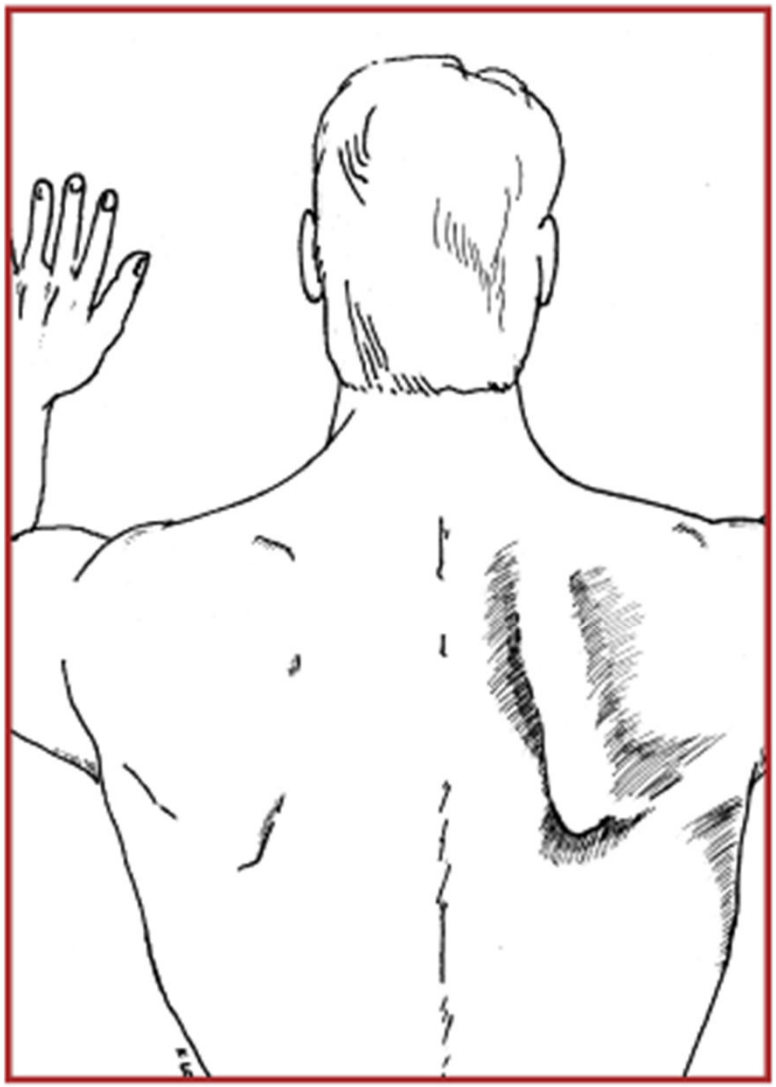


FIGURE 6. Scapular winging caused by long thoracic nerve injury. Scapular abduction, such as pushing against a wall, accentuates the protuberance of the medial scapular edge.

- Serratus Anterior and Winging of the Scapula
- Even though it is not considered part of the rotator cuff, we can test the strength of this muscle after the exam of the rotator cuff, given its role in stabilizing the scapula and hence the shoulder joint.
- To assess for a functional deficit of the serratus anterior we can ask the patient to do a standing push-up against the wall. If we observe a winging of a scapula this indicates weakness of this muscle on that side.

Videos

Shoulder Exam – Geeky medics

- https://geekymedics.com/shoulder-examination/

Shoulder exam Stanford

- https://stanfordmedicine25.stanford.edu/the25/shoulder.html

Case Study

A 55-year-old woman comes to the clinic because of chronic right shoulder pain that has persisted for 3 years. She says the pain is especially bothersome at night because she is unable to sleep on her side. Her temperature is 36.7°C (98.2°F), pulse is 60/min, respirations are 16/min, and blood pressure is 136/88 mm Hg. Physical examination shows pain to palpation just inferior to the acromion, and unilateral pain with 2/5 strength when the arm is abducted to 90°, pronated and internally rotated. Which of the following is the most likely diagnosis?

A. Deltoid tear

B. Infraspinatus tear

C. Subscapularis tear

D. Supraspinatus tear

E.Teres minor tear

Case Study

A 73-year-old man comes to the emergency department because of constant right shoulder pain following a fall while gardening. He denies history of other joint or muscular pain. His temperature is 36.7°C (98.0°F), pulse is 74/min, respirations are 16/min, and blood pressure is 138/88 mm Hg. Physical exam shows decreased range of motion. His arm is then passively abducted completely above his head and he is instructed to lower his arm gradually to his side. When doing so, his right arm drops abruptly. What is the most likely diagnosis?

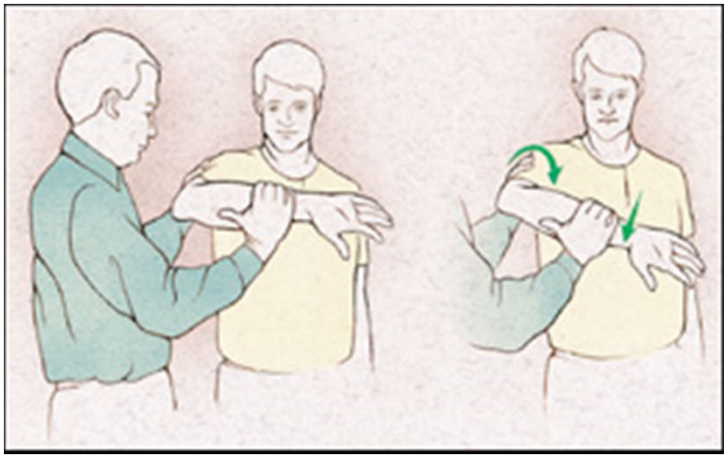
a. Thoracic outlet syndrome
b. Rotator Cuff Tear
c. Acromio-clavicular arthritis
d. Glenolabral tear

CaseStudy

- A 42-year-old man presents to urgent care with worsening left shoulder pain. The patient is an avid weightlifter. However, over the past several months, he has experienced worsening left shoulder pain that is exacerbated by overhead movements. He has no history of major trauma or surgery. On physical examination, the patient has weakness in the left shoulder after downward pressure is applied while both arms are at 90° elevation in the scapular plane with full internal rotation

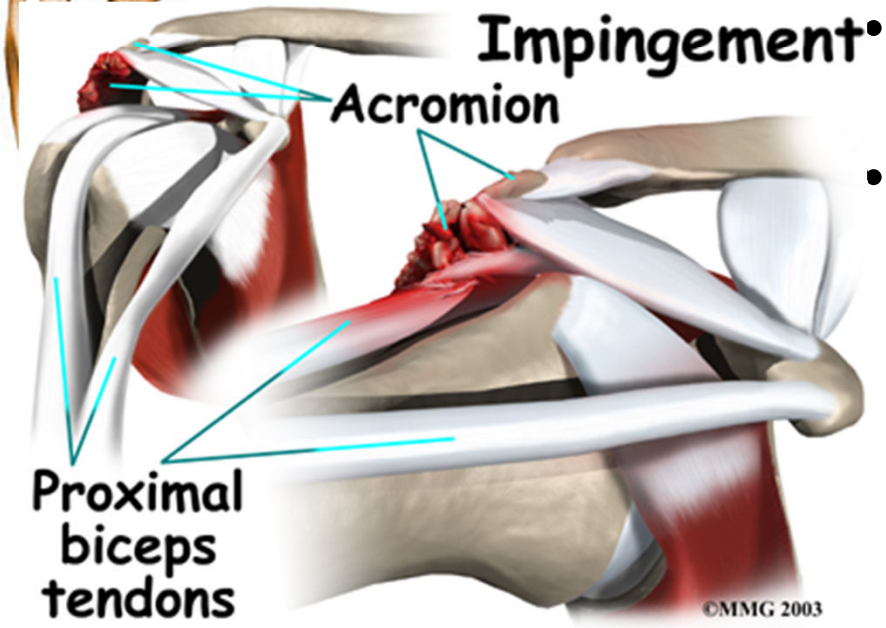
Which of the following anatomic structures is most likely to be disrupted given this patient's presentation?

1. Teres Minor
2. Supraspinatous
3. Infraspinatous
4. Subscapularis



- Hawkin's Sign
    - Arm is forward elevated to 90 degrees, then forcibly internally rotated
    - Trying to impinge subacromial structures with humeral head
    - Pain is positive test

Biceps Tendonosis



- Injury to long head of biceps tendon
- Typically an overuse injury
  - Repetitive (overhead) lifting
  - Impingement

Biceps Tendonosis: Speed's Test

- Forward flex shoulder to about 90°
- Abduct shoulder to about 10°
- Arm in full supination

- Apply downward force to distal arm

- Pain is positive test

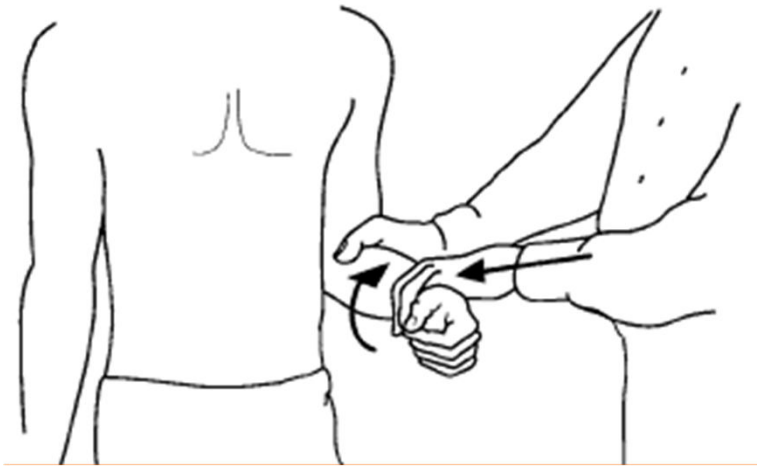
- Weakness without pain: muscle weakness or rupture

Biceps Tendonosis: Yergason's Test

- Elbow flexed to 90°
- Start in pronated position

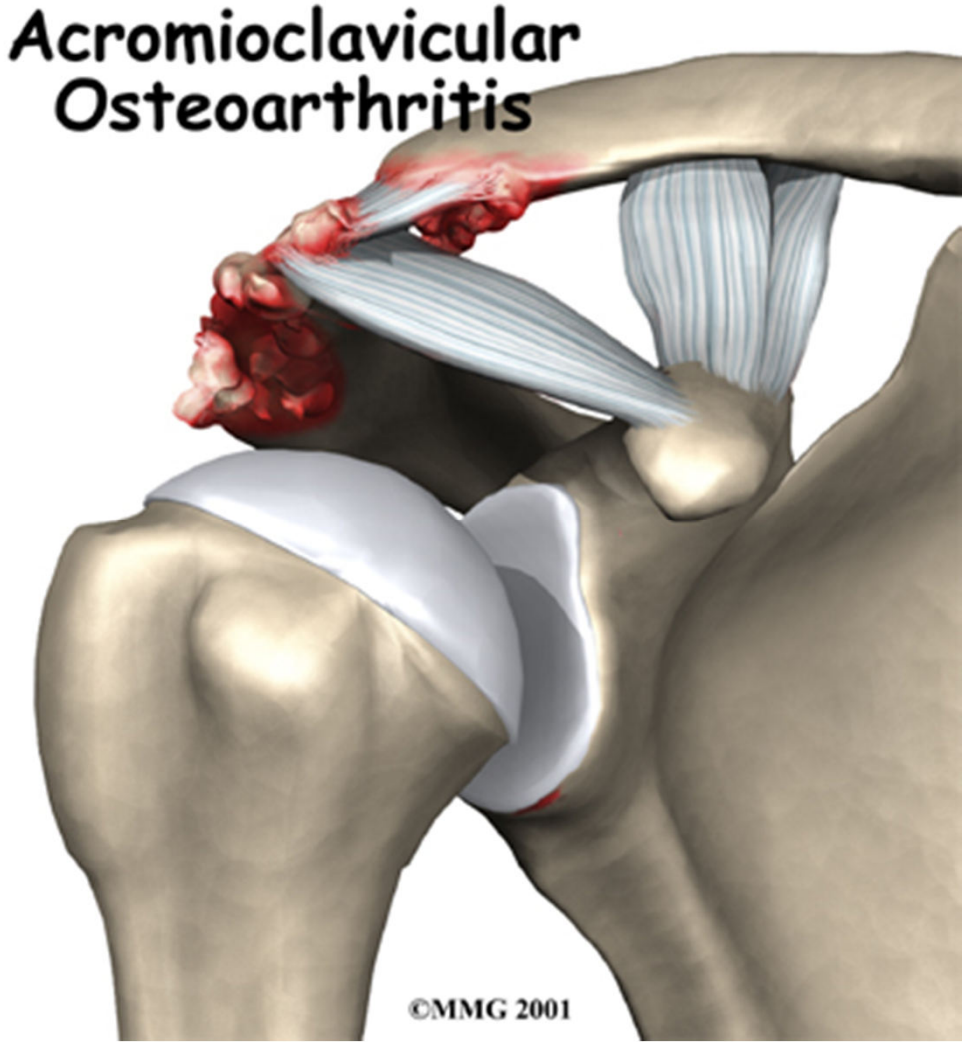
- Active supination & flexion against resistance
- Palpate biceps tendon

- Pain or painful pop is positive test
  - Tendonosis
  - Subluxation



- Biceps tendinopathy refers to inflammation or degeneration of the long head of the biceps tendon. It is an important cause of anterior shoulder pain and it is usually seen in association with other shoulder pathologies, such as rotator cuff tears and shoulder impingement.
- There are two specialized tests to confirm the presence of biceps tendinopathy:
- - Speed’s test
- - Yergason’s test

AC Arthritis / DJD



Frozen Shoulder

"This entity is difficult to define, difficult to treat, and difficult to explain" Codman 1934,

- Symptoms =
  - pain
    - progressive
    - mostly at night
    - end of its range of motion (ROM).
    - lasts 1-2 years in 90% of cases
  - restricted ROM
    - ER>Abd>IR

Frozen Shoulder

- History
- Exam:
  - MSK
  - Neuro
- Inx:
  - Shoulder x-ray
  - CXR - smokers
  - ? Bloods

Associated Conditions:

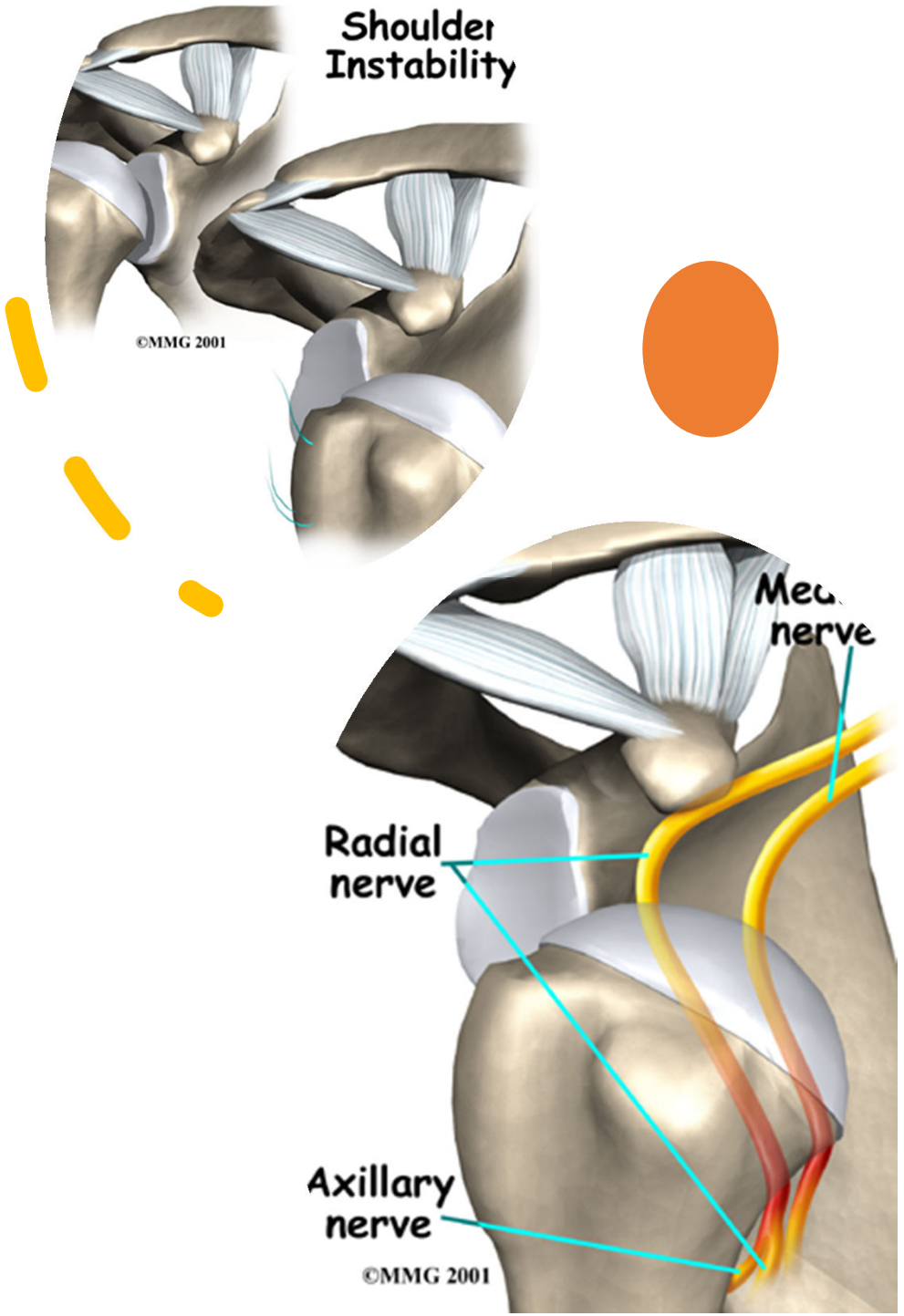
- Diabetes
- Parkinsons
- Hyperthyroidism
- Inflammatory dis
- Apical lung tumour

Rotator Cuff Disorders

- Tendinopathy
- Impingement
- Tears (full/partial)
- Bursitis

Shoulder Instability

- Failure to keep humeral head centered in glenoid
- Dislocation
  - Complete disruption of joint congruity or alignment
- Subluxation
  - Partial or incomplete dislocation
- Laxity
  - Slackness or looseness in joint
  - May be normal or abnormal



Instability: Sulcus Sign

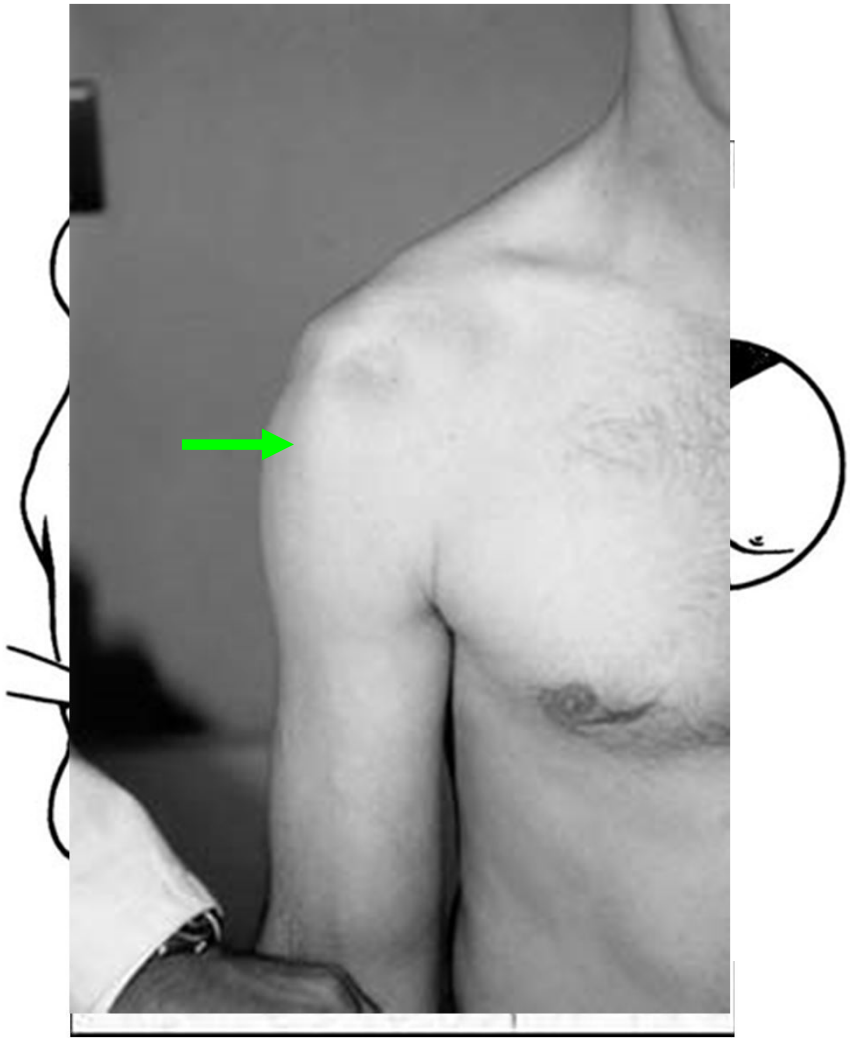
Inferior instability

Arm relaxed in neutral position

Arm pulled downward at wrist

Positive test is a visible sulcus at infra-acromial area

- Compare to contralateral side



SULCUS SIGN

Fig 5c

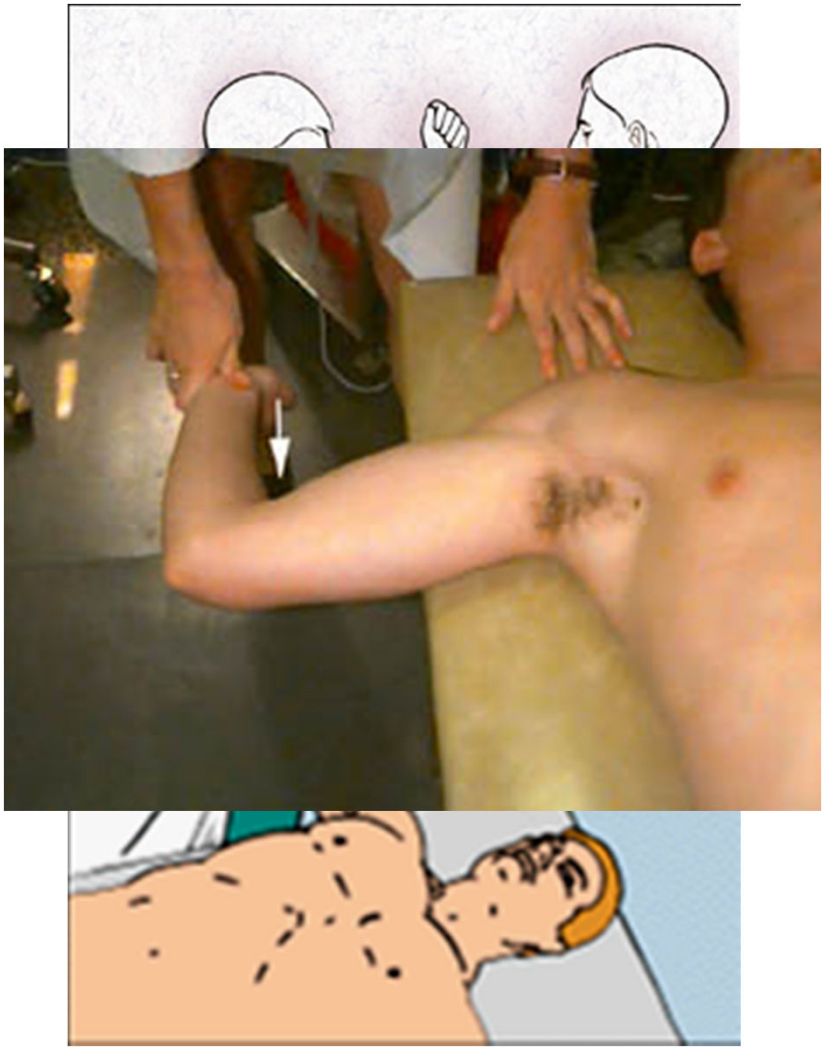
- Robert Simons is a 24 year old student who has experienced increasing problems with his left shoulder over the last 4 weeks.The problem began with a sharp twinging pain over the deltoid region whilst working shelf stacking in the library. The symptoms have now worsened to a constant ache and are made worse by racquet sports and overhead activities at the gym. Robert lives with his parents and younger brother and sister who are both of school age. He is otherwise fit and well and takes no medications.

Instability: Apprehension Test

- Anterior instability

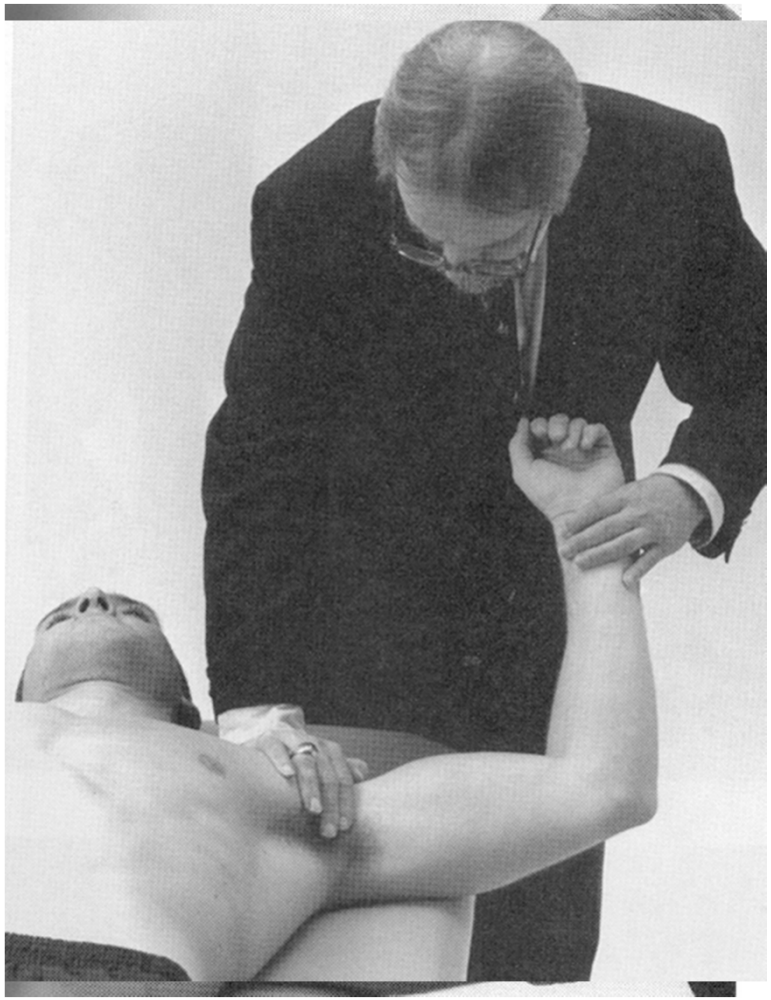
- Shoulder abducted to 90˚
- Slight stress to humeral head directed in anterior direction
- While externally rotating shoulder

- Positive test is apprehension due to feeling of instability or impending dislocation
  - Beware if false positives

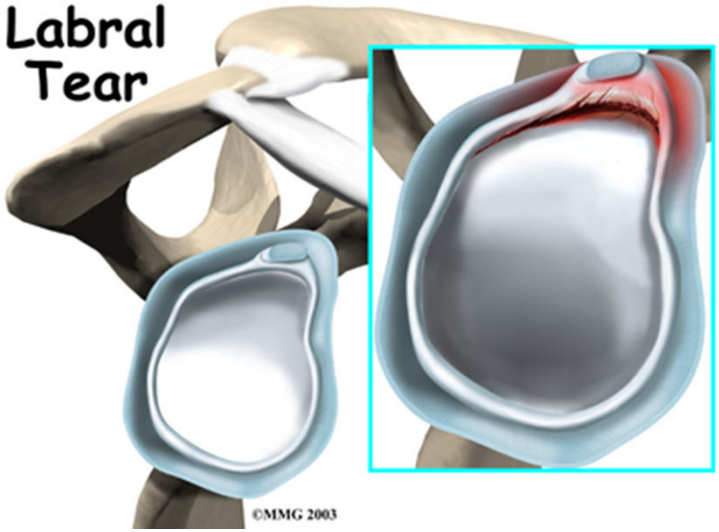


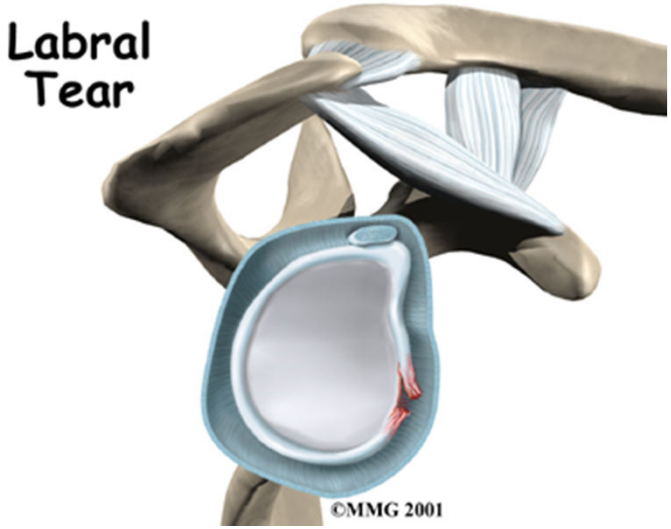
Instability: Relocation Test

- Anterior instability
- After a positive apprehension
- Apply posteriorly directed force over externally rotated humeral head
- Positive test is relief of apprehension
- Anterior release test



Glenoid Labral Tear





- Tear in glenoid labrum
- Usually due to instability

- SLAP Tear (Superior Labrum Anterior to Posterior)
  - Superior labral tear
  - Fall on outstretched hand or shoulder
  - Rotator cuff tendonosis or tears

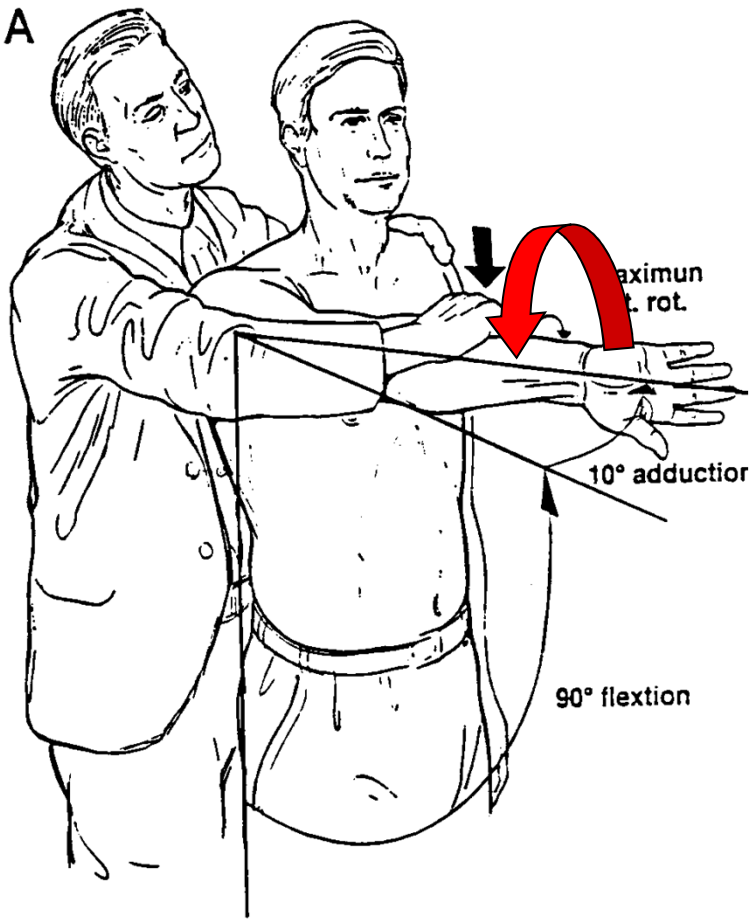
- Bankart Lesion
  - Anterior-inferior labral tear
  - Anterior shoulder dislocation / subluxation

O’Brien’s Active Compression Test

- Labral, AC, or biceps pathology

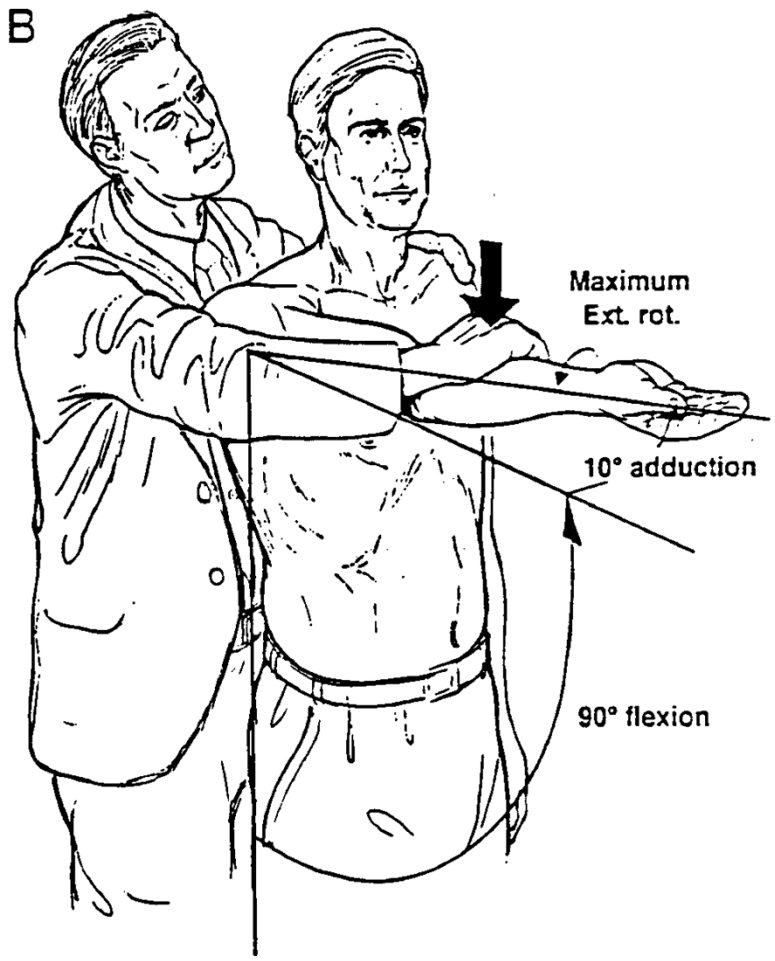
- Arm flexed to 90˚
- Arm cross-arm adducted 10-15˚
- Elbow extended
- Max pronation
- Resist downward force

- Positive test if painful
- Beware location of pain
  - AC
  - Biceps
  - Internal +/- click

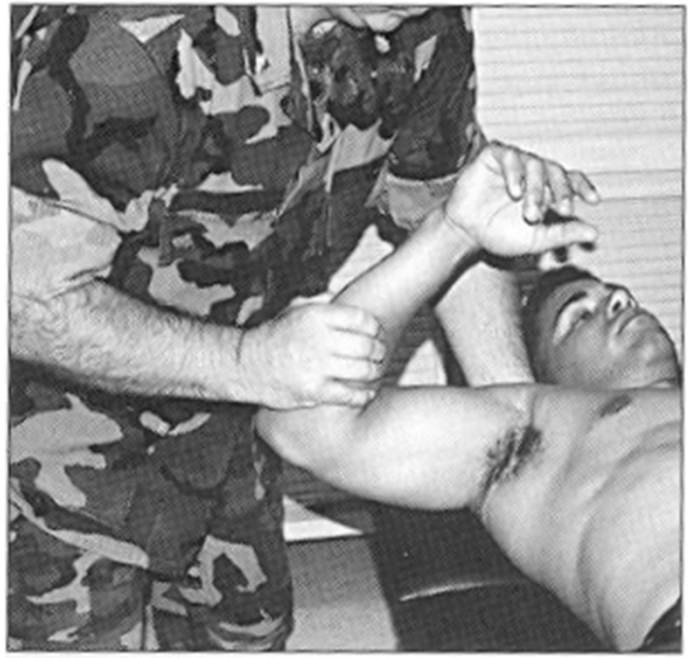


O’Brien’s Active Compression Test

- For labral pathology
  - Repeat testing with
  - Max supination
  - Should be pain free



Labral Tear: Crank Test



- Abduct arm to 90-120˚
- Stabilize shoulder
- Elbow secured with one hand
- Axially load with ER / IR at shoulder

- Positive test: audible or painful click / catch / grind

Hawkins

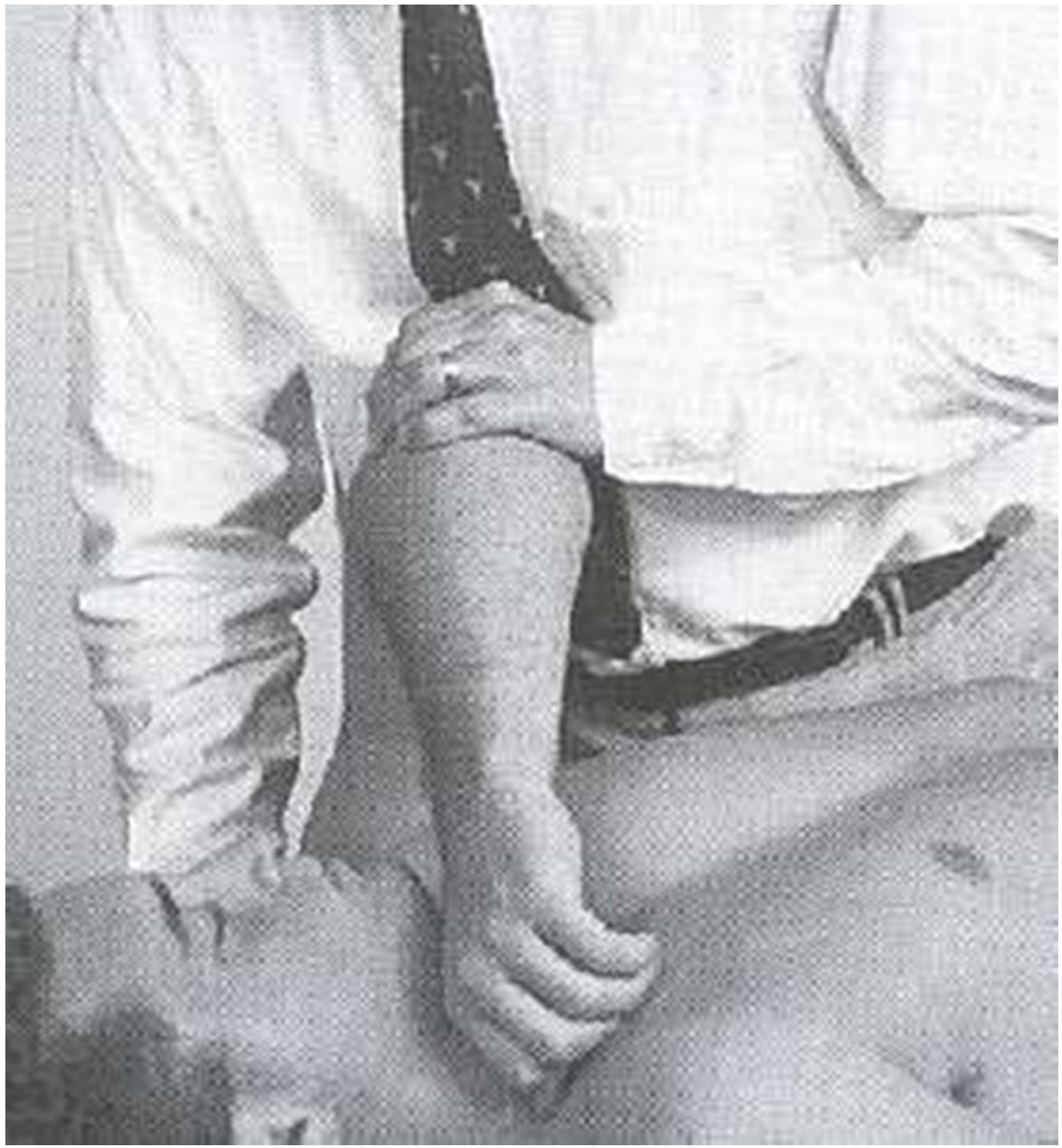
- **Hawkin's impingement sign – Passively bring the patient's arm into 90 degrees of abduction and angled to about 45 degrees into the frontal plane, gently rotate the forarm into internal rotation. Pain in the superior, lateral aspect of the shoulder indicates a positive sign. A positive Hawkins impingement test often indicates a rotator cuff tear.**

Drawer Test

Apprehension Test

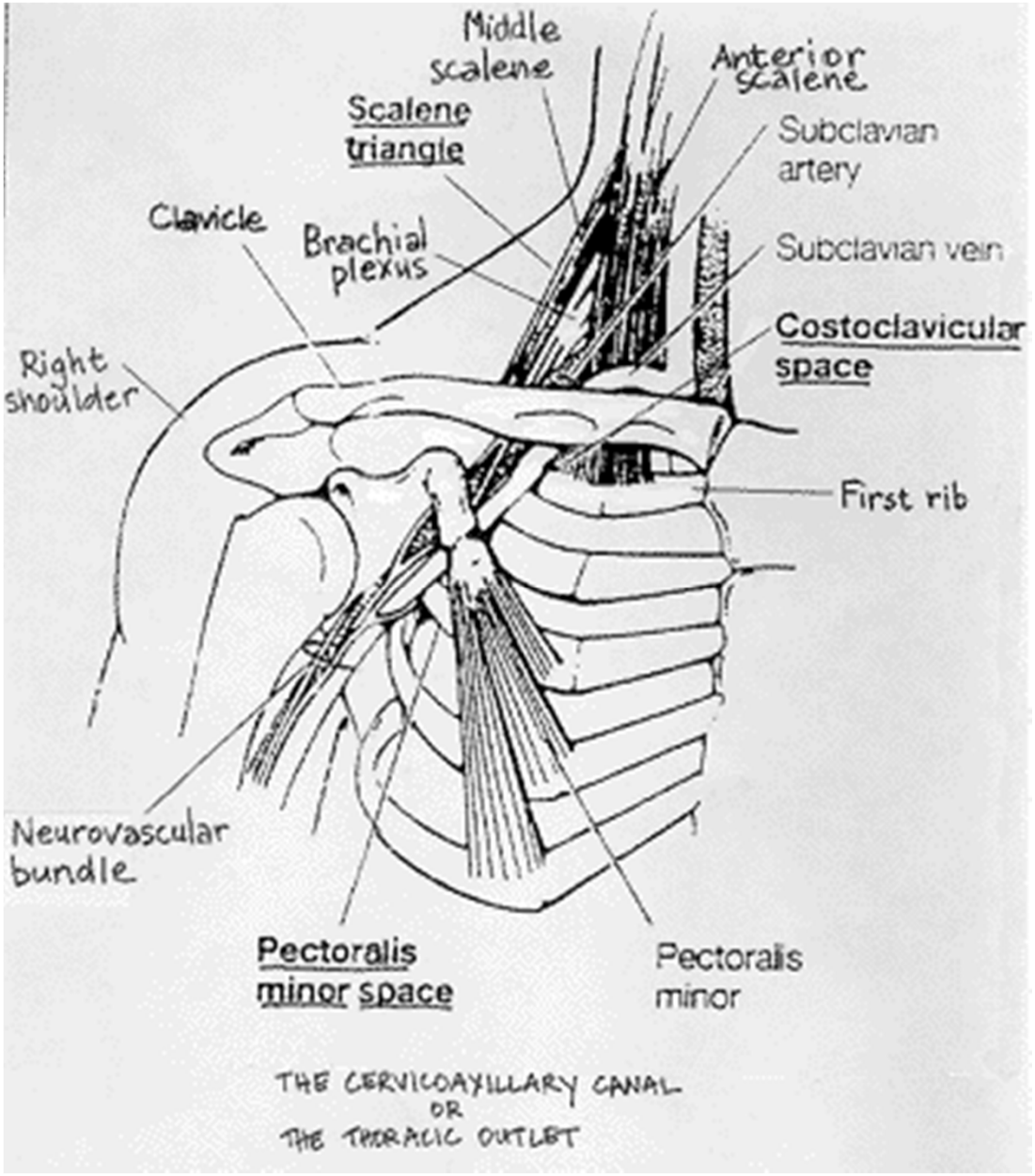
- Positive Findings
  - Pain
  - Feeling of Apprehension about the shoulder potentially re subluxating or dislocating

Posterior Apprehension Test

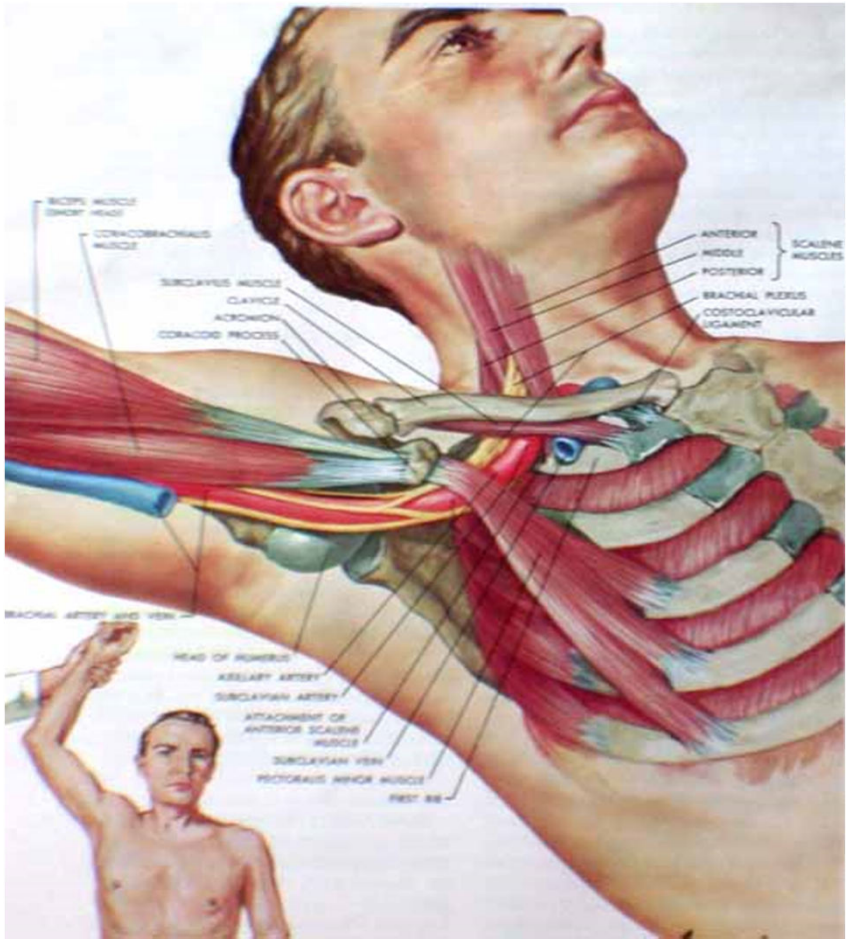


Neer Impingement Test

Thoracic Outlet



Thoracic Outlet Syndrome



Shoulder Case Study

A 23-year-old man is brought to the clinic because of left shoulder pain. His friend says that prior to his shoulder pain he suddenly dropped to the floor and started having generalized jerking movements for 30 seconds. The patient says that he does not remember what happened and holds his left shoulder adducted and internally rotated. Which of the following is the most likely diagnosis?

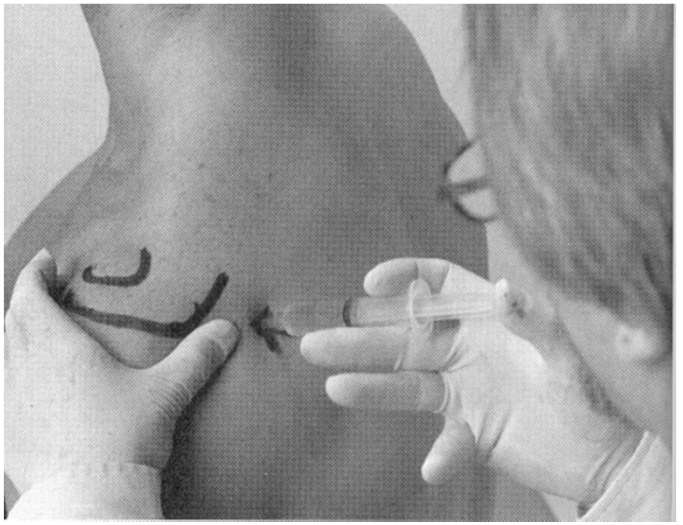
1. Anterior shoulder dislocation
2. Bony Bankart Lesion
3. Posterior Shoulder Dislocation
4. Rotator Cuff Strain

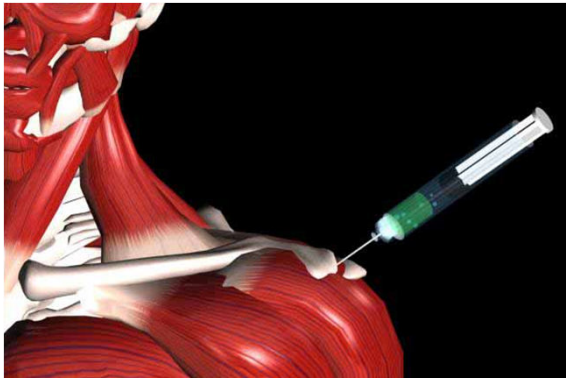
Referral Criteria

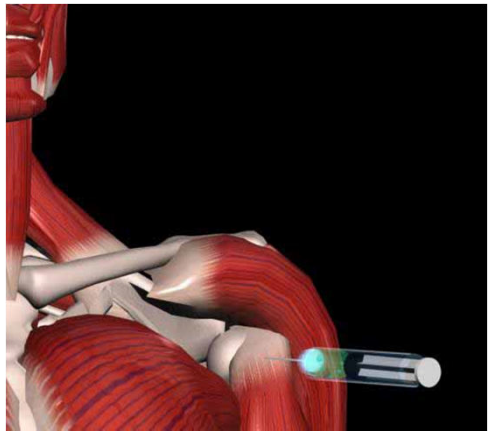
- Diagnostic uncertainty or red flag criteria
- Pain and significant disability lasting more than six months, despite activity modification, physiotherapy and steroid injections (if indicated)
- History of instability
- First dislocation – occupation/sport/active
- Severe post-traumatic acromioclavicular pain

Diagnostic Injection

- AC joint
- Subacromial space
- Glenohumeral joint
- Biceps tendon (long head)







Summary

Mixed shoulder disorders are common, and over-differentiation of diagnostic categories does not largely alter conservative management in primary care

Self help advice, including relative rest and attention to occupational, sporting, or other physical factors, should be offered as well as analgesics

The evidence for common interventions such as steroids and physiotherapy is relatively weak

For rotator cuff disorders, physiotherapy may reduce repeat consultations, and steroid injections have a marginal short term effect on pain

Poorer prognosis is associated with increasing age, female sex, severe or recurrent symptoms at presentation, and associated neck pain

Surgery should be considered when conservative measures fail

"*the role of the Physician is to entertain the Patient whilst his disease runs its usual course."*
Molière 17th century,