

### Causes of Shoulder Pain

- Myofascial pain syndrome
- Cx Dysfunction with referred pain
- Cx Radiculopathy
- Supraspinatus Tendinosis
- Adhesive Capsulitis
- Subacromial impingement syndrome
- Supraspinatus tendon tear/rupture
- Acute Bursitis
- Calcific Tendinitis
- GH Arthrosis
- TOS
- AC joint osteoarthritis
- Bicep Tendinitis
- Visceral Referred Pain

### Serious Disorders

- Malignancy
- Septic Infection
- Carcinoma of the lung
- MI

### Pitfalls

- Referred sources of shoulder pain: Cx spondylosis, Cx arthritis, Cx disc disease, MI, CRPS, Diaphragmatic irritation, TOS, Gallbladder Disease
- PMR ( >60 yo, bilateral, inflammatory shoulder girdle pain)
- Posterior dislocation of the shoulder joint
- Recurrent subluxation of shoulder joint
- AVN of humeral head
- Rotator cuff tear/degeneration

### Referral

- Persisting night pain with shoulder joint stiffness
- Persisting supraspinatus teninitis - Rotator cuff tear/degeneration
- Confirmed/suspected shoulder dislocation
- Confirmed/suspected recurrent subluxation/AVN
- Children with shoulder instability



- Hx**
- Duration
  - Onset - Night pain when leaning + Hx of trauma, >65 yo = rotator cuff tear
  - Activity/mechanism at the time of onset - Overhead work = impingement syndrome (60-120 degrees)
  - Activities that relieve/exacerbate
  - Patient's age - <30 = biomechanical/inflammatory (atraumatic instability, tendinosis and arthropathies)  
>45 = Complete rotator cuff tears
  - Past Hx of trauma/injury
  - Past Hx of shoulder/arm surgery
  - Treatment attempted - not getting better
  - Other medical conditions (Diabetes, Thyroid disease, Coronary Artery disease, Alcohol abuse + use of corticosteroids)

**Hx**

<b>Age</b>	<40yo: Instability, rotator cuff tendinopathy >40yo: Rotator Cuff tears, Adhesive Capsulitis, GH OA
<b>Diabetes/Thyroid disorders</b>	Adhesive capsulitis
<b>Hx of trauma</b>	<40 yo: Shoulder Dislocation/subluxation >40 yo: rotator cuff tears
<b>Loss of ROM</b>	Adhesive Capsulitis, GH OA
<b>Night Pain</b>	Rotator Cuff Disorders, adhesive capsulitis
<b>Paraesthesia and arm pain past elbow</b>	Cx Spine
<b>Pain Location</b>	Anterior- Superior shoulder pain = AC joint Diffuse shoulder pain in deltoid = rotator cuff, adhesive capsulitis, GH OA
<b>Pain with overhead activity</b>	Impingement, rotator cuff disorders
<b>Sports</b>	Instability - overhead sports and collision sports
<b>Weakness</b>	Rotator Cuff disorders, GH OA

### Further Questions

- Injury - even very minor when the pain started?
- Does the pain keep you up at night?
- Pain/Stiffness in neck?
- Pain/restriction when clipping/handling your bra or touching you shoulder blades (limited internal rotation)
- Trouble with combing hair? (External rotation)
- Pain on walking/some stressful activity?
- Pain worse when waking in the morning?
- Is it both sides? Do you have it in your hips too?
- Pain associated with sporting activity, housework, dressing?



### Investigations

- ESR/CRP (PMR, Infection, Inflammatory)
- RF
- Serum Uric acid (Gout)
- X-ray
- Bone Scan
- US
- MRI

### In children

- Septic Arthritis/osteomyelitis
- Swimmer's Shoulder

### In Elderly

- PMR
- Supraspinatus Tear+ Persistent tendinitis
- Other Rotator Cuff Disorder
- Stiff Shoulder due to Adhesive Capsulitis
- OA of AC + GH joints
- Cx manipulable lesion with referred pain
- AVN of the humeral Head

### Adhesive Capsulitis

#### Causes:

- Diabetes
- Thyroid Disease
- Pulmonary disorders - TB, carcinoma
- Cardiac Disease (MI)
- Cerebrovascular accident
- Shoulder Trauma
- Recent surgery under anaesthetic

### S&S

- Onset usually >40 yo, mean age 60yo
- F > M
- Unilateral (But can be bilateral - rare)
- Increasing pain and stiffness



### S&S (cont)

3 Phases:

**Painful phase:** Insidious onset - shoulder pain + ache on movement in upper traps. Increasing during the night

**Adhesive:** After several months - pain becomes less severe, but pain during movement remains. Shoulder movement more restricted

**Resolution:** Pain less severe, restriction is worse. ROM slowly improved

- To differentiate between rotator cuff tendinitis, Adhesive capsulitis has global restriction of passive movement, traps tenderness and early movement of scapula on abduction

### Management

3 times a week (intensive) - No manipulation at initial stage

Rest

Pendular Exercises

NSAID advice - pharmacists

Cryotherapy

US, IF

Trigger points/bands of the shoulder girdle - upper traps

Spencer Technique

When acute episode is better, restore function - active exercises

Mobilisation/manipulation

PIR

Resisted strengthening exercises - isometric (press against wall) in pain free range to isotonic (moving shoulders with weights)

### DOES NOT RECUR IN THE SAME SHOULDER WHEN BETTER

Spencer: 7 stages

1. GH Flexion + elbow extension
  2. GH Extension + elbow flexion
  3. Circumduction + traction
  4. Circumduction + compression
  5. Externally rotate + adduct (combing hair)
  6. Internally rotate + abduction and extension (wiping bum)
  7. Milking - scoop up
- 4-5 repetitions on every step. Slow movements

### Subacromial Bursitis

- Caused by inflammation of supraspinatus and/or other structures around the bursa
- Pain and swelling = impingement
- Pain on active + passive ROM of the shoulder
- Focal warmth, swelling
- Pt shrugs shoulder to initiate abduction
- Ultrasound



### Management

- Cryotherapy
- Sling (48-72 hours) - decreases tension on supraspinatus tendon
- Mobility exercises
- NSAIDs
- Mobilisation/manipulation of GH, AC, SC and Scapular abnormalities

### Calcific Tendinitis

- HADD = Hydroxyapatite Deposition Disease
- Caused by trauma/overuse
- Intense pain in the shoulder, radiates down upper arm - starts suddenly and rapidly becomes worse
- Pain worse with ANY shoulder movements and restricted in ALL directions
- Clinical features + X-ray (soft tissue calcifications)

### Management

- Rest - may need a sling for several days
- Cryotherapy
- NSAIDs
- GP for corticosteroid injections
- Can improve within 4-5 days of conservative care

### GH Dislocation

- Usually anterior
- Forced abduction + external rotation
- Severe pain, patient holds arm tightly against body
- Shoulder appears flattened laterally + prominent anteriorly. AC more prominent too
- X-rays in AP and Lateral scapula/axillary
- Posterior dislocation - axial loading of adducted, internally rotated arm. Seizure should be considered!

### GH Instability

**Types:** Anterior inferior (common), Posterior, Multidirectional - congenital

- Trauma related - direct/overuse (overhead activities), intentional, atraumatic - congenital, bilateral, joint laxity

**Hx:** General shoulder pain, worse with activity/certain arm positions

Relieved by rest/heat

Hx of catching/locking with motion

Painful arc of motion (impingement)

**Exam:** Sulcus sign/redness

Trigger points + myospasm of rotator cuff

AROM/PROM shows repeatable clunk/apprehension with abduction + external rotation

+ve Load and shift

Anterior/posterior apprehension sign.



### GH Instability (cont)

**DDx:** Labral Tear/GH OA

Biceps Tendinopathy

Rotator cuff tear

Shoulder Impingement

Subacromial Bursitis

**Management:** Correction of faulty movement patterns - strengthening of rotator cuffs + correction of muscle imbalances (PFROM then to mild resistance exercises), if not getting better, consider referral to GP for surgery

### Impingement Syndrome

- Not a condition on it's own

- Caused by:

Subacromial Bone spurs/bursal hypertrophy

AC Joint arthrosis/bone spurs

Rotator cuff disease

Superior labral injury

GIRD

GH Instability

biceps tendinopathy

Scapular dyskinesis

Cx radiculopathy

- **Hx:** Dull, achy shoulder - worse with shoulder abduction , overhead activity/excessive use

Sudden onset of sharp pain in shoulder with tearing = rotator cuff tear

**Exam:** Pain on top of shoulder = AC joint arthritis

Pain over bicipital groove = bicipital tendonitis

Pain over lateral shoulder = supraspinatus tendinopathy

AROM = pain with shoulder abduction/flexion 8-120 degrees + shoulder hiking

PROM: WNL unless tendon is involved

RRROM: Muscle weakness due to pain

SMR = WNL - rule out Cx radiculopathy/neurological

+ve impingement sign

+ve neer's sign

+ve Hawkins Kennedy

+ve Drops arm, Empty Can

**DDx:** Biceps tendonitis, rotator cuff injuries, Adhesive capsulitis, AC joint pathology, Glenoid Labral Tear, Subacromial Bursitis

**Management:** Education + reassurance , avoidance of aggravating activity, PRICE + NSAIDs, MF release, Manipulation of SC, AC, Cx,Tx, TENs, US

**Rehab:** Ice and rest shoulder after

PRFROM + Pendulum arm swings, stretching then PFAROM + mild resistance exercises

### Labral Tear

Classifications

