

UMass Sports and Exercise Medicine: Shoulder Exam



Emily J Eshleman, DO, SM, CAQSM

Lee A. Mancini, MD, CAQSM, FAAFP, CSCS*D, CSN

Chief, Division of Sports and Exercise Medicine

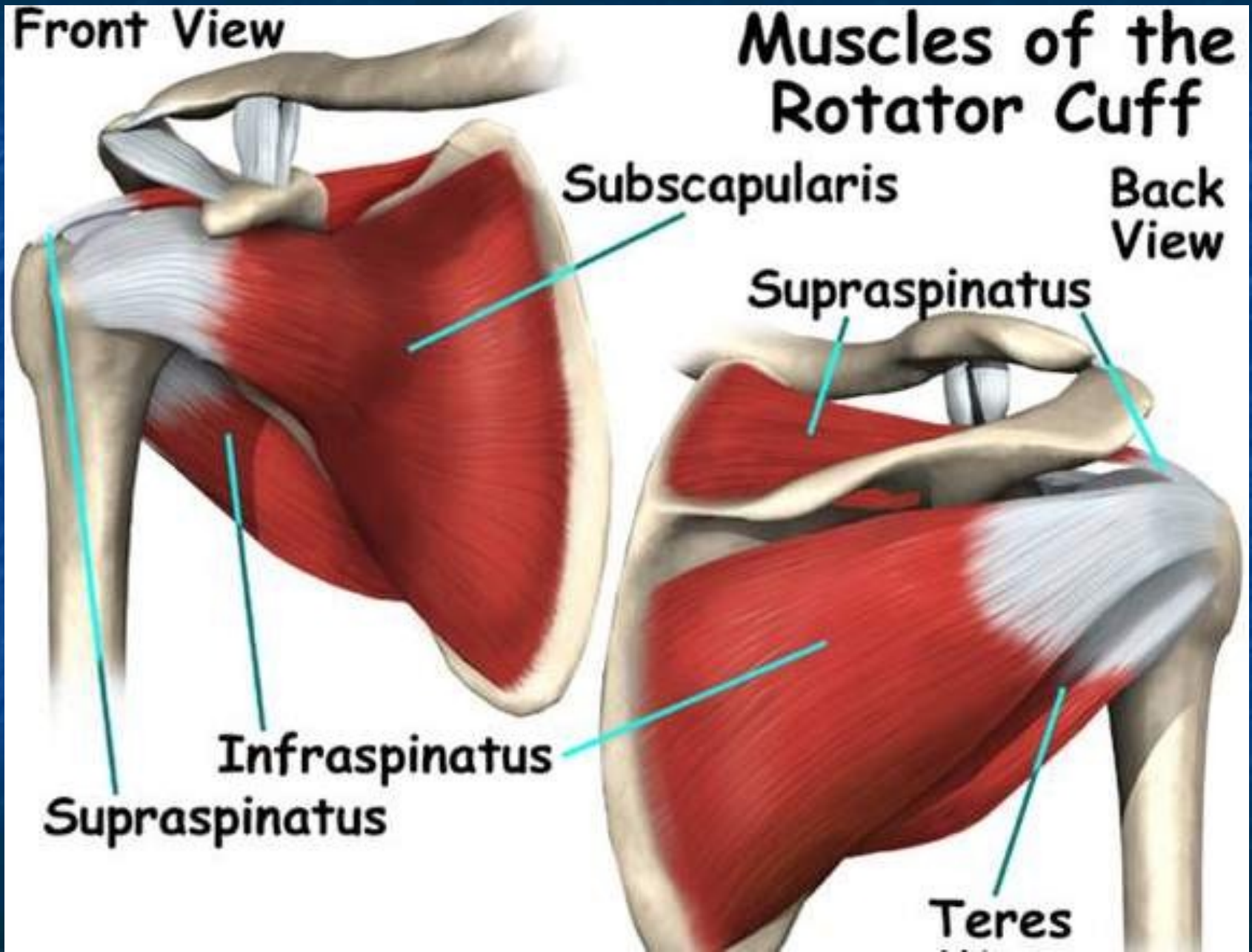
Director, UMass Primary Care Sports and Exercise Medicine Fellowship

Associate Professor University of Massachusetts Medical School

Certified Strength & Conditioning Coach with Distinction

Certified Sports Nutritionist

Shoulder Exam



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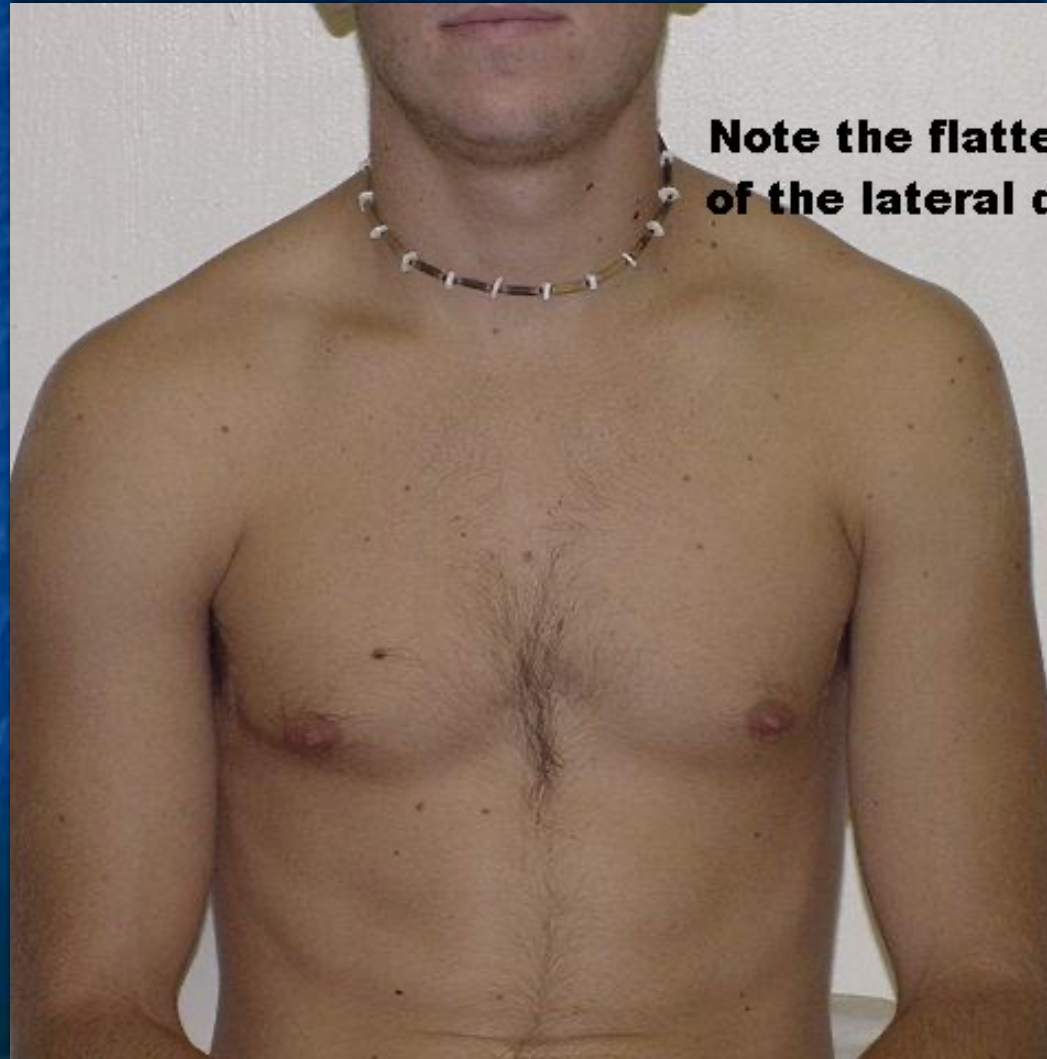
- **Inspection**
 - Atrophy, winging, deformity
- **Palpation**
 - AC, Sub-acromial, biceps, para-scapula
- **ROM**
 - abduction, flexion, internal/external rotation
- **Strength**
 - Scaption/Empty Can/Jobe's: Supraspinatus
 - External Rotation: Infraspinatus and Teres Minor
 - Internal Rotation: Sub-Scapularis
- **Impingement**
 - Neer and Hawkin's Test

Special Tests

- **Laxity**
 - Apprehension / Relocation / Surprise Test
 - Sulcus Sign
 - Load and Shift Test
- **Biceps Tendon**
 - Speed's Test
- **Labral Exam**
 - O'Brien's Test
- **AC Joint**
 - Crossover Arm Test / Scarf Test
- **Scapula Exam**
 - Wall Push-up

Inspection

- Inspection
 - deformity/atrophy/winging
- Atrophy
 - Supraspinatus, Infraspinatus, Deltoid, Biceps
 - Neurogenic vs. Muscle Injury
- Scapulo-Humeral Rhythm
 - Normal 2 to 1 rotation ratio
 - 120 degrees motion gleno-humeral joint
 - 60 degrees motion scapula-thoracic joint
 - Reverse Scapulo-humeral Rhythm

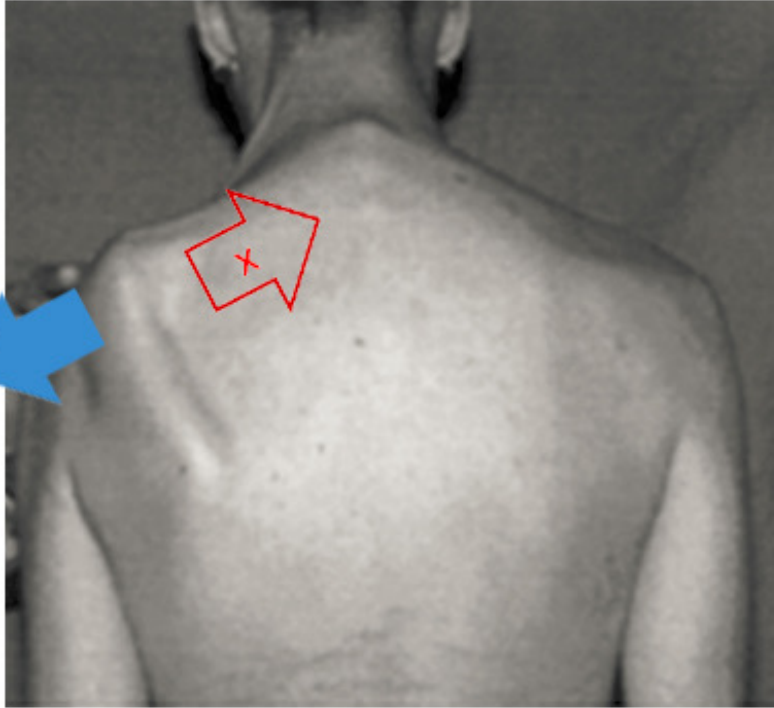


Inspection

- Shoulder Height
 - Dominant lower than non-dominant
- Winging: determined by position of medial border of scapular
 - Static vs. Dynamic
 - Medial Boarder
 - Medial winging:
 - serratus anterior (long thoracic n)
 - Lateral winging:
 - Trapezius (spinal accessory n)
 - OR rhomboids (dorsal scapular n)

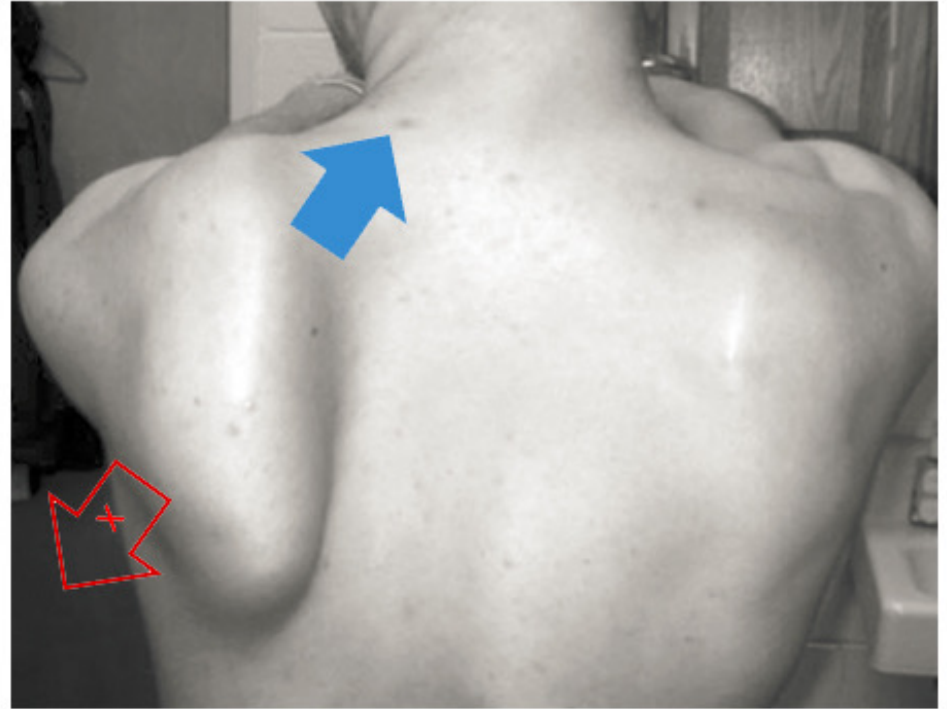


Lateral Scapular Winging



Absent pull of trapezius due to Spinal Assessorary Nerve palsy

Medial Scapular Winging



Absent pull of serratus anterior due to Long Thoracic Nerve palsy

Scapula Exam



ROM

- Flexion, Abduction, Internal Rotation, External Rotation
- Internal to External Rotation
 - Loss of internal ROM impingement
 - Increased external and loss internal ROM overhead athletes

- Scaption vs. Abduction
- Painful Arc
 - 60-120 degrees glenohumeral painful arc
 - 160-180 degrees AC painful arc



Shoulder Flexion & Extension

- Forward Flexion is moving the arm FORWARD
- Rear Extension (like reaching for you wallet) extending behind you



Strength Testing - Supraspinatus

- Jobe's/Empty Can
 - Isolates mostly Supraspinatus
 - Resisted Abduction in plane of scapula
 - (+) Pain/weakness more significant than pain alone
 - Sens 84-89%; Spec 50-58% (level 1B) tears
- (level 2B) tears



Strength Testing – Infraspinatus & Teres Minor

- External Rotation/Patte's Test
 - Isolates Infraspinatus/Teres Minor
 - (+) Pain/weakness more significant than pain alone
 - Sens 70%; Spec 90% (level 2B) lesions
 - Sens 70%; Spec 90% (level 2B) tears



Strength Testing: Sub-Scapularis

- Lift-Off Test
 - Seated with manual resisted internal rotation behind back
 - (+) Pain/weakness more significant than pain alone
 - Sens. 62% Spec. 100% (level 2B)



Impingement Tests – Neer's Test

- Neer's Test
 - Passive internal rotation with forward flexion 180 degrees
 - (+) Recreates Pain (not at AC Joint)
 - Sens. 83-89% Spec. 31-51% (level 1B)



Impingement Tests – Hawkin's Test

- Hawkin's Test
 - Passive forward flexion with elbow 90 degrees and then internal rotation
 - (+) Recreates Pain (not at AC Joint)
 - Sens. 87-89% Spec. 60% (level 1B)



Labral Exam – O'Brien's Test

- Active Compression Test/O'Brien's Test (anterior)
- Tenderness (anterior)



TABLE 2

Use of history and physical examination to diagnose shoulder pain

History or maneuver	Study quality (1A–5)*	Sensitivity	Specificity	LR+	LR–	PV+	PV–
Rotator cuff tear							
History of trauma ¹⁹	2B	36	73	1.3	0.88	72	37
Night pain ¹⁹	2B	88	20	1.1	0.6	70	43
Painful arc ¹⁷	2B	33	81	1.7	0.83	81	33
Empty can test ^{18,20,21}	1B	84–89	50–58	1.7–2	0.22–0.28	36–98	22–93
Drop sign ²¹	1B	21	100	>25	0.79	100	32
Lift off test (for subscapularis tears) ²¹	1B	62	100	>25	0.38	100	69
Impingement							
Hawkin's test ^{20,22}	1B	87–89	60	2.2	0.18	71	83
Instability							
Relocation test ²³	2B	57	100	>25	0.43	100	73
Augmented apprehension ²³	2B	68	100	>25	0.32	100	78
Labral tear							
Crank test ²⁴	2B	91	93	13	0.10	94	90
Active compression test ²⁵	1B	100	99	>25	0.01	95	100
Acromioclavicular joint							
Active compression test ²⁵	1B	100	97	>25	0.01	89	100

*Based on the guidelines for evidence quality outlined by the Center for Evidence-Based Medicine (<http://163.1.96.10/docs/levels.html>).

LR+ = positive likelihood ratio; LR– = negative likelihood ratio; PV+ = positive predictive value; PV– = negative predictive value.

Thank You...Any Questions?

