Shoulder Clinical Exam:
The Sports Medicine Approach

Christina Allen, M.D.
Assistant Professor
UCSF Sports Medicine
Department of Orthopaedic Surgery
University of Calif., San Francisco
History

• What, How, When did the injury happen?
• Where does it hurt?
• Did you hear/feel a “pop?”
• Swelling?
• Locking, or inability to go through a FROM?
• Did you or the ER have to put something back in place?
Shoulder Exam-History

- Hx dislocation/trauma/fall?
- Overhead activity pain?
- Night pain?
- Weakness?
- Decreased ROM?
- Previous tx (injection, PT, NSAIDS)?
- Numbness in arms? Distribution?
- Rule out cervical spine etiology by hx and exam
# History Taking

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td>Gender: Male Female (circle) Phone #:</td>
</tr>
</tbody>
</table>

What kind of work do you do?  
SPORTS: You USUALLY Participate In  
HOURS per WEEK  WEEKS/YEAR  LEVEL  
(Choose: Competitive, Recreational, Light Recreational)  
Who referred you to this office (name of person)?  
Which hand do you write or throw with?  
Right  Left  (Circle)  

**HISTORY:**  
1. Which Shoulder is the problem?  
Right  Left  Both (Circle)  
2. When did you start to have pain?  
3. Did you have an injury?  
If so, what was the injury and when?  
4. Have you had a shoulder problem before?  
If so, what and how was it treated?  
5. Have you seen another physician for this shoulder problem?  
Who?  
6. Have you dislocated your shoulder before?  
If so, how many times?  
7. Have you had previous shoulder surgery?  
If so, what shoulder and when was it performed?  
8. Have you ever had a shoulder INJECTION?  
If so, how many times and when was the last time?  

### UCSF Sports Medicine Shoulder Questionnaire - Page 2

Do you take any medicine for your shoulder pain? (List meds)  
Do you have any NECK Pain or Problems?  
Do you have any other joint problems (arthritis in knees/hips/back)?  
Do you use crutches or a cane to walk with?  
YES  NO (Circle)  
If so, in which hand:  
RIGHT  LEFT  BOTH (circle one)  

### SYMPTOMS:  
Do you have shoulder pain at night that awakens you?  
Do you have pain ALL the time, MOST of the time, or only SOME of the time? (circle)  
Does the pain interfere with work?  
With sports?  
Does pain happen BEFORE, DURING or AFTER sports? (circle)  
What activity makes your shoulder hurt more?  
Do you have any NUMBNESS, TINGLING, or a PINS-AND-NEEDLES feeling in your arm or hand?  
Can you DRESS yourself with the painful arm?  
Have you missed any work due to this injury?  
If so, how long?
Shoulder Physical Exam

- Inspection
  - Swelling
  - Muscle atrophy
  - Shoulder position
  - Color change
  - Scapular winging
  - Scapulothoracic dyskinesis
  - Surgical scars
Shoulder Physical Exam

- Palpation
  - Greater tuberosity
  - Anterior acromion
  - Bicipital groove
  - AC joint
  - Posterior Joint line
  - Trigger points?
  - Compare both sides
Range of Motion

• Forward Flexion
• Abduction
• External Rotation
• Internal Rotation
• Check for both passive and active motion!
Shoulder Physical Exam

• **Motion- Test Active AND Passive**
  – Forward flexion
  – Abduction
  – External rotation (0 and 90)
  – Internal rotation (0 and 90)

• **Check them supine to eliminate gravity and reduce guarding due to pain if you’re not sure…**
Range of motion

• If there’s loss of motion:

• Active = passive
  – Joint contracture
  – Physical/structural block
  – Guarding

• Passive > active
  – Pain
  – Weakness

• Check them supine to eliminate gravity and reduce guarding due to pain if you’re not sure...
Strength

- Abduction
  - Supraspinatus
- External rotators
  - Teres minor
  - Infraspinatus
- Internal rotators
  - Subscapularis
Shoulder Physical Exam

• Strength Testing- check both sides and look for asymmetry
  – Full can (thumbs up/ER) vs. empty can (thumbs down/IR) (supraspinatus)
  – Ext. rotation at 90 (supraspinatus/infra)
  – Ext. rotation at 0 (teres minor, infraspinatus)
  – Belly press and Gerber’s lift-off test (subscapularis)
Supraspinatus

- Forward flexion 20-30 deg
- Abduction 90 deg
- Thumbs up
- Isolate supraspinatus muscle activity
- Resisted abduction
Supraspinatus Tests

“Full Can” > “Empty Can”
Supraspinatus Tests
External rotators

- Arms at the side
- Elbows flexed
- Resisted external rotation
- Infraspinatus
- Teres minor
Infraspinatus/Teres Minor Test
Subscapularis Tests

Gerber’s “Lift-Off” Test

Belly Press
Lift-off Test

- Arm internally rotated
- Lift arm off the back
- If unable to maintain position
  - Positive lift-off sign
- Make sure pt is not extending elbow
Belly-press sign

- For pt that are unable to internally rotate their arm to their back
- Palms on belly
- Bring both elbows forward
- Resisted elbow forward flexion
- Not good to isolated superior fibers of subscapularis
Shoulder Physical Exam

• Provocative tests
  – Impingement Sign (Neer’s Test): pain with forced forward elevation of humerus against acromion
  – Impingement Test: relief of pain after subacromial lidocaine injection
  – Hawkin’s sign
  – Jobe’s sign (pain or weakness)
  – Hornblower’s sign (severe supraspinatus weakness)
  – Drop arm test
Hawkin’s and Neer’s Signs
AC arthritis/injury

- Pain with palpation
- Pain with cross chest adduction tests
- Pain located at the AC joint
Shoulder Physical Exam

• Other Provocative tests
  – Biceps/Labrum
    • O’Brien’s test
    • Speed’s
    • Yergason’s
Superior Labrum Anterior Posterior Lesion

- O’ Brien’s Test
- Adduction 15-20 deg
- Forward Flexion 90 deg
- Thumbs down
- Resisted forward flexion
- Positive test only when:
  - Pain with the above position
  - Pain diminishes when palm is supinated
  - Pain is deep- not greater tuberosity or A/C joint
  - Otherwise equivocal test
Shoulder Physical Exam

• Other Provocative tests
  – Instability tests
  • Relocation, Apprehension, Drawer tests
Stability examination

- Translational tests
  - Anterior translation
  - Posterior translation
- Grading
  - I – to the rim not over
  - II – over the rim but spontaneously reduce
  - III – locked dislocation
- Inferior Translation
  - Measured by dimpling or Sulcus-Centimeters

**BEWARE OF VOLUNTEER DISLOCATORS !!!**
Load and Shift test

• Slight joint compression
• Anterior / posterior translation
• Inferior pull for sulcus sign; sulcus should decrease with Shoulder ER, otherwise pathologic
• Make sure the patient is relaxed!
Instability tests

• Apprehension sign
  – Arm 90 deg abducted, 90 deg external rotation
  – Dislocation position for anterior instability

• Relocation sign
  – Relief of intraarticular pain and apprehension with a posteriorly directed force
  – May also be a sign for a SLAP lesion

• Circumduction Test
  – “Backstroke maneuver”
  – Humeral head starts posterior and reduces/clunks anteriorly as get to Full Forward Flexion
  – Sign of Posterior instability

• ‘Jerk’ Test
  – Posteriorly directed force of the shoulder
  – Pain with posterior instability
Physical examination

• Examine the cervical spine
  – Referred pain!!
  – Range of motion
  – Strength
• Examine distal motor strength
  – Peripheral nerve examination
• Remember zebras
  – Pain out of proportion
    • Lung CA – Pancoast tumor
Radiographic Studies

- Disease pathology
  - Impingement
  - Cuff tear arthropathy
  - RA
  - OA
  - Dislocation (posterior)
XRays

Normal

Ant Disloc

Normal???
Radiographic studies

- AP of GH joint
- Axillary lateral
- Supraspinatus outlet view
- AP of AC joint
- Weight bearing view of shoulder
Weight-bearing view of Shoulder

- Weighted abduction
  - 45-60 deg abduction
  - 1 pound weight
  - AP of GH joint
  - 1 # weight
MRI

- RULE #1- LOOK AT XRAYS FIRST!!!
- RULE #2- don’t bother with an MRI if the patient doesn’t want surgery
- Helpful to evaluate cuff integrity
- Quality of muscle
  - Fatty infiltration
  - Retracted tear
- Labral pathology
- RULE #3: GET AN MRA (Arthrogram) for young patients and especially for instability evaluations.
MRA

- Labral pathology
- Small Cuff tears (young patients)