

“Older” Shoulders

Rotator Cuff Disease

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Rotator Cuff Tears

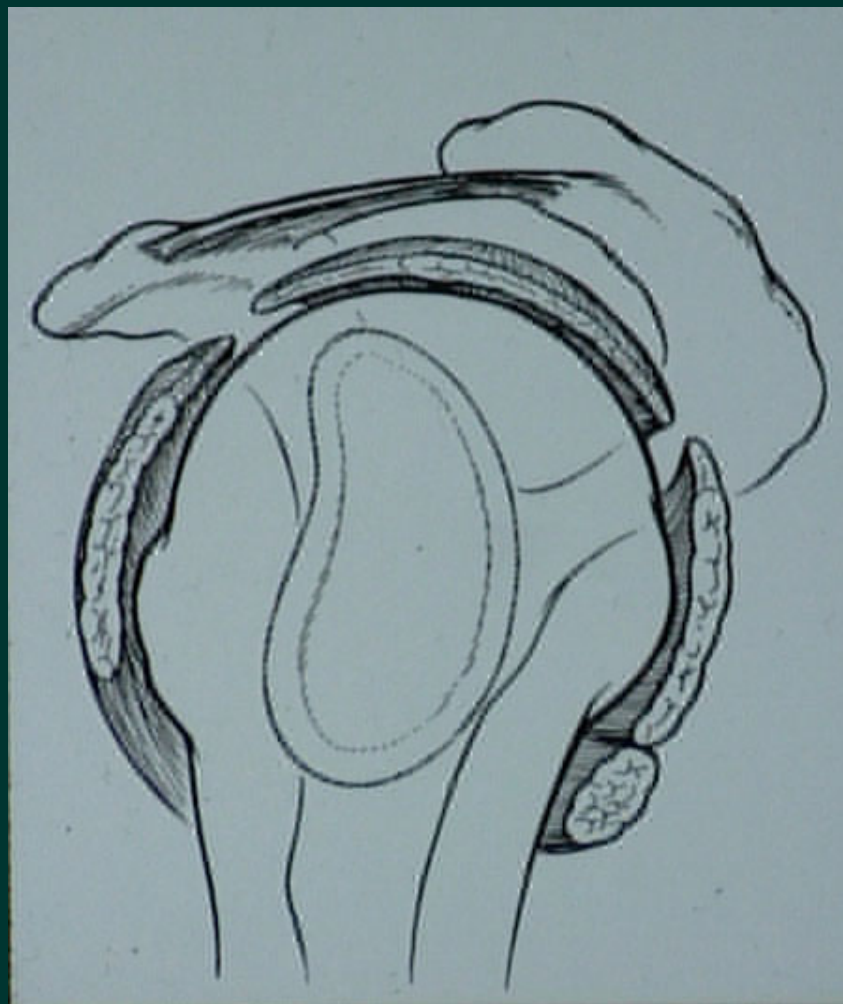
Anatomy

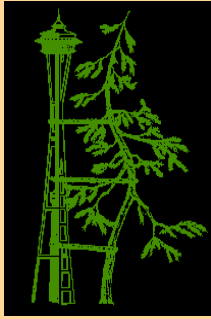




Rotator Cuff Tears

Anatomy

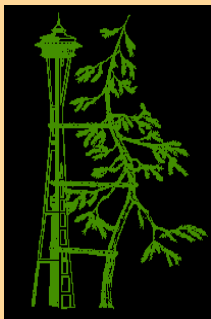




Rotator Cuff Tears

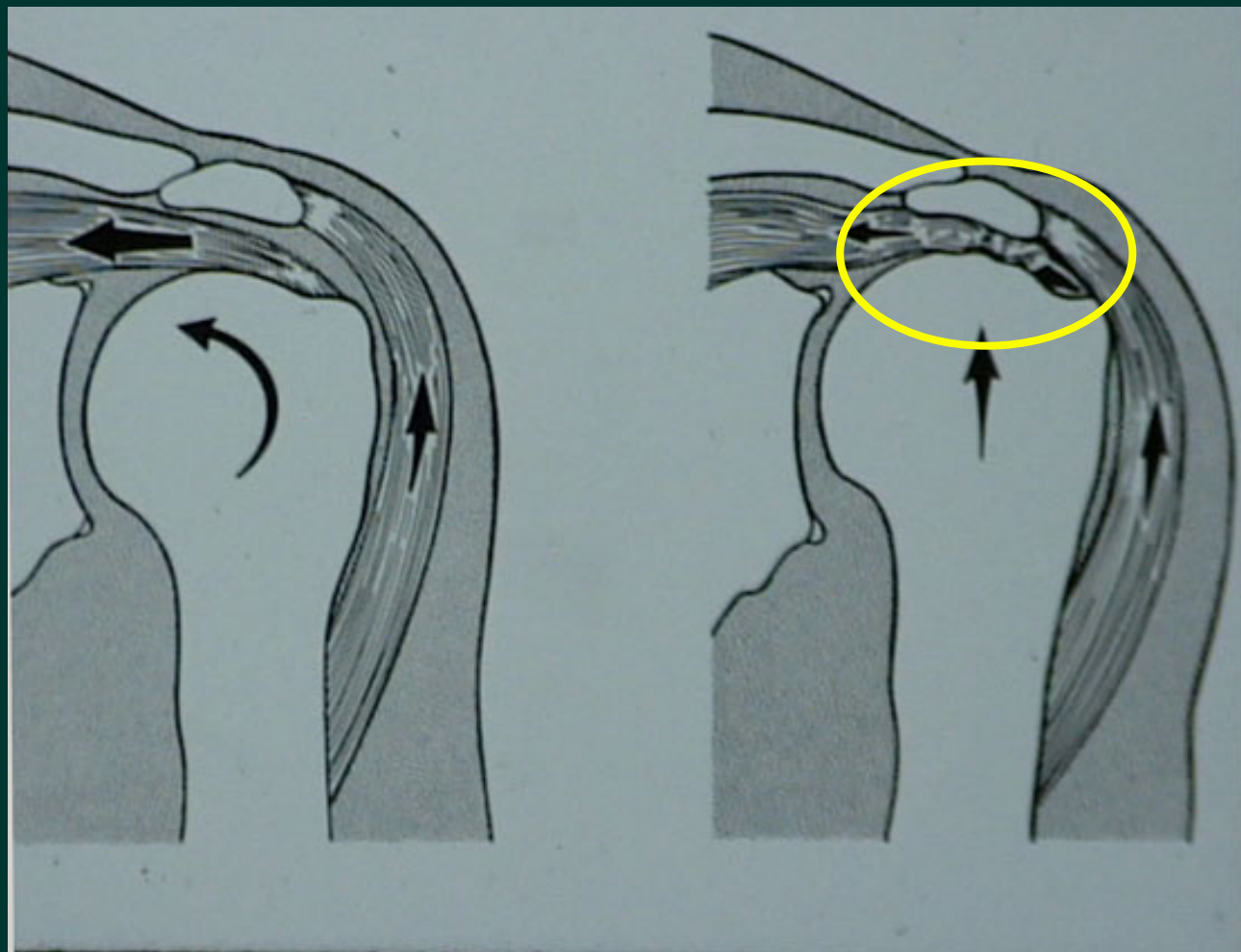
Definition

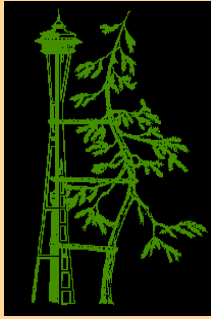
Pathologic changes of the
rotator cuff tendons



Rotator Cuff Tears

Progressive
thinning and
weakening
with ↑ age





Rotator Cuff Tears

Cause

Trauma

Degenerative



Rotator Cuff Tears

Types

Tendinitis

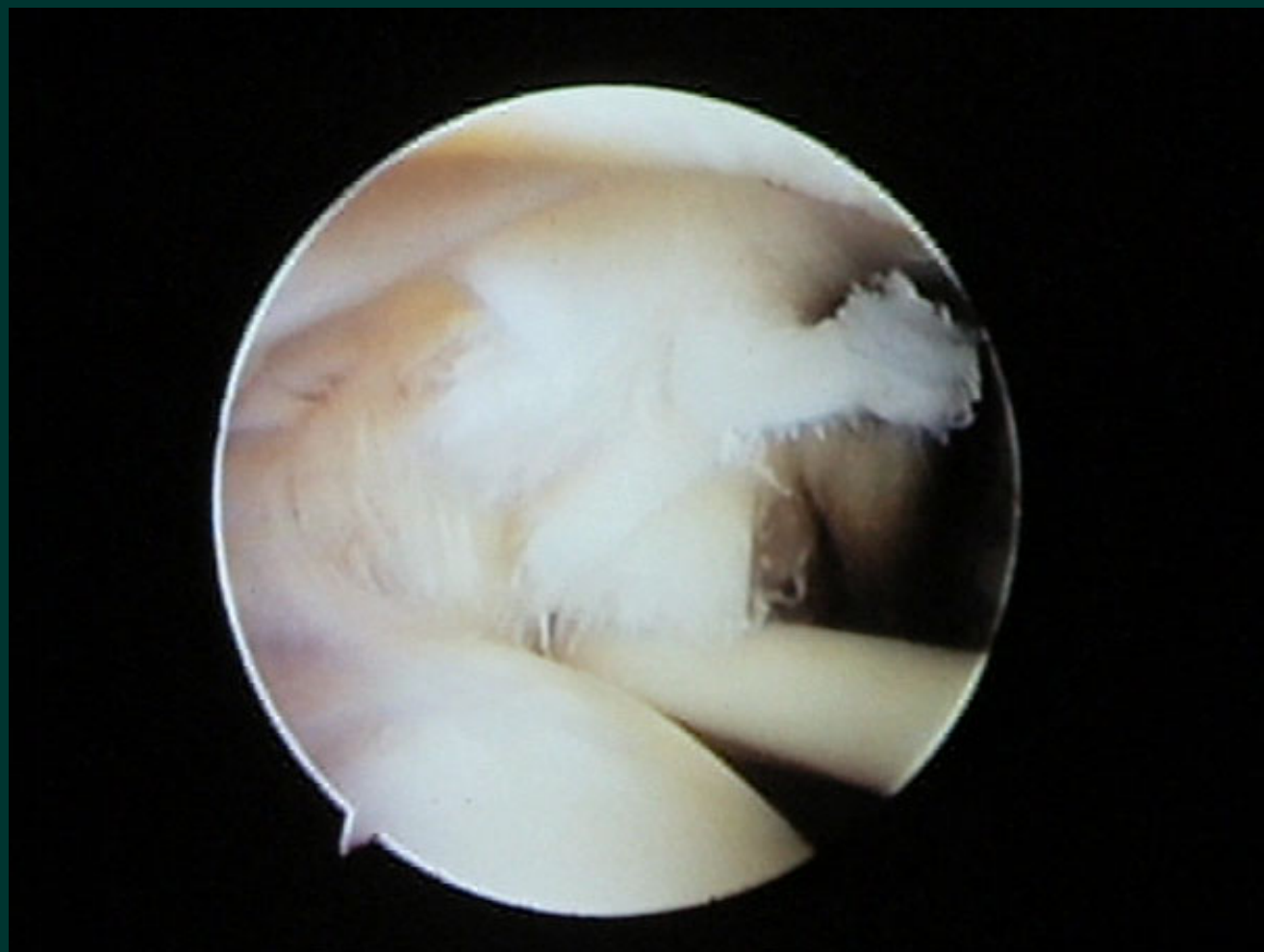
Partial thickness tear

Full thickness tear



Rotator Cuff Tears

Partial
Thickness
Tear





How to Recognize

Complaints

Pain, ↓ sleep, overhead, weakness,
stiffness, catching, popping



How to Recognize

History

Acute (traumatic)

vs.

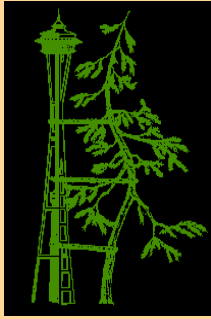
Chronic (insidious)



How to Recognize

Exam

Atrophy, ecchymosis,
weakness, subacromial
roughness, pain,
positive injection test



How to Recognize

Atrophy

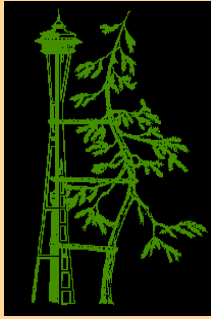




How to Recognize

Subacromial
Roughness





How to Recognize

Weakness





How to Recognize

Pain





Differential Diagnosis

- Acromioclavicular arthritis
- Frozen shoulder
- Glenohumeral arthritis
- Herniated cervical disc
- Suprascapular nerve entrapment
- Fracture (Skier's)



How to Work-Up

X-rays

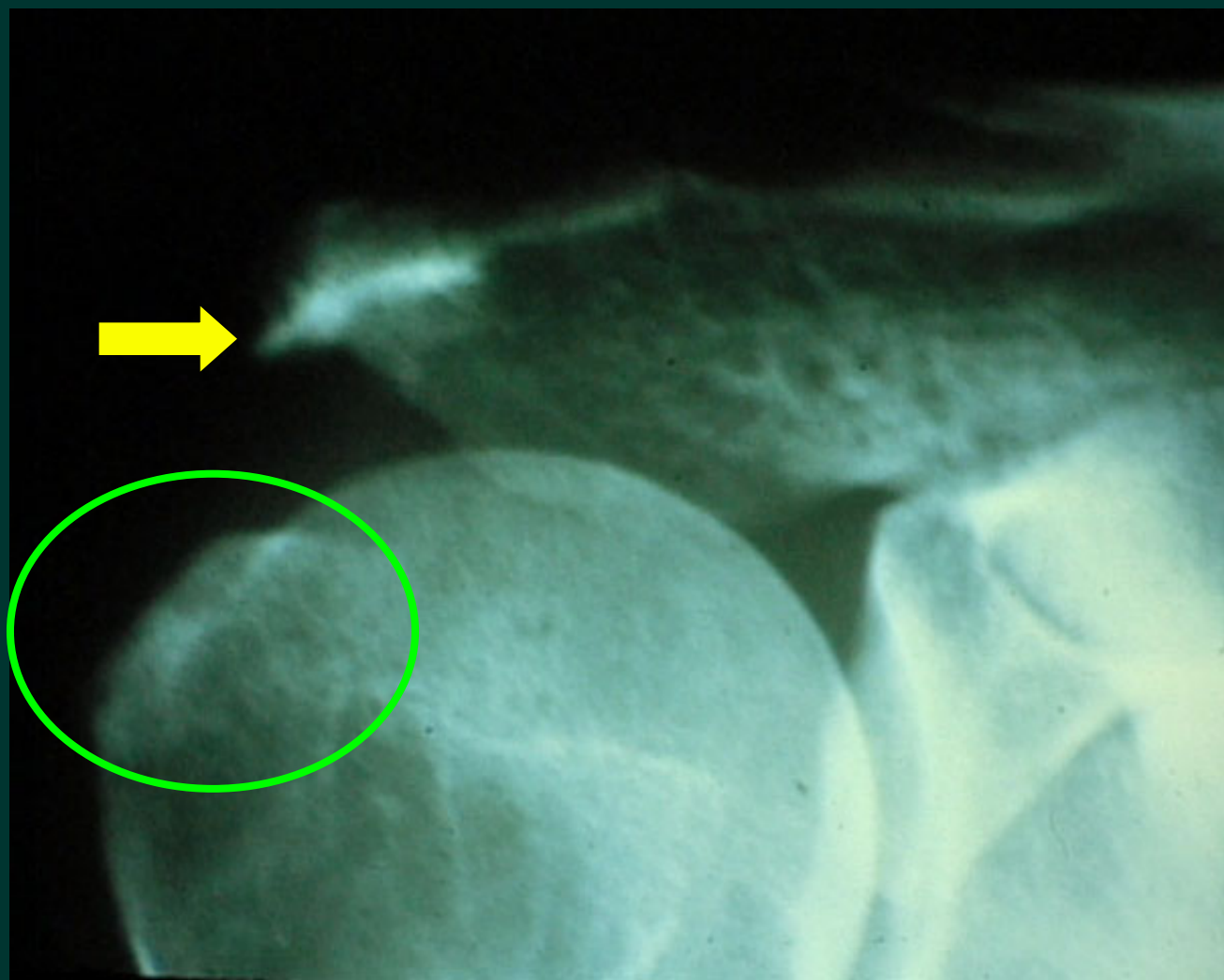
Greater tuberosity reactive changes, acromial spurcil/spur, high-riding humeral head

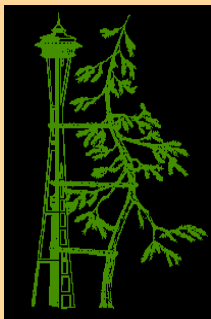
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How to Work-Up

Greater
tuberosity
reactive
changes,
acromial
sourcil/spur





How to Work-Up

High-riding
humeral
head





How to Work-Up

Other Imaging Studies

Arthrogram

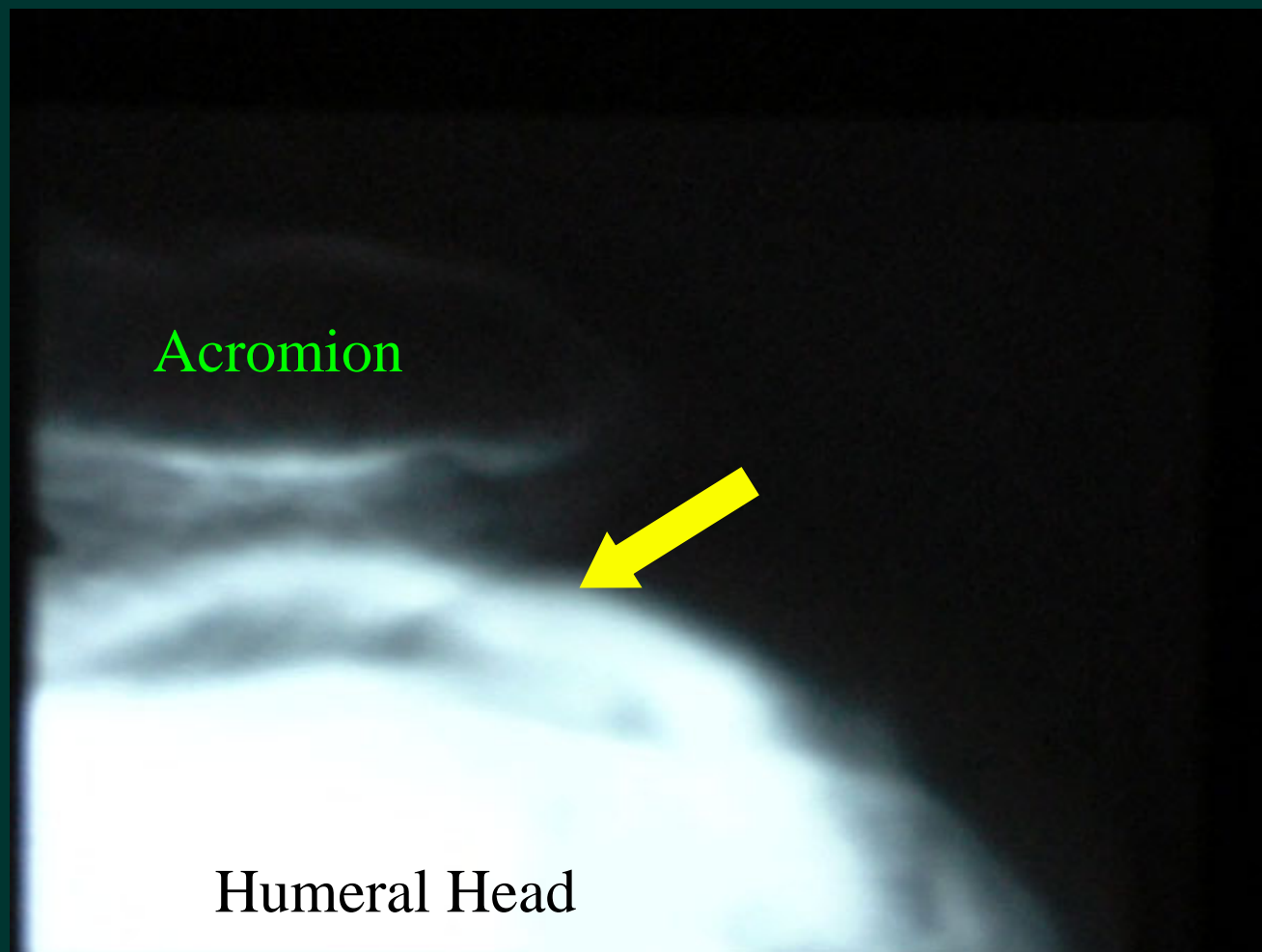
Ultrasound

MRI



How to Work-Up

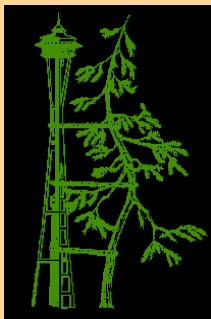
Positive
arthrogram
with dye
leakage





Ambulatory Treatment

Conservative - rest, ROM, NSAID,s,
injection (?), time, avoidance,
modifications, education,
compensatory muscle strengthening,
progressive resumption of activities
(except acute tear in young/active?)



Ambulatory Treatment

Progressive
Range of
Motion

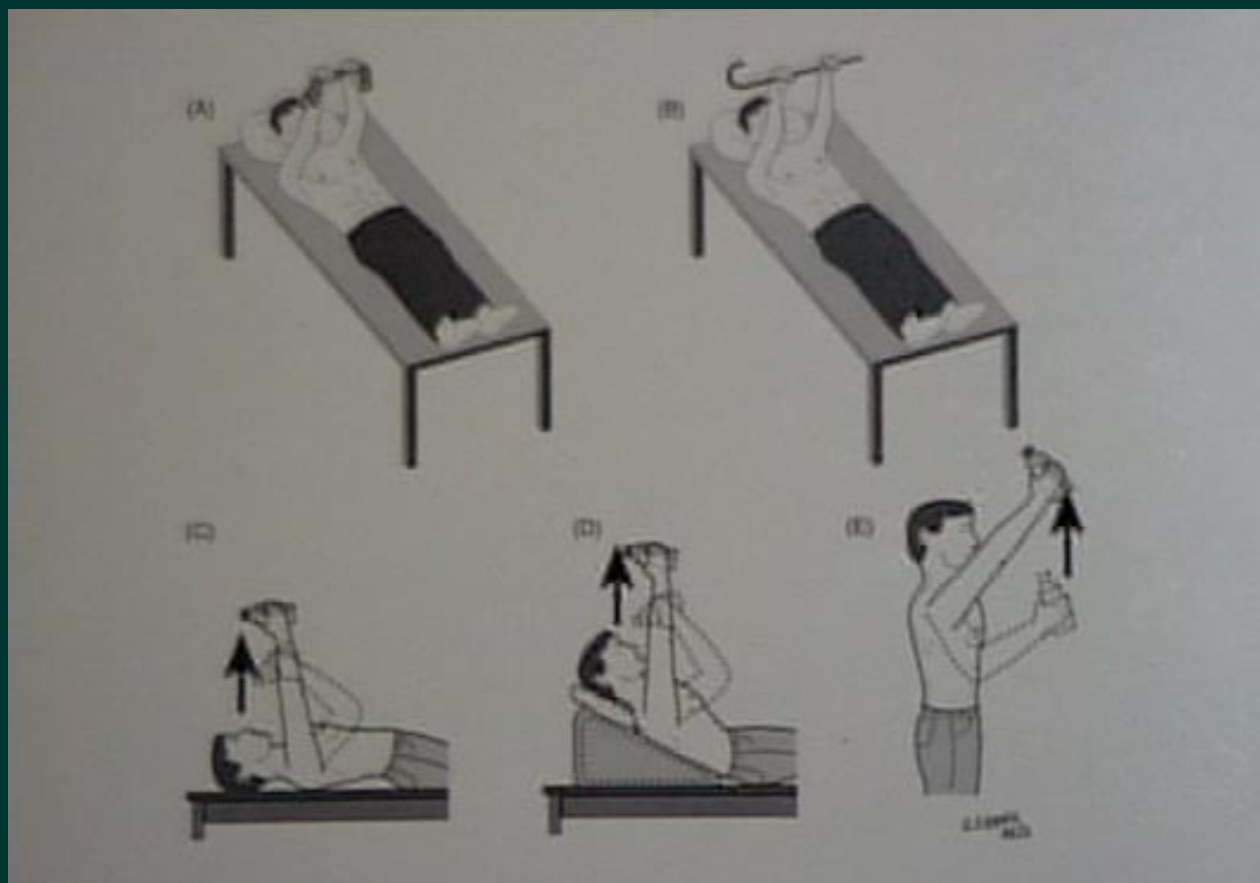


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Ambulatory Treatment

Compensatory
Muscle
Strengthening





Outcome

Most do well with appropriate
conservative management



Other Thoughts

Wheelchair/Crutch Ambulators

Difficult, rehab, rehab, rehab,
rarely if ever repair



Other Thoughts

After dislocation in > 40 y.o.

Beware potential for RCT,
image those doing poorly with
rehab EARLY



Other Thoughts

Calcific Tendinitis





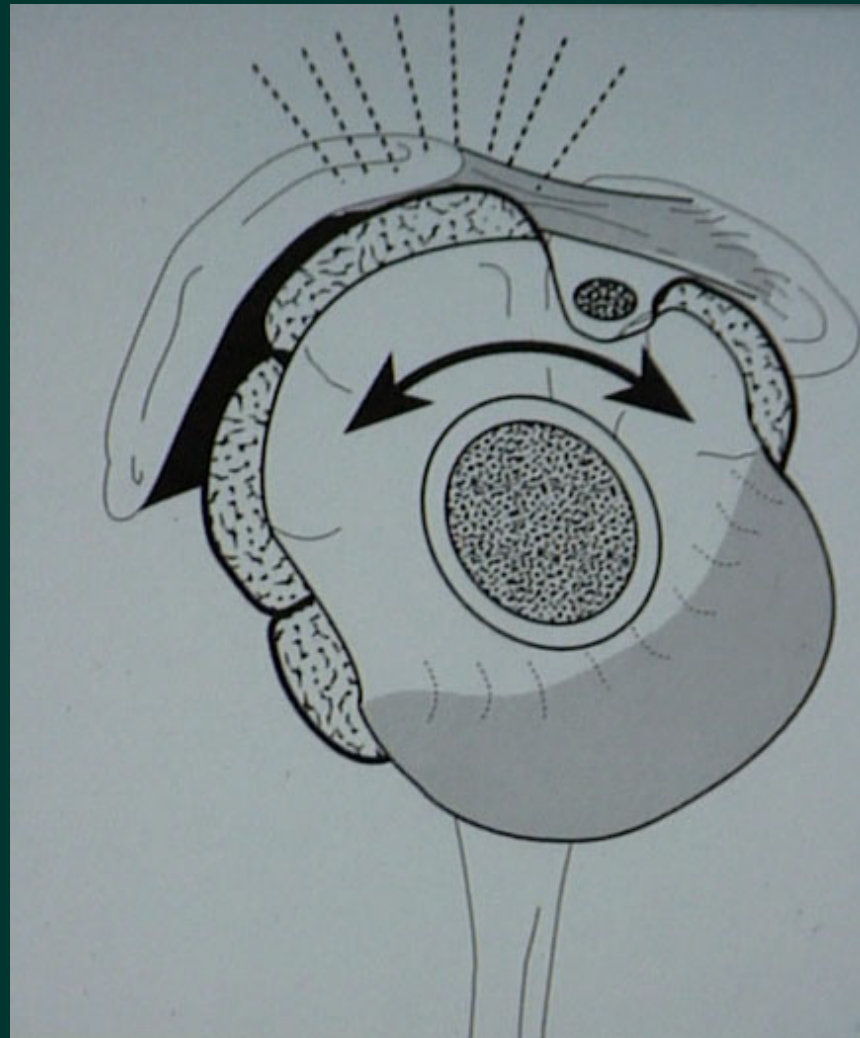
Other Thoughts

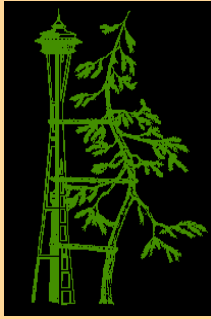
Calcific Tendinitis

- Insidious onset...PAIN!
- Try conservative approach
 - May need to remove or decompress if symptoms persist



“Impingement”





“Impingement”

Question what it is...Triad!

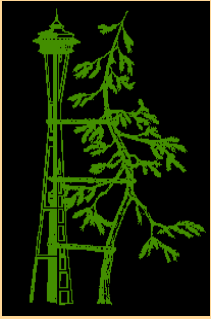
- posterior capsular tightness
 - subacromial bursitis
- cuff pathology (-itis vs. tear)



When to Refer

Acute

Weakness, bruising,
positive study,
especially young/active pts.



When to Refer

Chronic

After several months, positive study, failure of conservative care, continued/worsening pain & dysfunction, difficulty sleeping



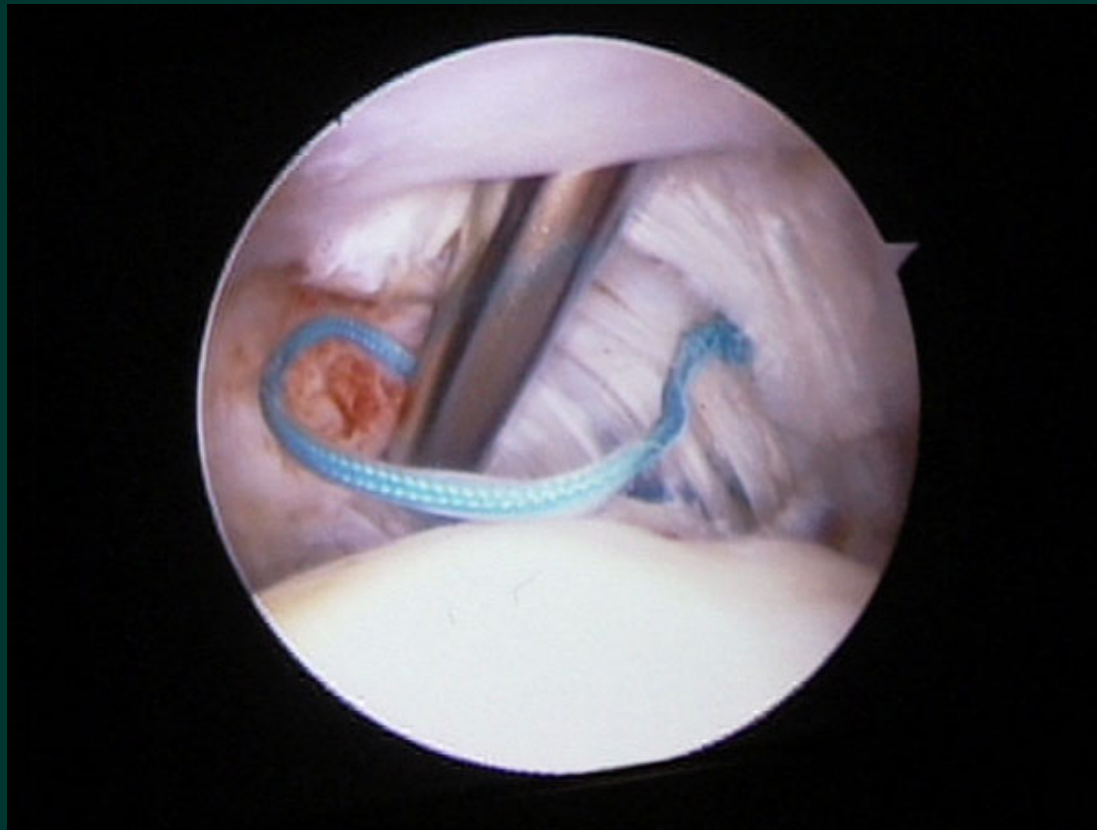
How We Treat It

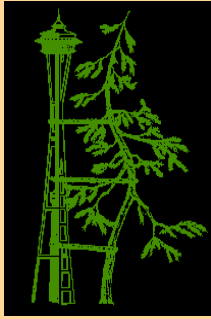
- More Rehab/ Avoidance/Modification
- Meds/Injections
- Explanation of risks/benefits
- Surgery - arthroscopic or open subacromial smoothing/debridement vs. repair



How We Treat It

RCT \neq RCR





How We Treat It

Prognostic indicators for RCR Failure

↑ Age (> 70)

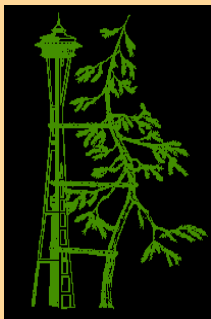
↑ Chronicity

Atraumatic

↑ Injections

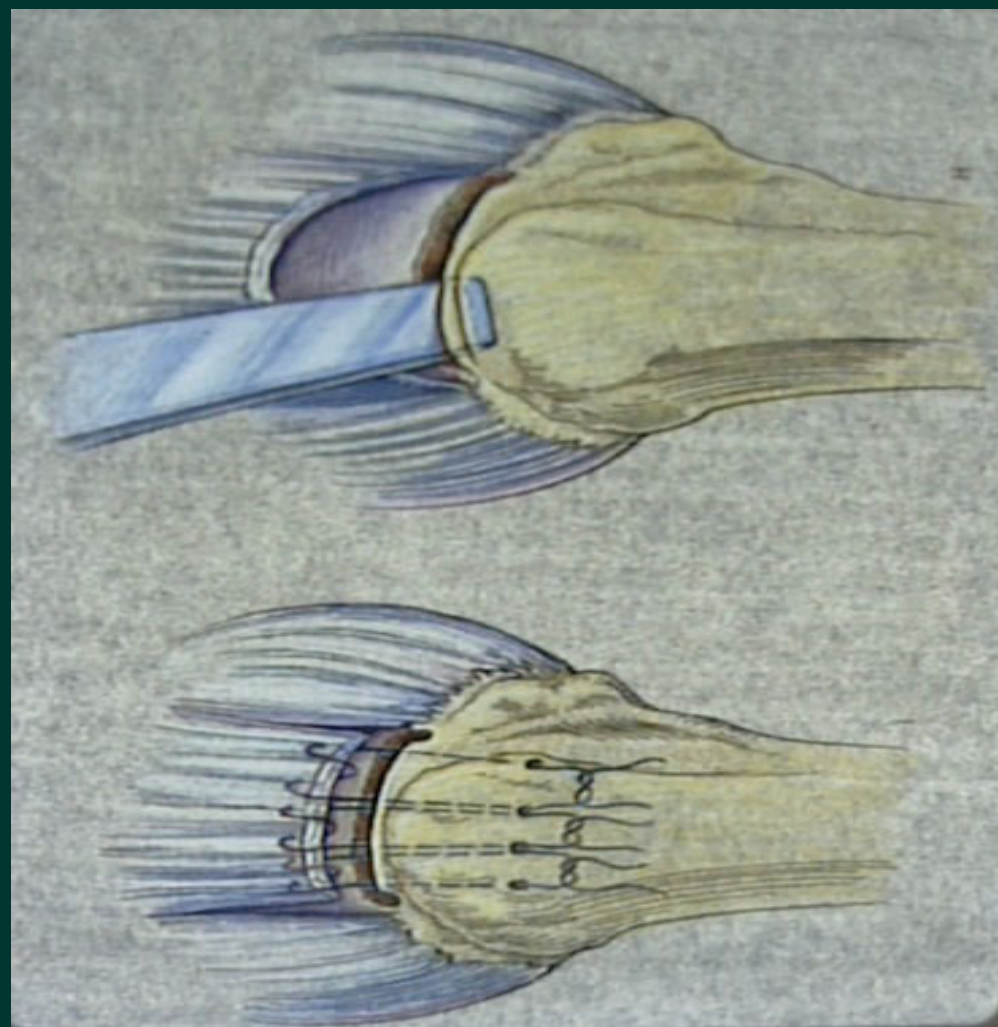
↑ # tendons

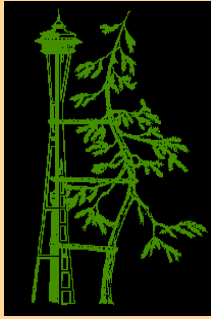
Smoking



How We Treat It

Open rotator
cuff repair





Outcome

Most do well extremely well
with near complete recovery
of function and relief of pain



Outcome





Rotator Cuff Tears

Summary

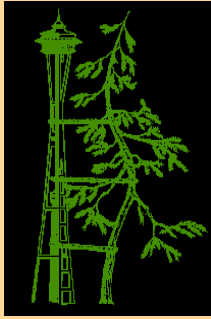
- VERY common problem
- Can be acute or chronic
- Many will improve adequately with conservative care
- Some require surgery



Rotator Cuff Tears

Summary

- In young/active/traumatic tears...think early referral
- In elderly/sedentary/insidious tears...think rehab, refer prn



“Older” Shoulders

Stiffness



Capsular Laxity



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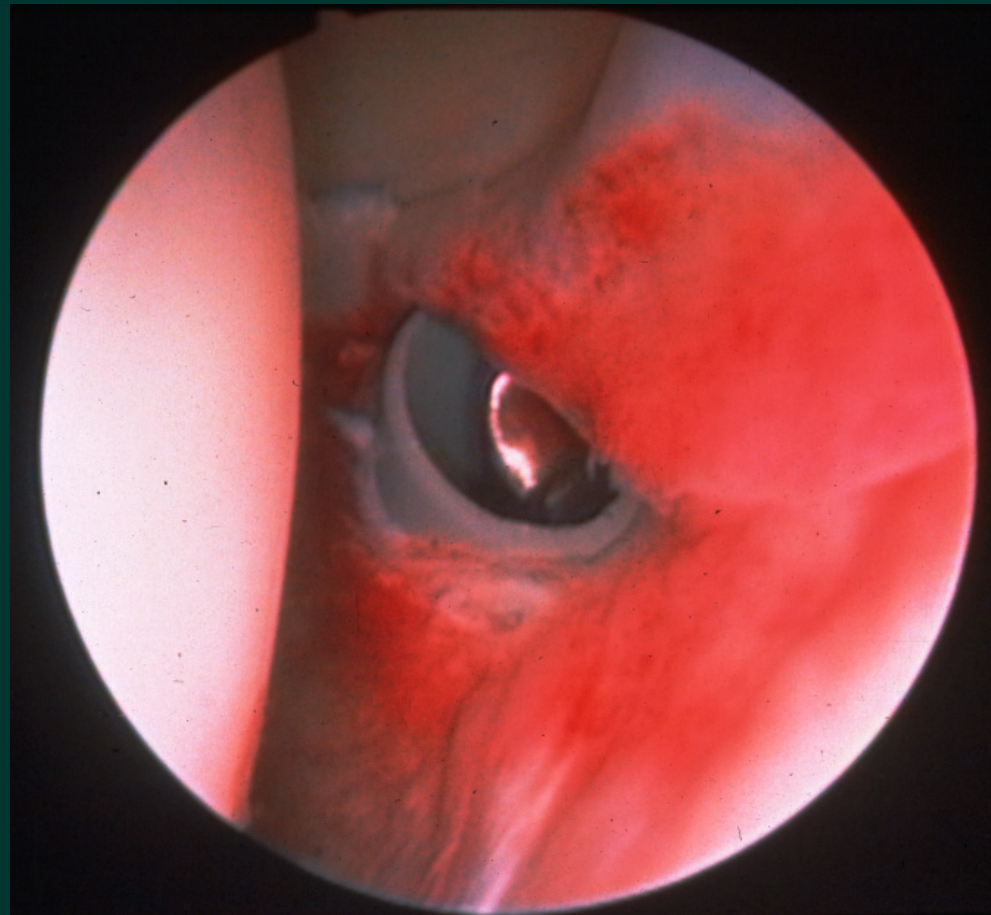


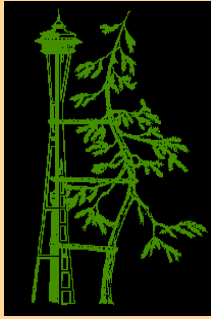
“Frozen Shoulder”

- Definition - Symptomatic limitation of passive motion in a shoulder
- Cause - Stiffening of joint capsule after inflammation

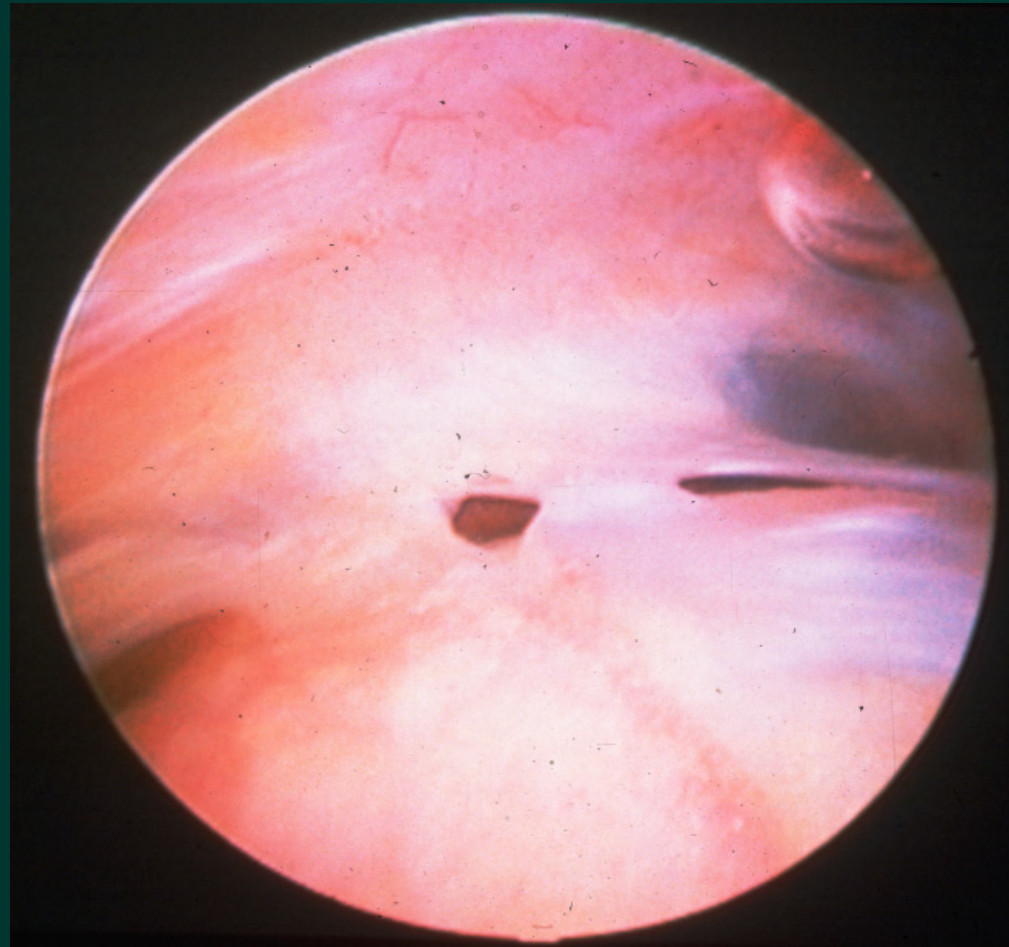


Inflammation





Adhesions





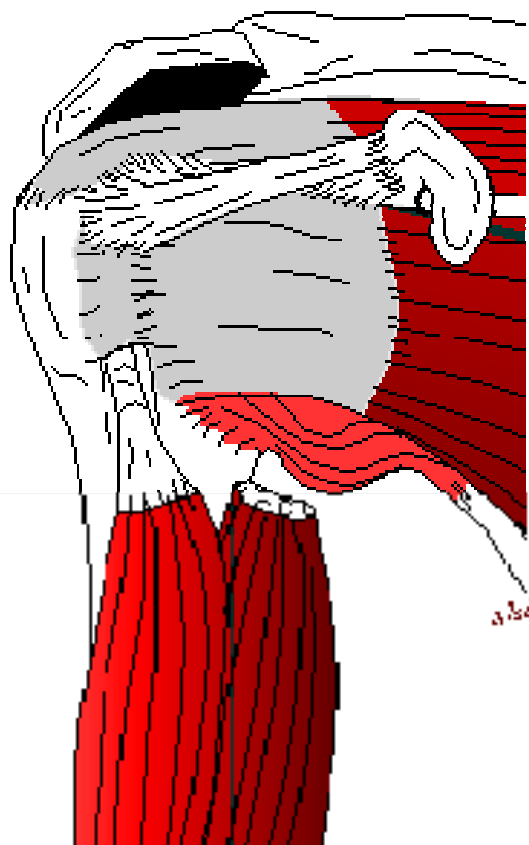
Actually...

Four Types (etiologies) of Stiffness

Idiopathic Frozen Shoulder
Diabetic Stiff Shoulder
Post-Traumatic Stiff Shoulder
Post-Surgical Stiff Shoulder



Capsular Contracture



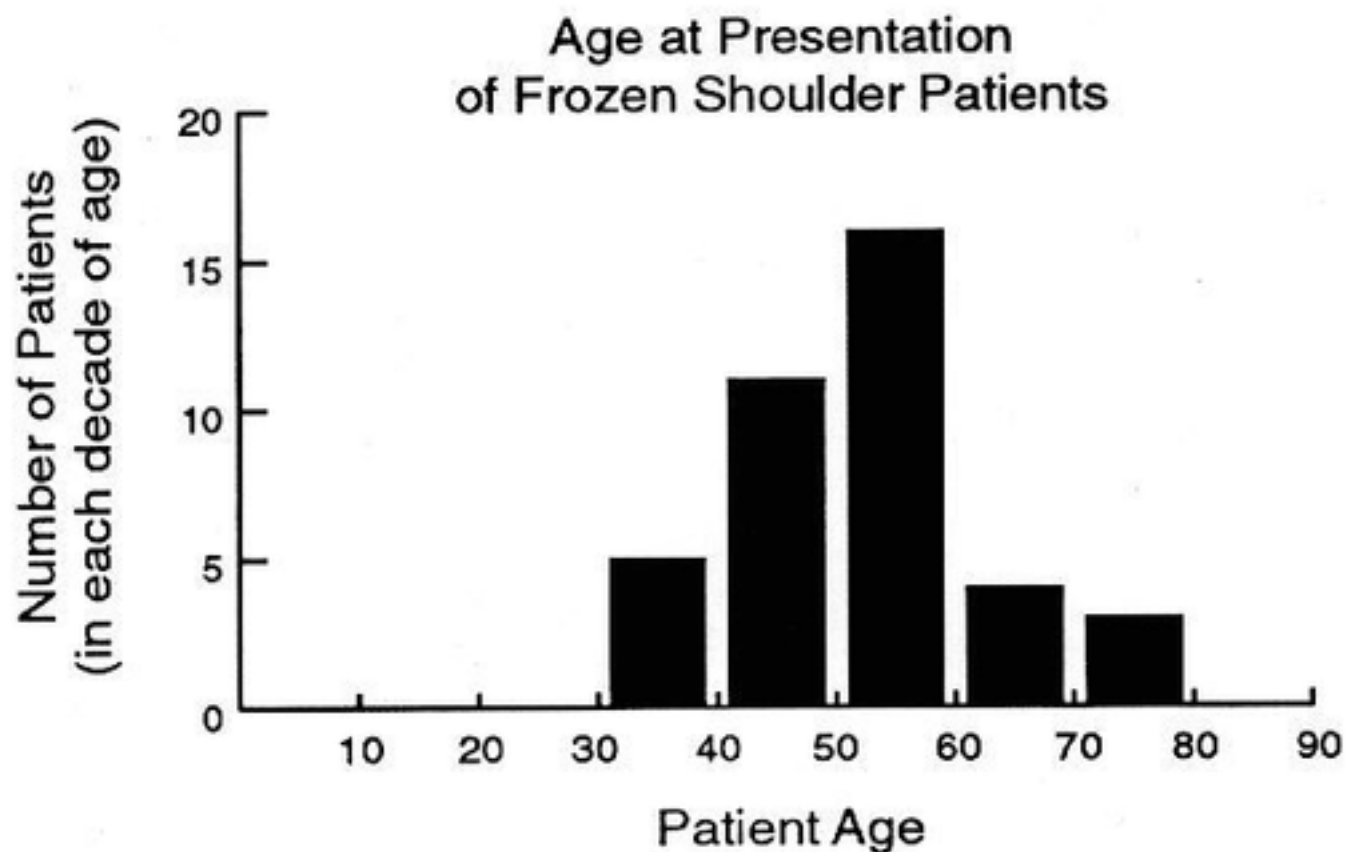


How to Recognize

- History - loss of comfort & function (inability to sleep comfortably)
- Exam - limited range of flexion, external rotation, internal rotation and/or cross body motion
- X-rays - normal



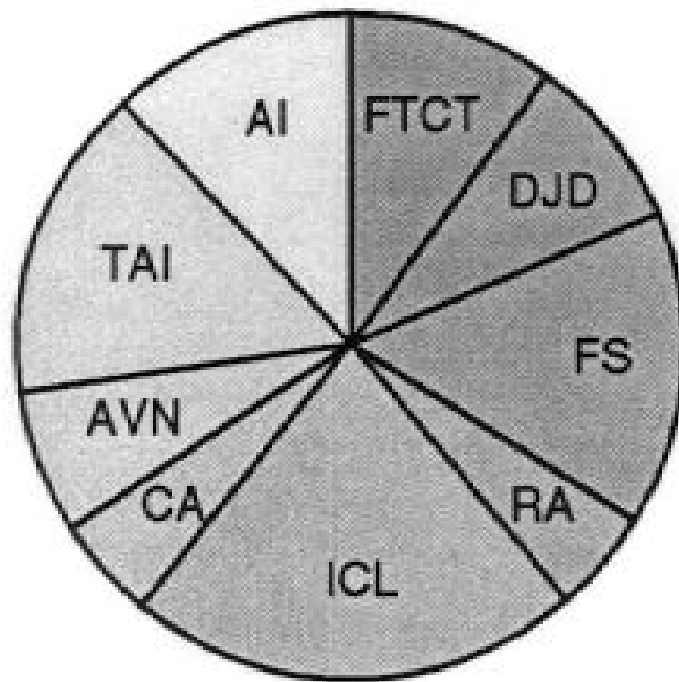
Peak age = 55 years





Top 3 in middle age

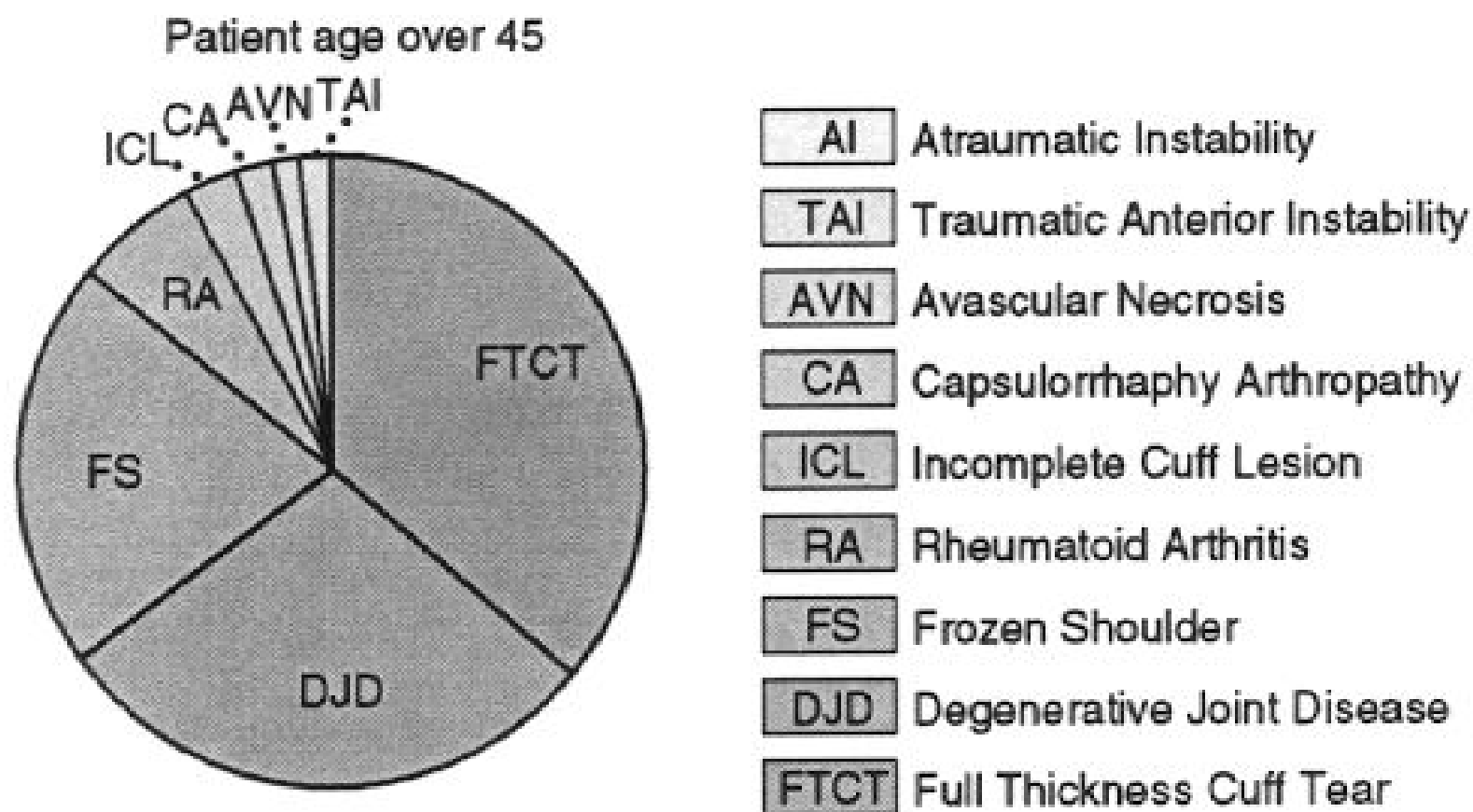
Patient age 31 to 45



- AI Atraumatic Instability
- TAI Traumatic Anterior Instability
- AVN Avascular Necrosis
- CA Capsulorrhaphy Arthropathy
- ICL Incomplete Cuff Lesion
- RA Rheumatoid Arthritis
- FS Frozen Shoulder
- DJD Degenerative Joint Disease
- FTCT Full Thickness Cuff Tear

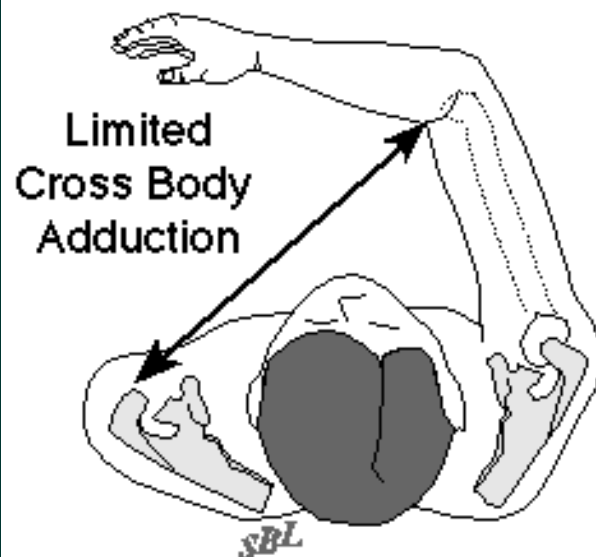
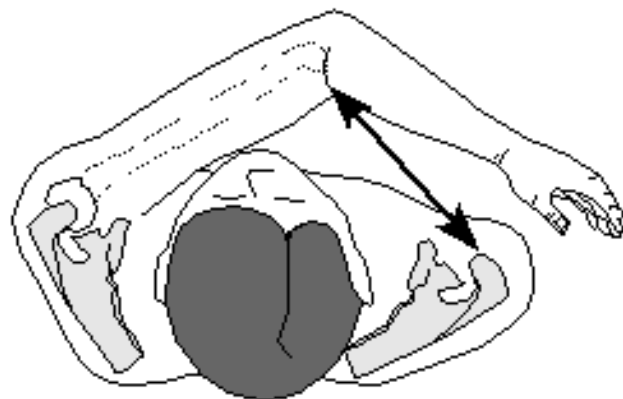


Top three > 45 years



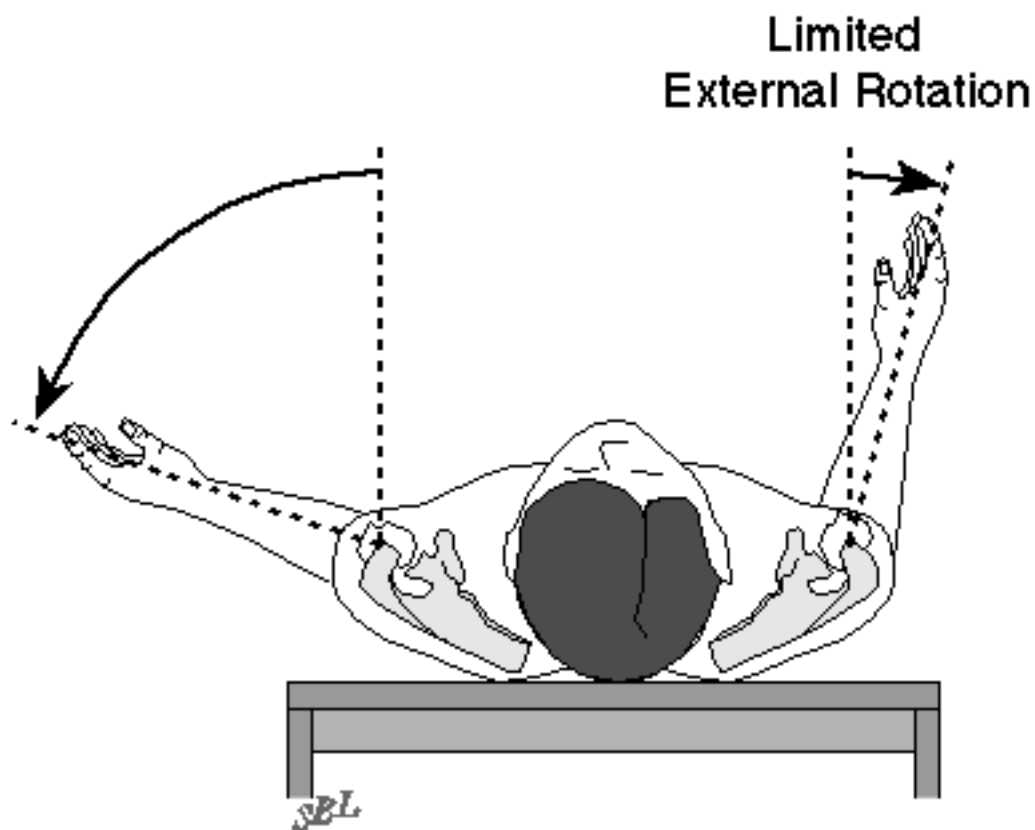


Asymmetrical range



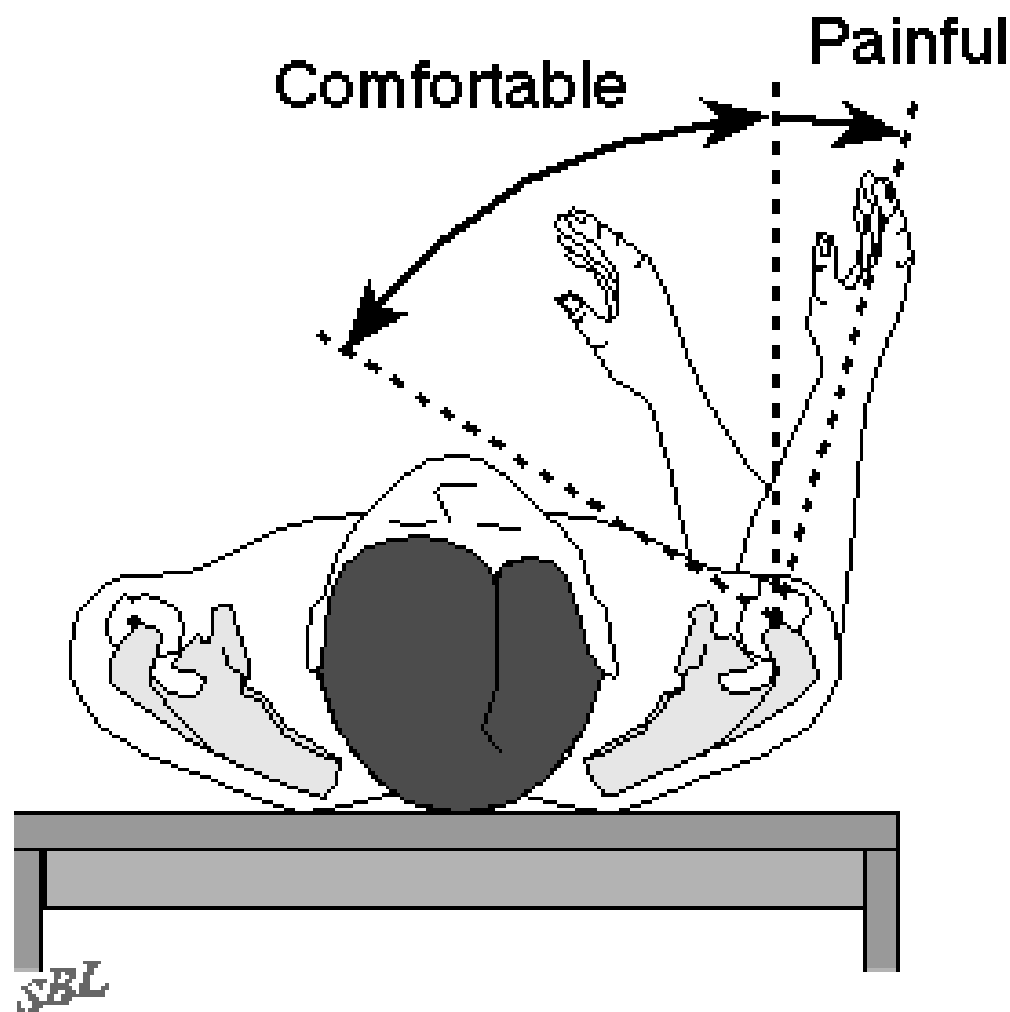


Asymmetrical Range



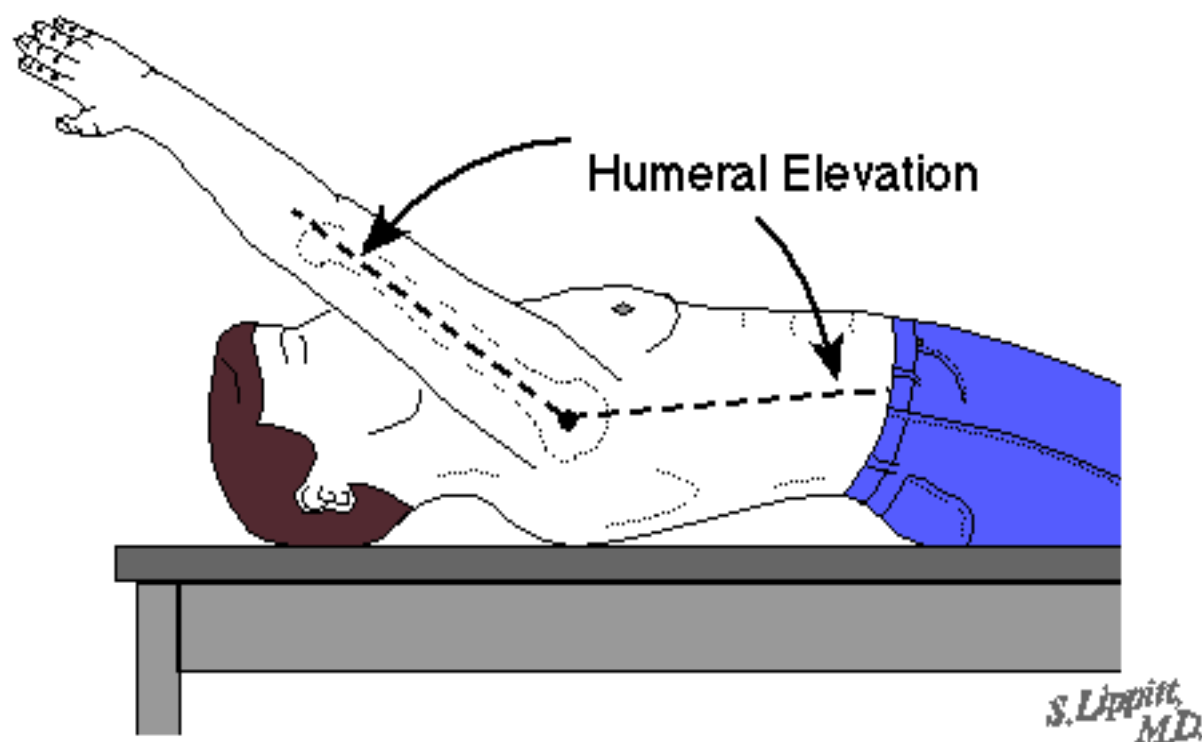


Pain at the extreme



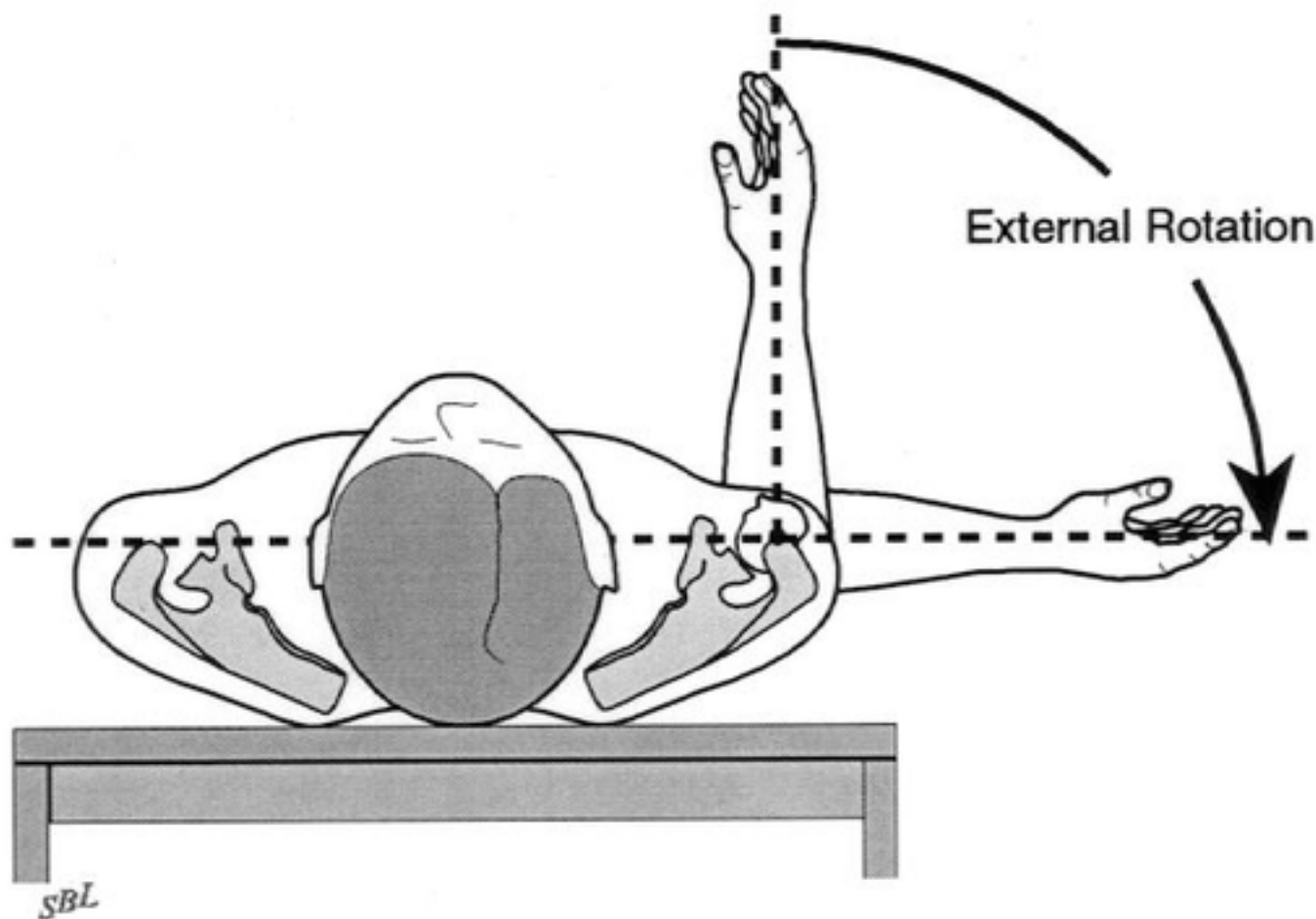


Flexion



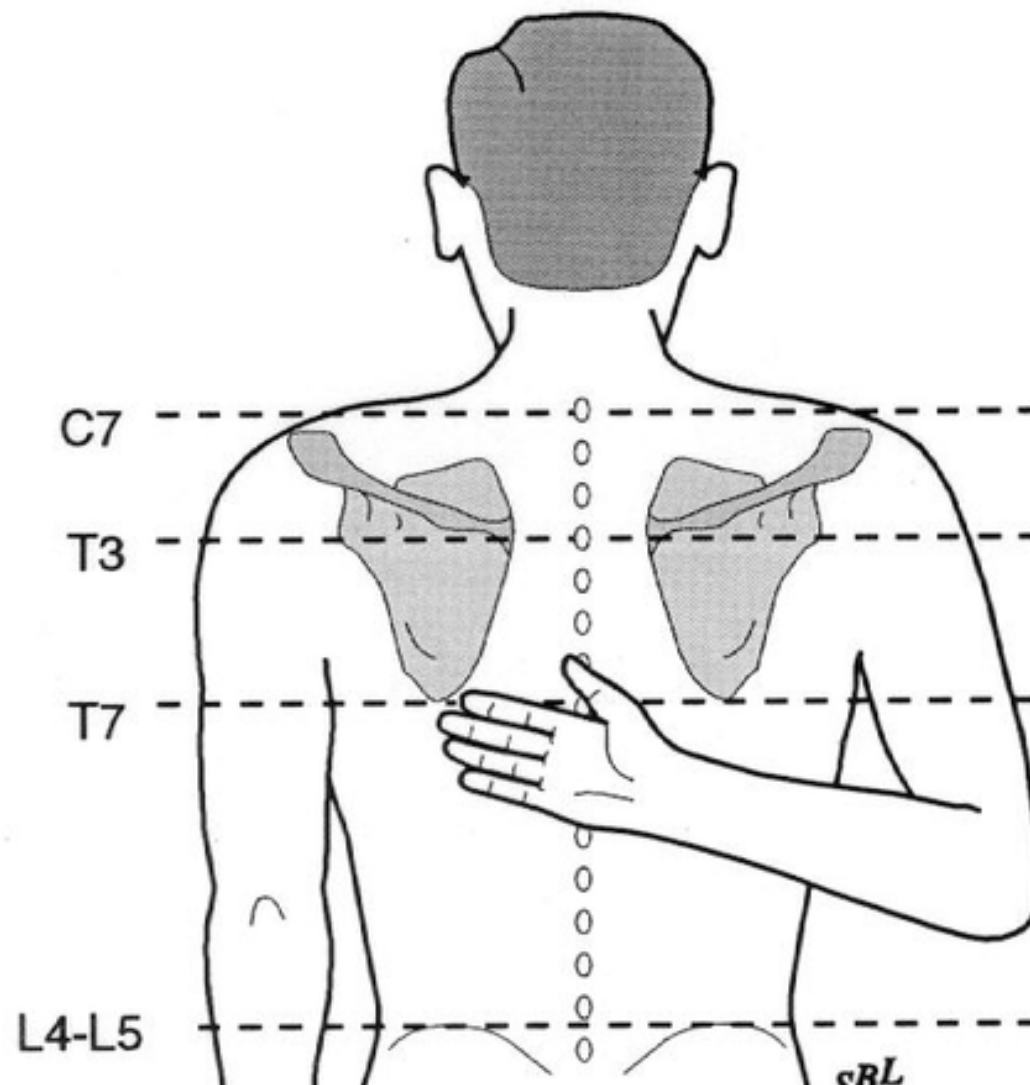


External Rotation

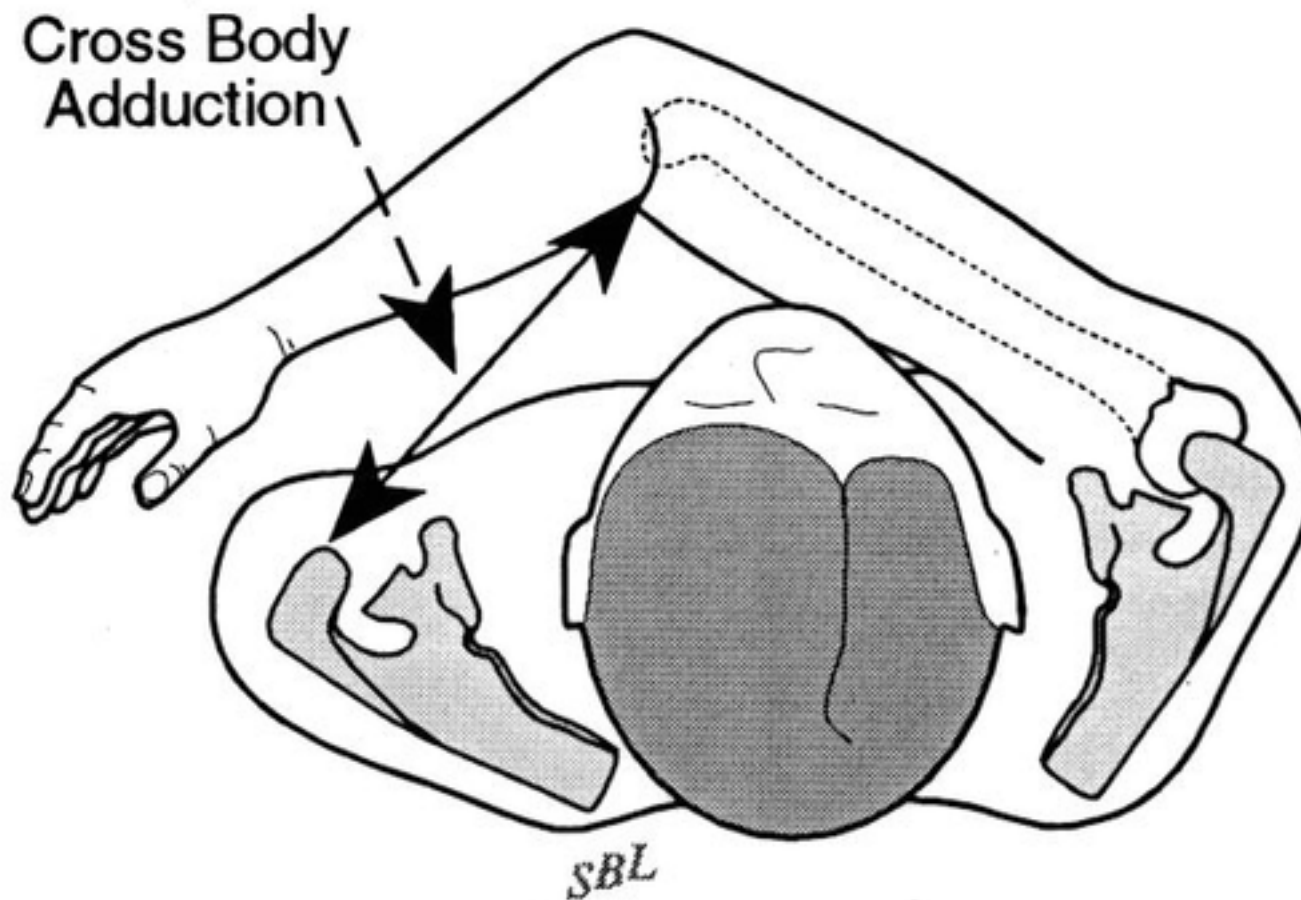




Internal rotation



Cross body



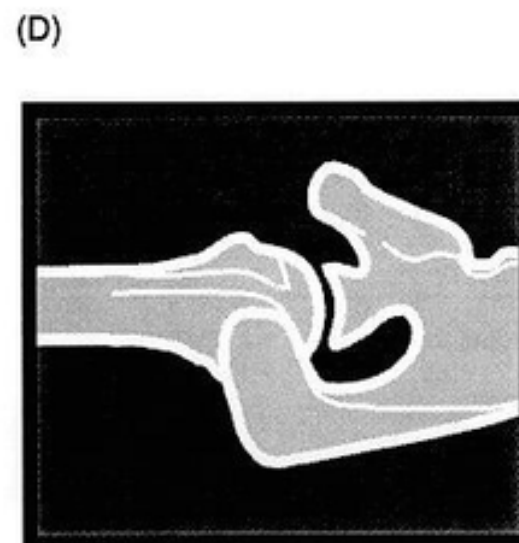
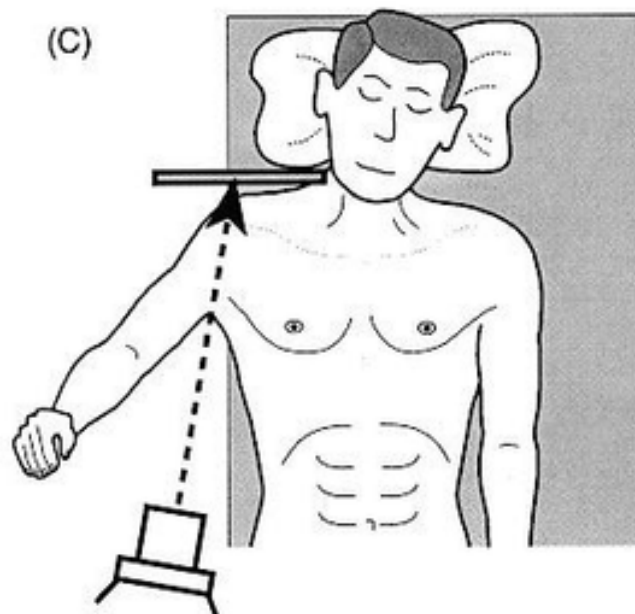
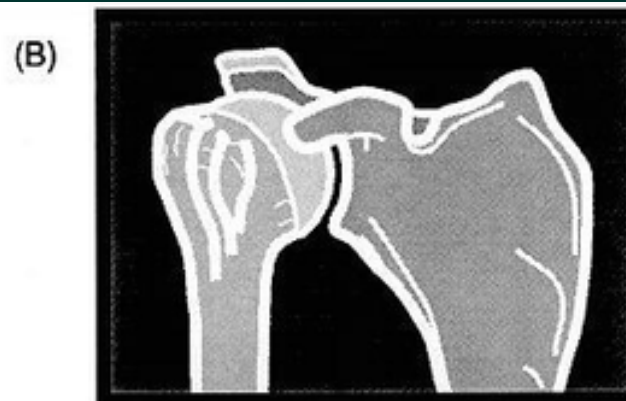
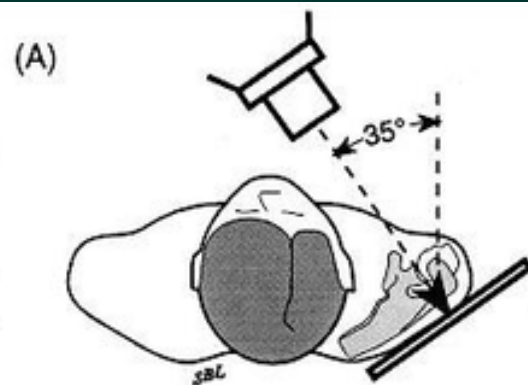


How to Work Up

- Rule out predisposing factors
 - Diabetes
 - Cervical spondylosis
 - Underlying shoulder pathology - e.g.: tumor
 - Previous trauma or surgery



Good quality films



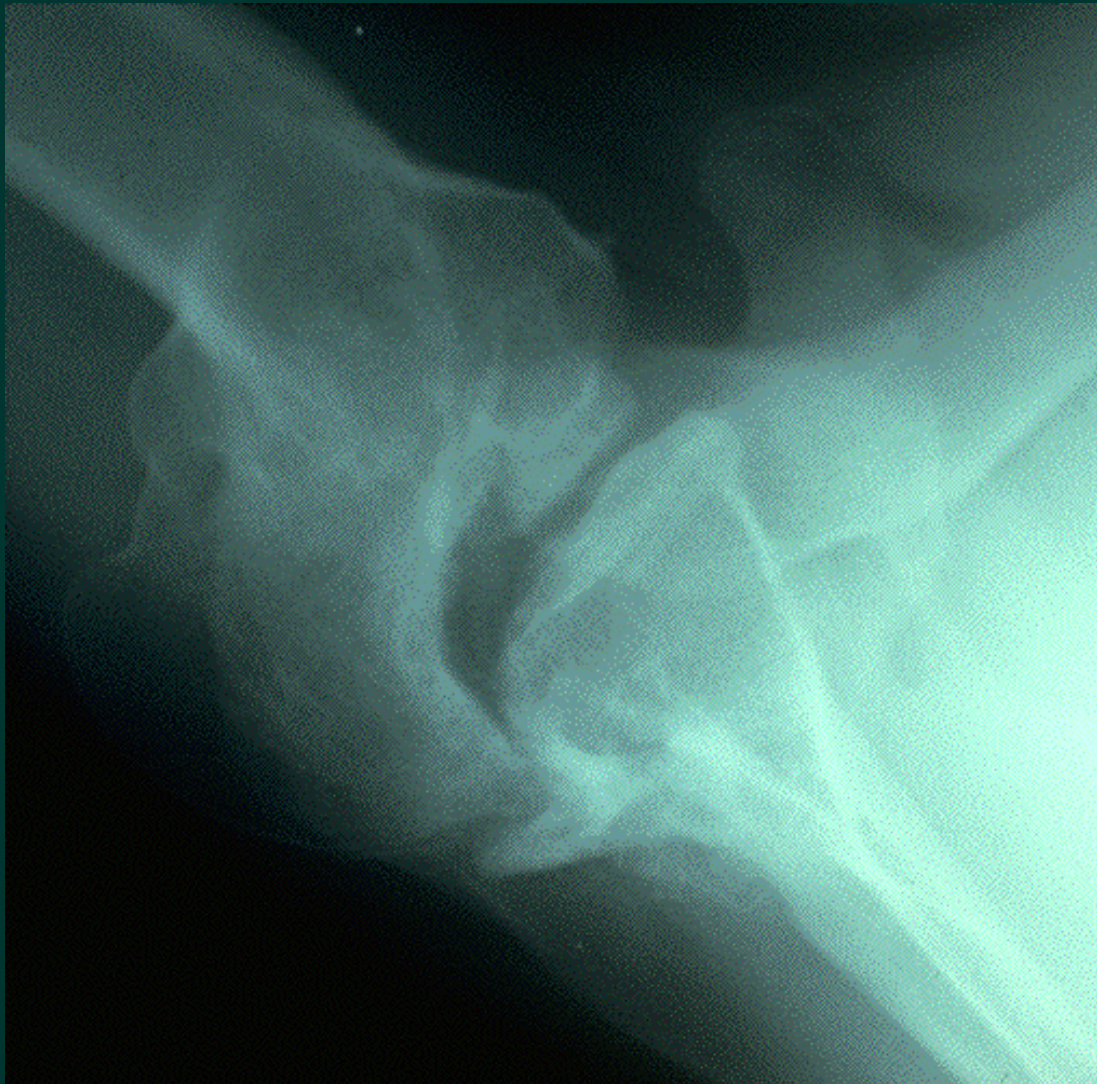


Exclude

- Fractures/Dislocations
 - Tumors
- Bony Abnormalities
 - Arthritis

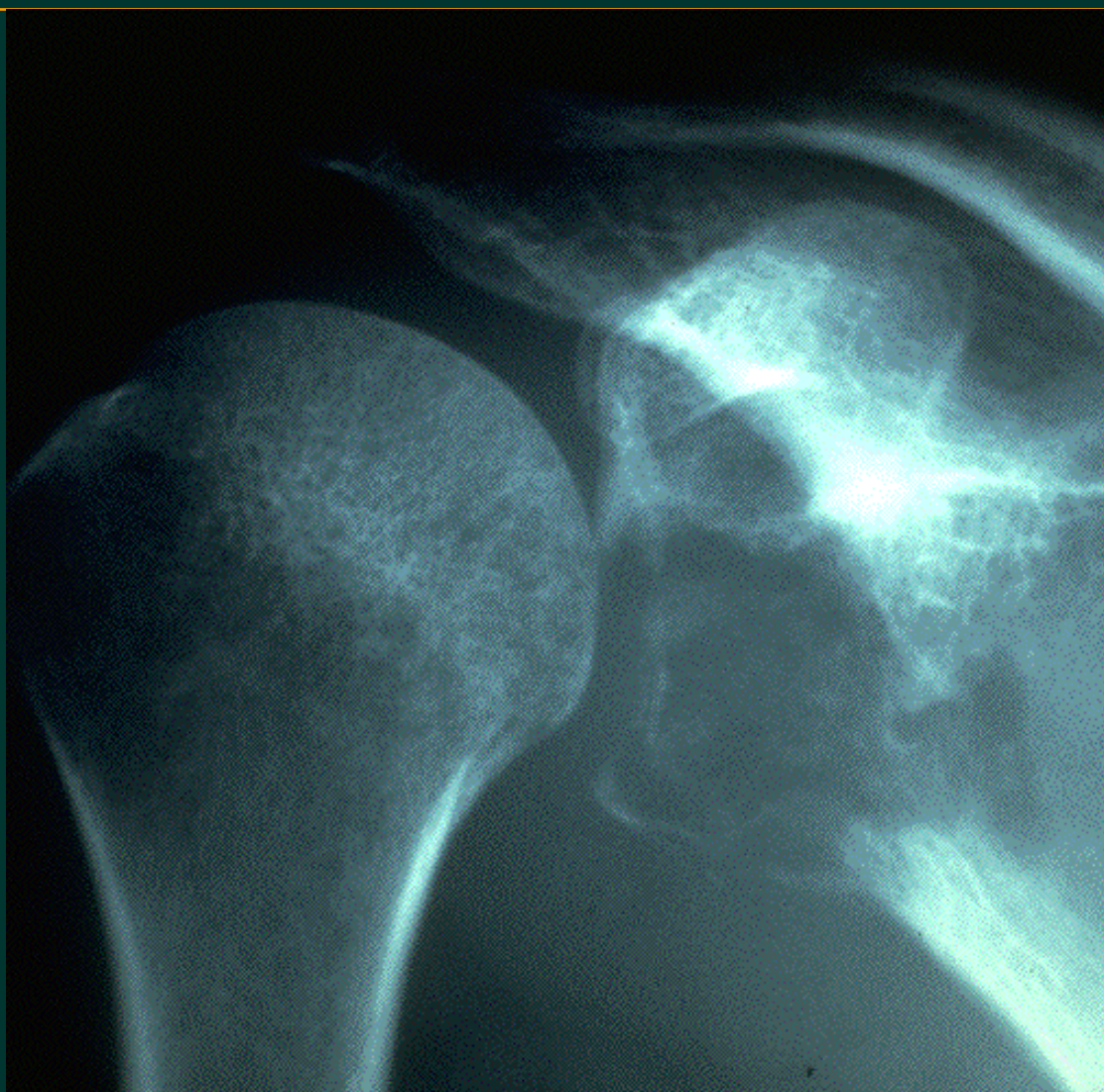


Posterior Fx/Dislocation



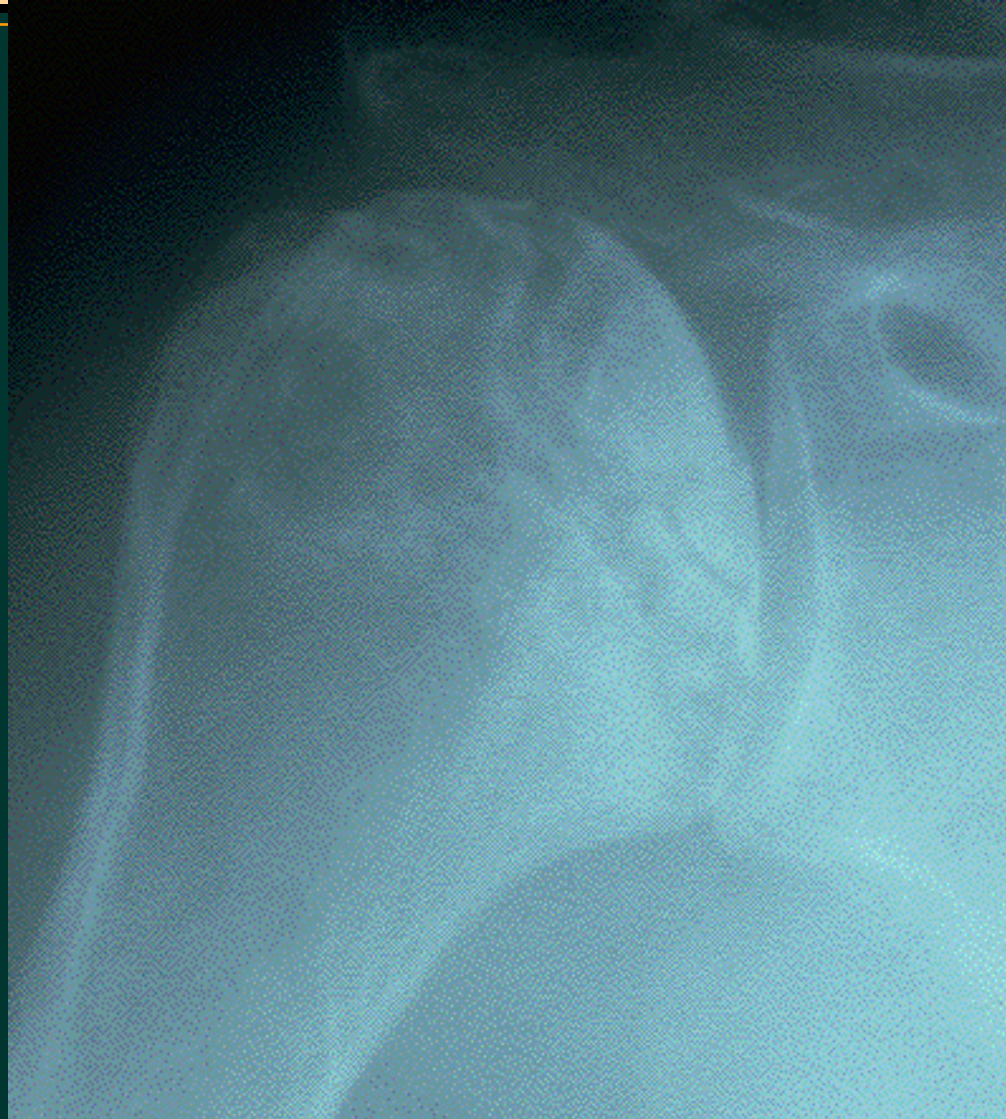


Tumor



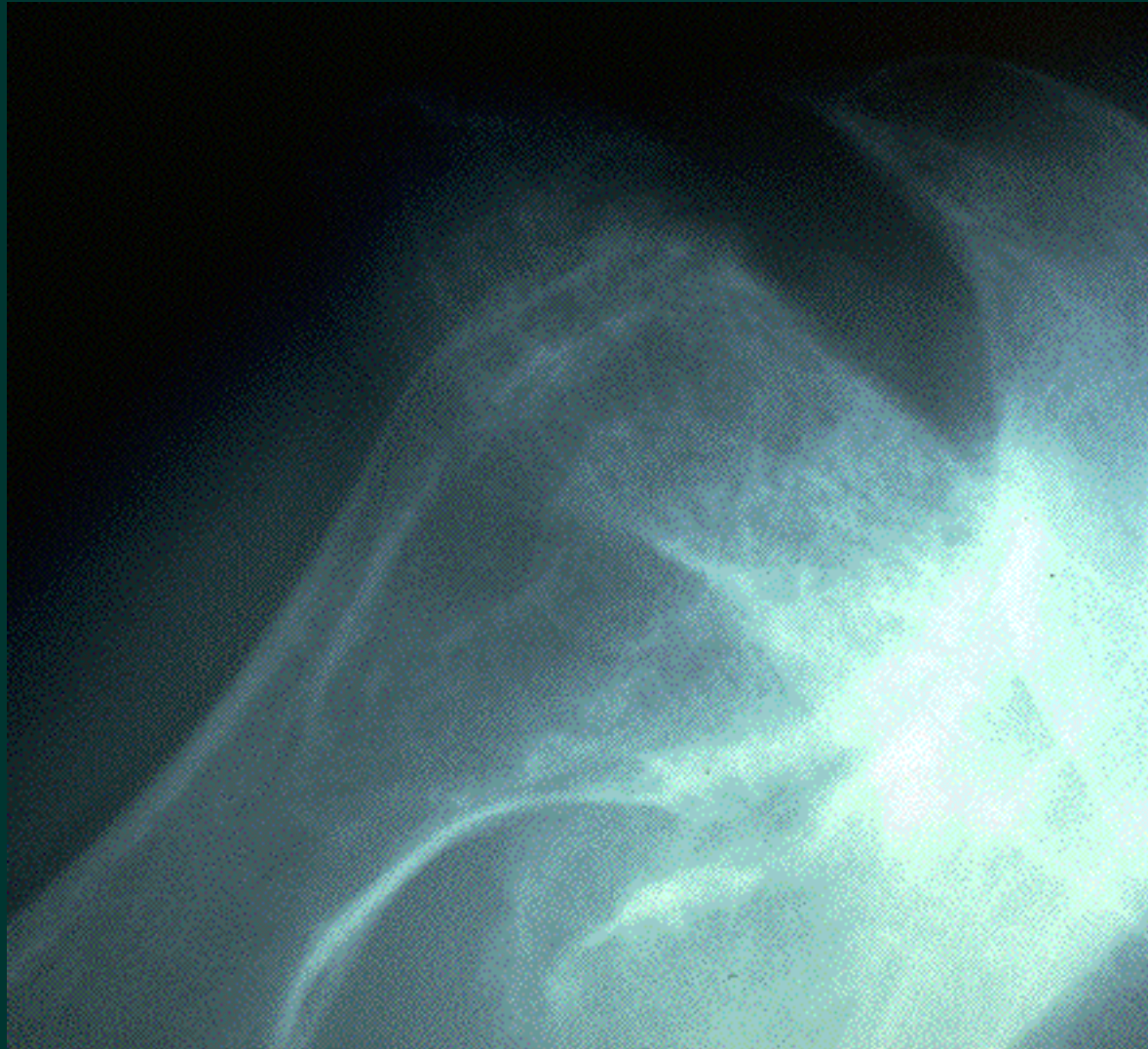


Avascular Necrosis





Rheumatoid Arthritis





ambulatory Management

Treat the PAIN!!!

NSAID's

Injections

Acupuncture

(ANYTHING But Narcotics)



ambulatory Management

**Avoid Overuse and
Bothersome Activities!!!**

Rest and Time!

No Strengthening!!!

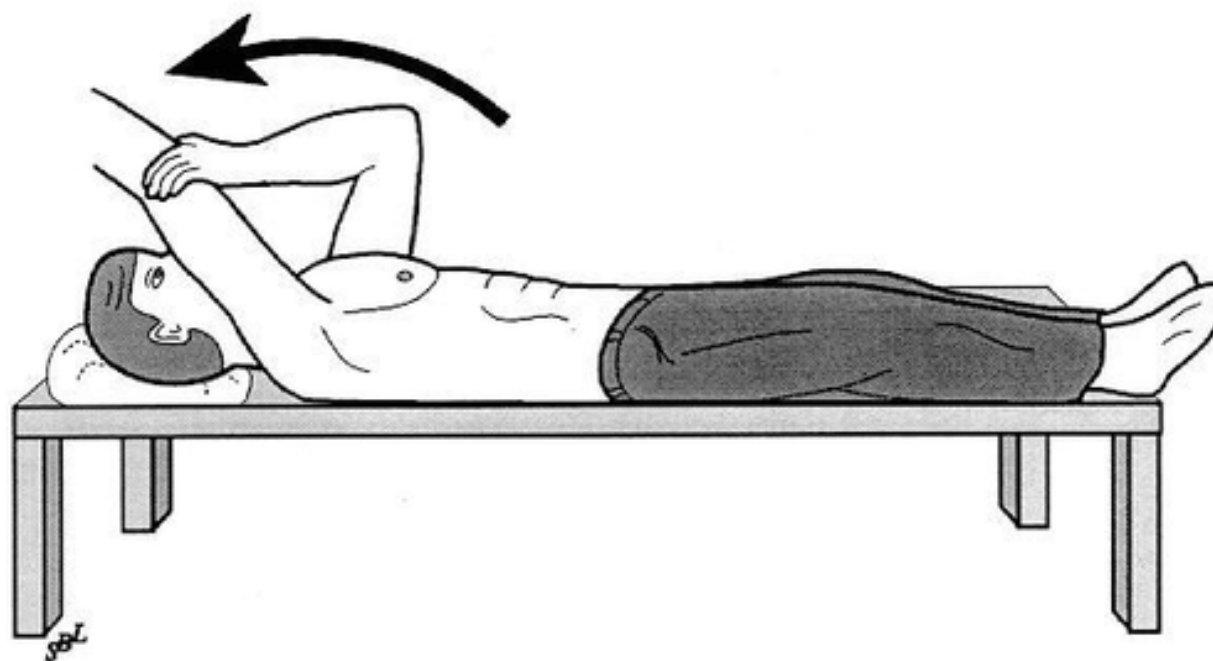


ambulatory Management

- Recognize that gentle stretching 5X/day for 6 weeks will improve most cases
- Demonstrate stretching exercises
- Return visit to check on exercises
- Monitor range of motion, symptoms



Flexion



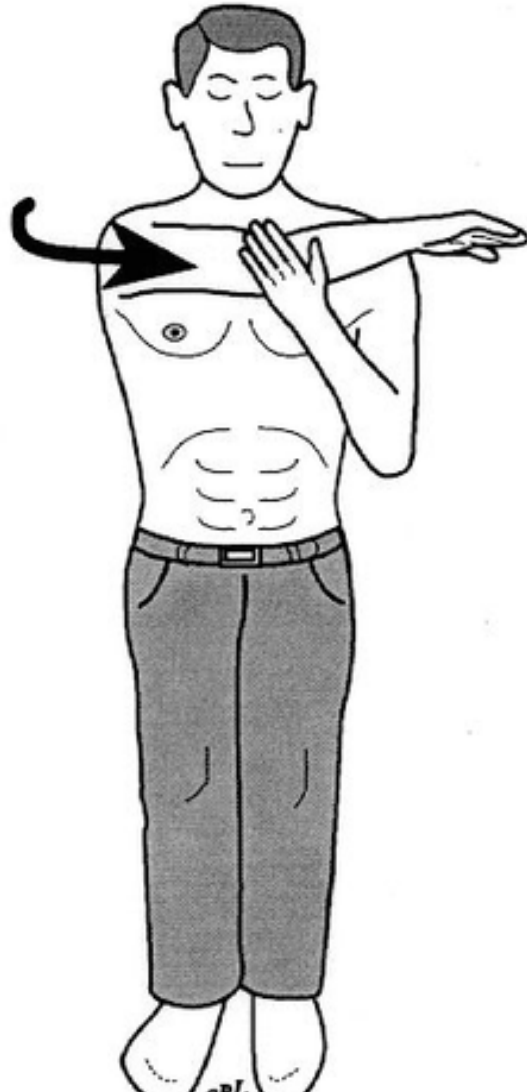
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Forward lean



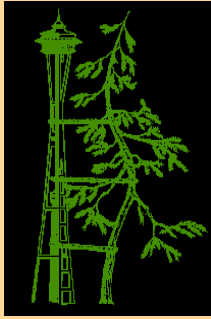
Cross-body





External rotation



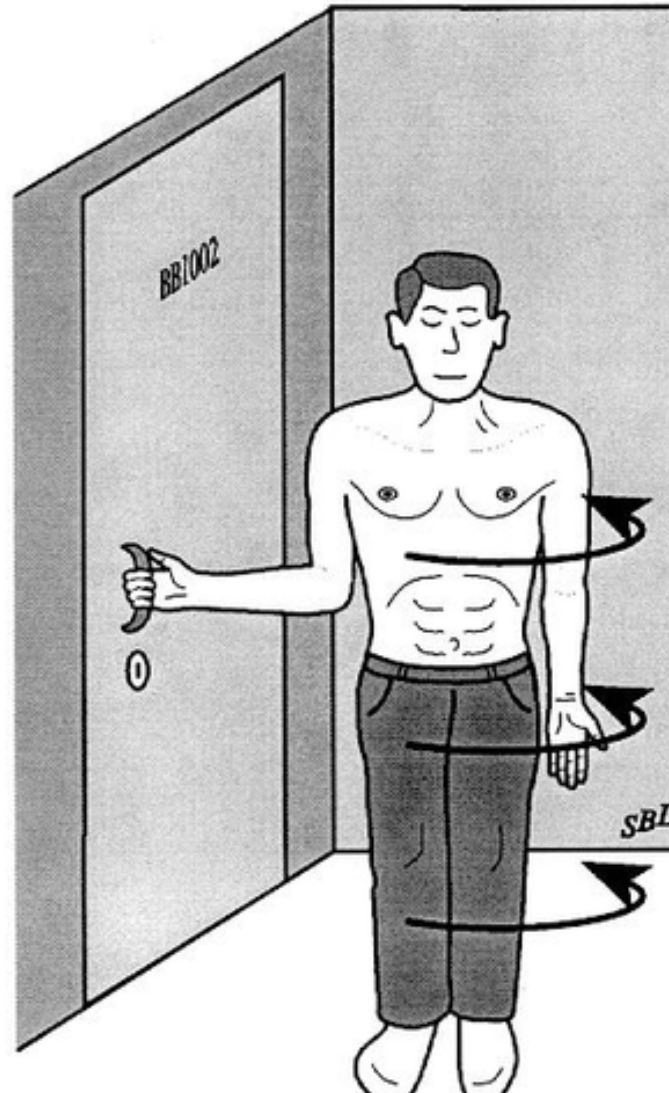


External Rotation



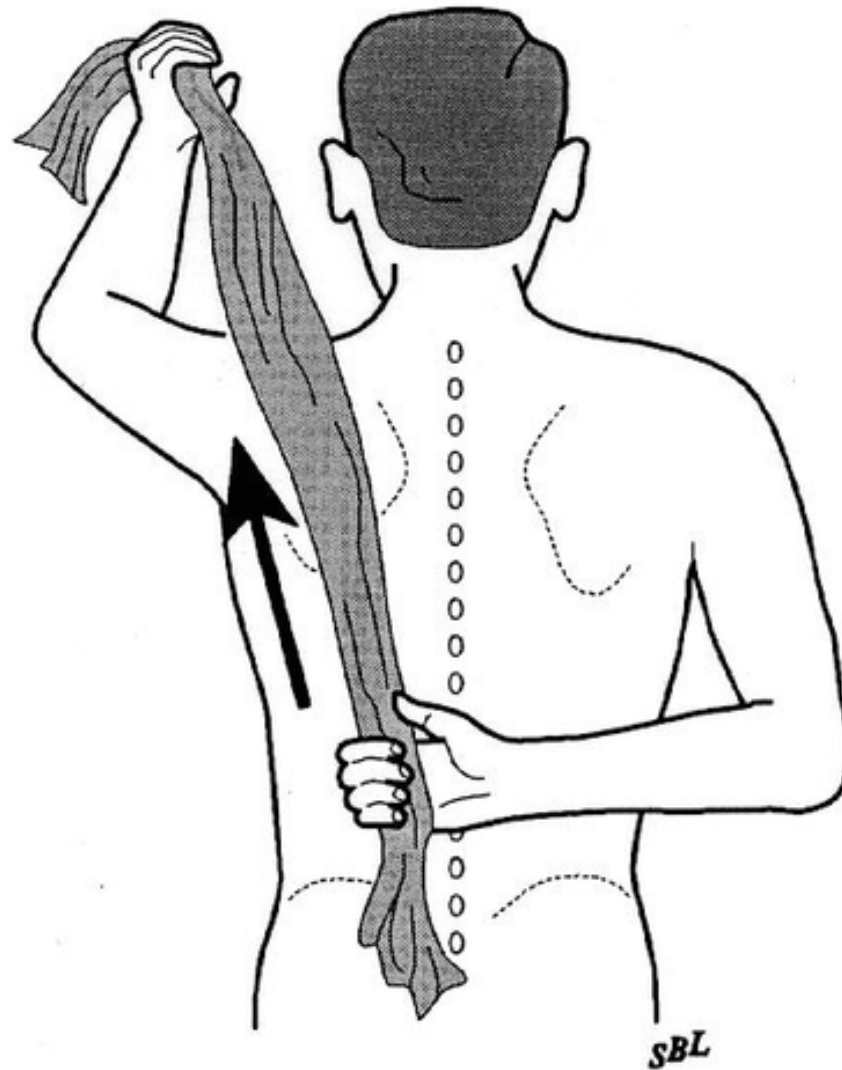


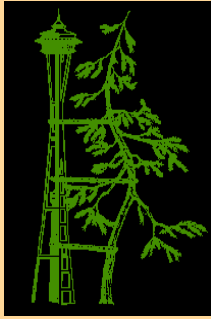
External rotation





Internal rotation



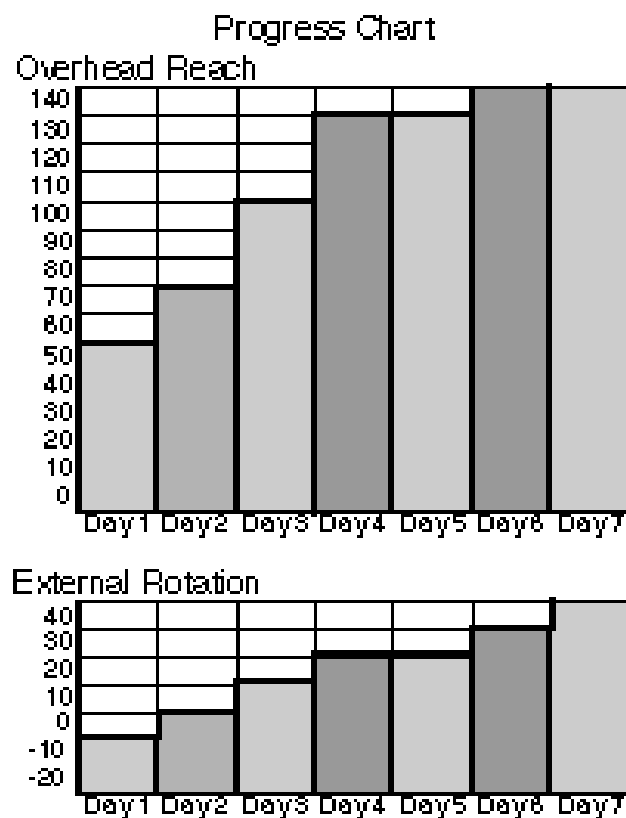


Internal Rotation





Document progress





When to Refer to Ortho

- No improvement in range of motion or symptoms after 6 - 12 weeks of exercises
- Concern about other diagnoses (e.g.: questionable X-ray)



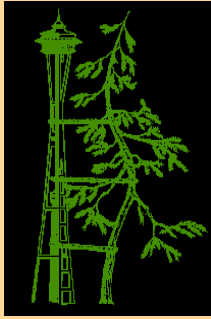
How We Treat It

- Home stretching exercises
- Regular monitoring/feedback
- Possibly exam/manipulation under anesthesia if no previous injury/surgery and bone strong
- Possibly surgical release

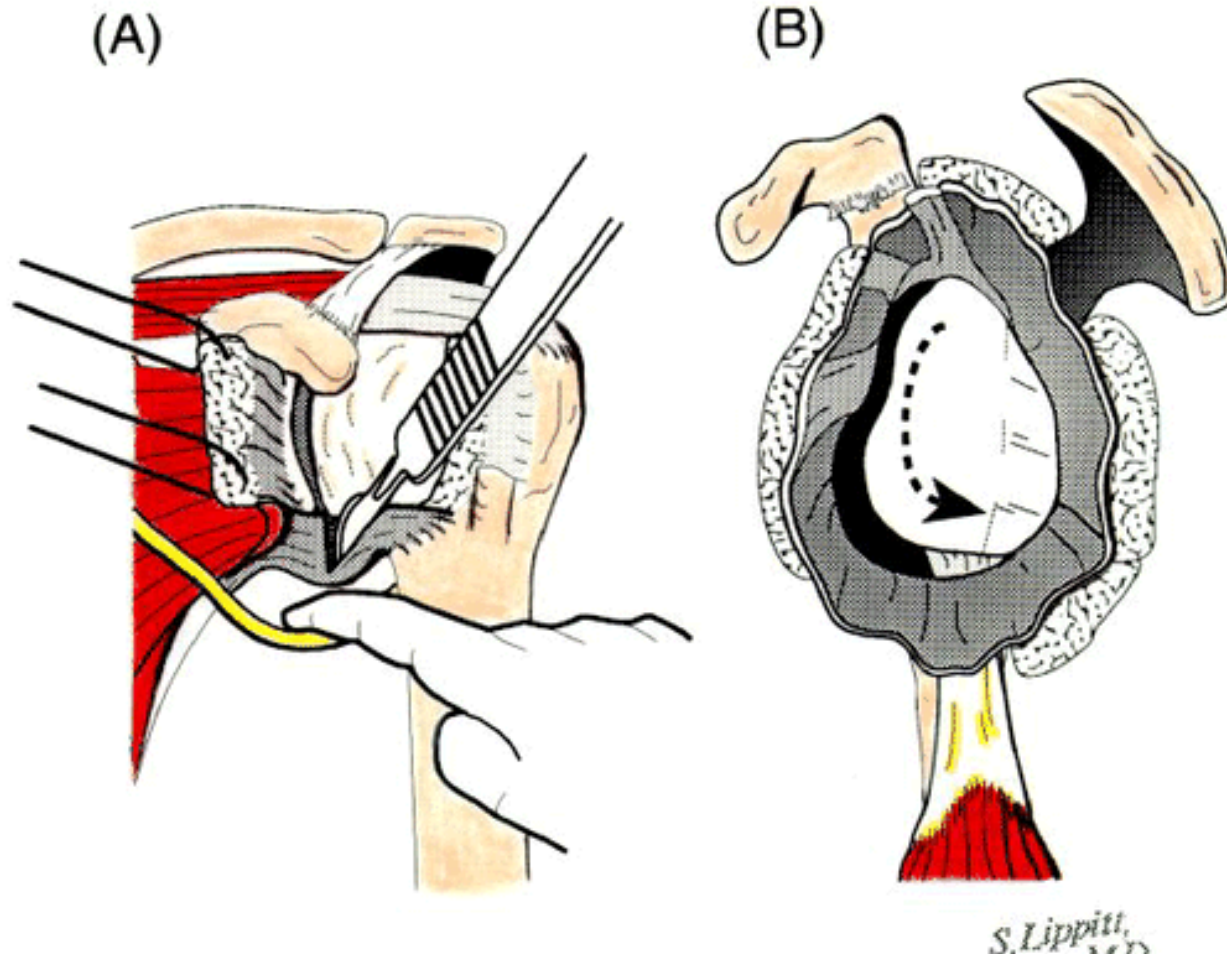


How We Treat It



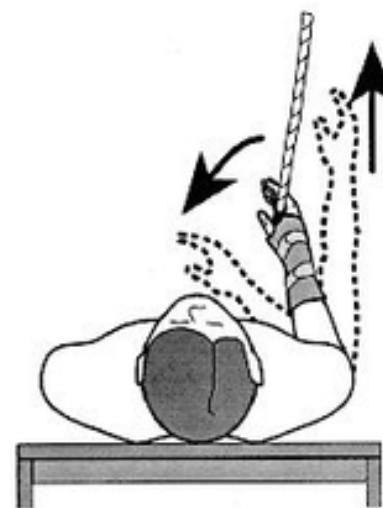
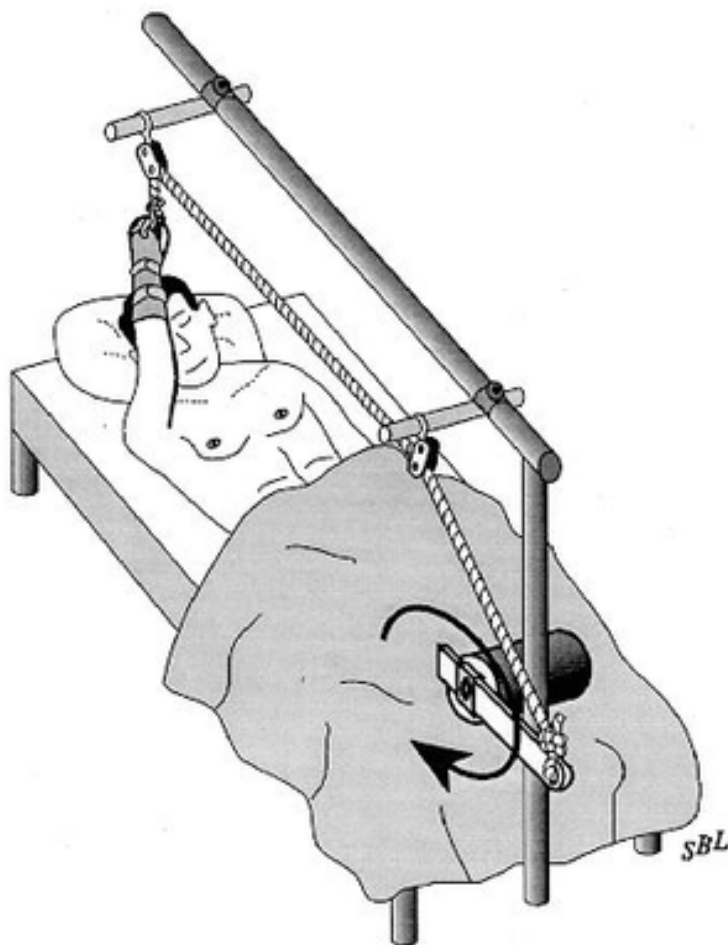


Capsular Release





Continuous Motion



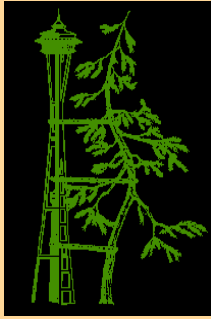
Motion provided by CPM



Outcome

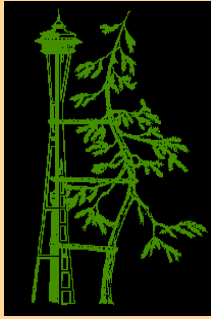
“Frozen Shoulders Thaw!”

Most do well with near complete recovery of function and relief of pain, one way or another...



“Older” Shoulders

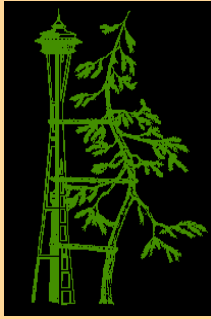
Arthritis



Shoulder Arthritis

Definition

Loss of the cartilaginous surfaces
in the glenohumeral joint



Shoulder Arthritis

Cause

Generally idiopathic,
but multiple others possible



Shoulder Arthritis

Potential Causes:

Osteoarthritis

Cuff Tear Arthropathy

Rheumatoid

Post-surgical

Arthritis

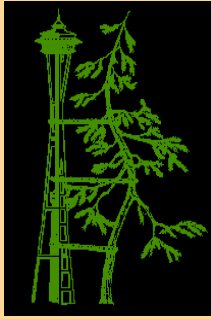
Previous Infection

Post-traumatic

Tumor

Avascular Necrosis

Spondyloarthropathy



Shoulder Arthritis

Post-traumatic
Arthritis





Shoulder Arthritis

Cuff Tear
Arthropathy





How to Recognize

Complaints

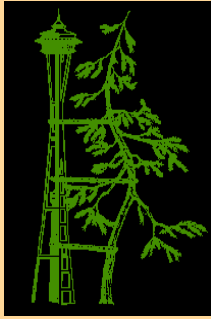
Night/rest pain, stiffness,
weakness, roughness,
functional limitation



How to Recognize

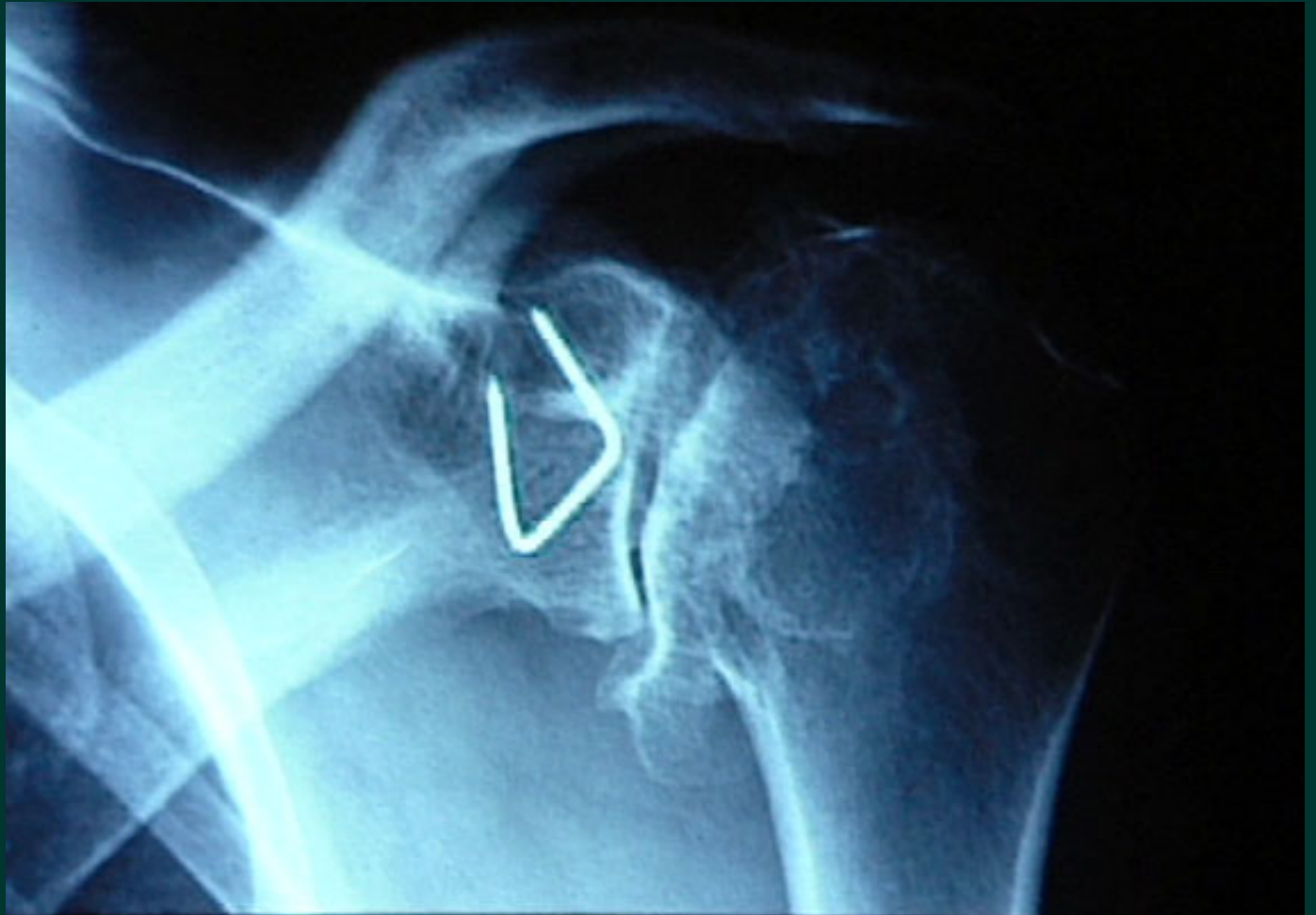
History

Insidious, progressive worsening,
possible distant injury
and/or surgery



Shoulder Arthritis

Post-surgical

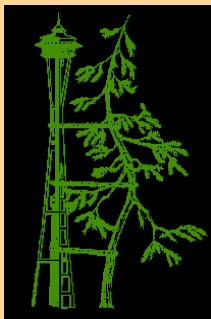




How to Work-Up

Exam

Atrophy, weakness, stiffness,
crepitation, tenderness,
rarely swelling



How to Work-Up

Stiffness



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How to Work-Up

X-ray

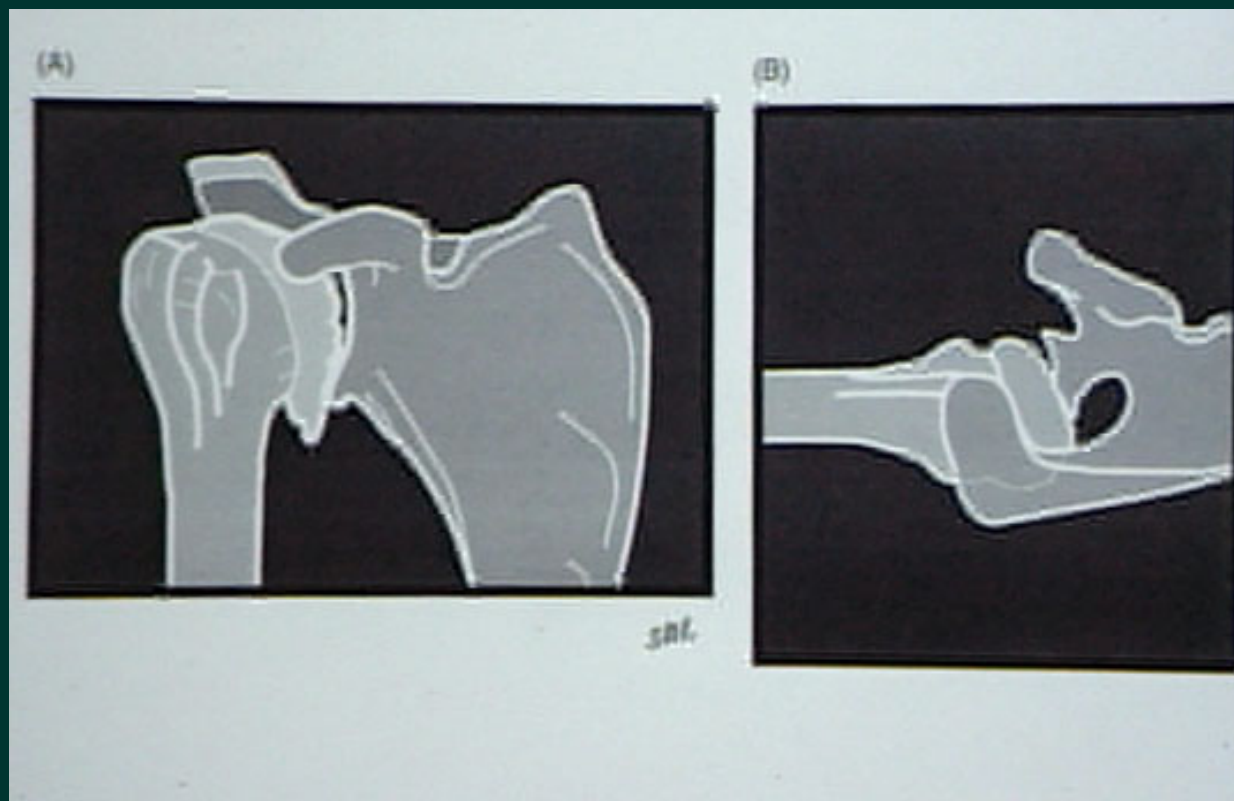
AP

Axillary Lateral



How to Work-Up

Osteoarthritis





How to Work-Up

Other Studies

Occasional CT or MRI

Labs as needed
to R/O certain dxs



Avascular Necrosis





Differential Diagnosis

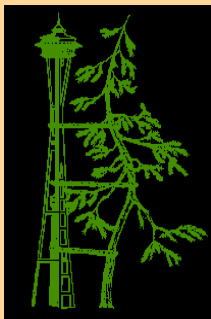
- Infection
- Charcot Joint
- Fracture of the proximal humerus
- Herniated cervical disc
- Rotator cuff tear
- Tumor



Ambulatory Treatment

Conservative

NSAID's, avoidance,
modification, passive
stretching, ice/heat, support,
possible cortisone injection (?)



Ambulatory Treatment

Passive
Stretching





When to Refer

- Failure of conservative treatment and time (at least 3 mos?)
- Severe pain, difficulty sleeping, functional limitations disabling



How We Treat It

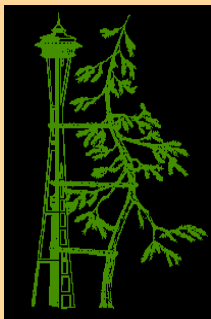
- Further conservative management
- Explanation of risks/benefits
- Surgery - Arthroscopic or open smoothing/debridement vs. hemi- or total shoulder arthroplasty/fusion



How We Treat It

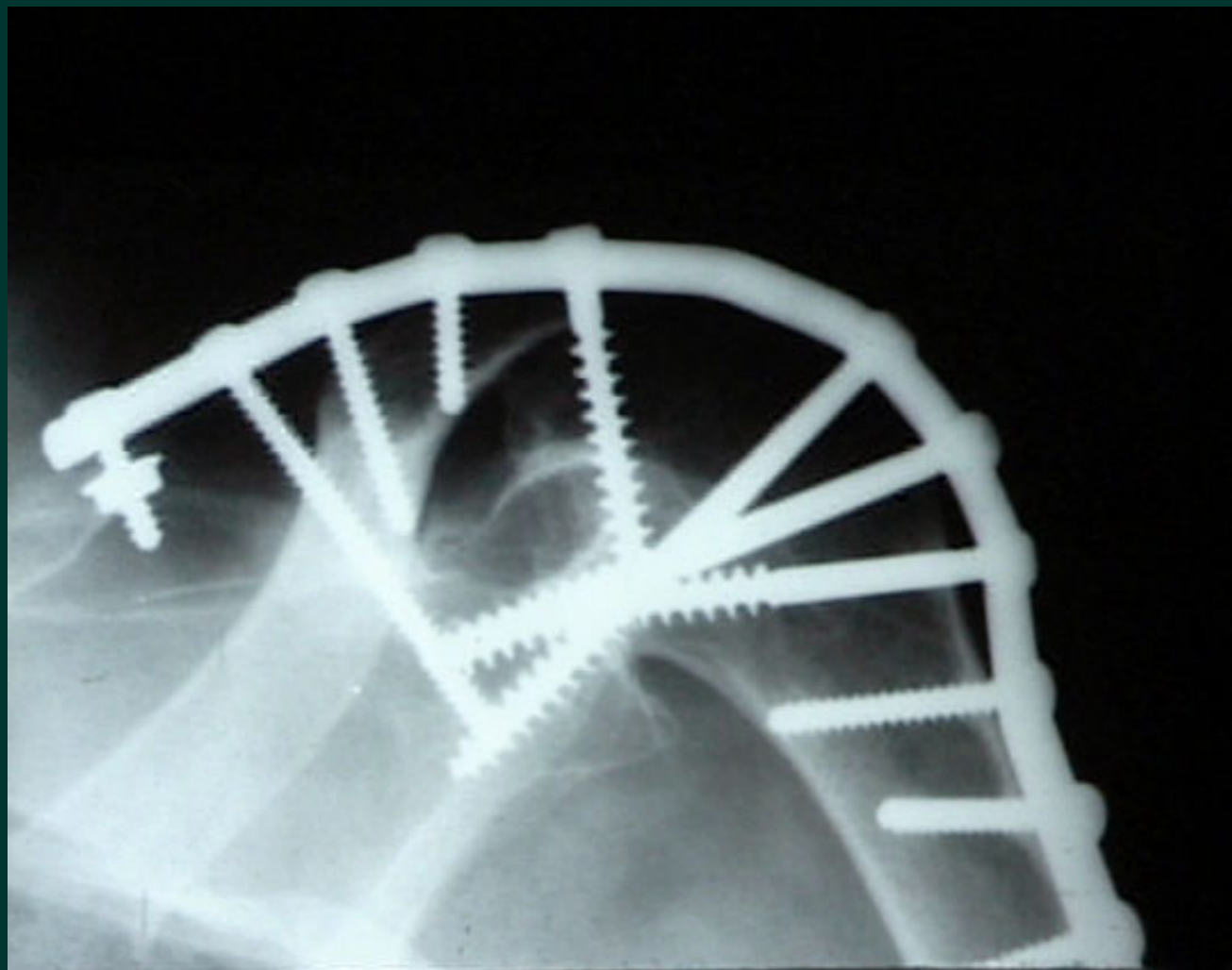
Total
Shoulder
Arthroplasty





How We Treat It

Shoulder
Arthrodesis





Outcome

Most do well extremely well
with relief of pain
and improvement of function



Shoulder Arthritis

Summary

- A challenging problem
- Can have many etiologies and be very debilitating
 - If conservative care fails, surgery can be very rewarding