

The University of Jordan
Faculty Of Medicine



Muscles connecting Scapula with Humerus (Muscles of the shoulder)

By

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Muscles connecting Scapula with Humerus (Muscles of the shoulder)

Clinical Anatomy by Regions 9th ed. - R. Snell (Lippincott,2012 chapter 9 / page 349)

Learning Objectives

- 1-Identify shoulder muscles
- 2-Know shoulder movements
- 3- Identify Rotator cuff muscles
- 3- Know subacromial bursa

Deltoid tuberosity






Shoulder Muscles

1. Deltoid
2. Supraspinatus
3. Infraspinatus
4. Teres minor
5. Teres Major
6. Subscapularis

Right Clavicle - Muscle Attachments

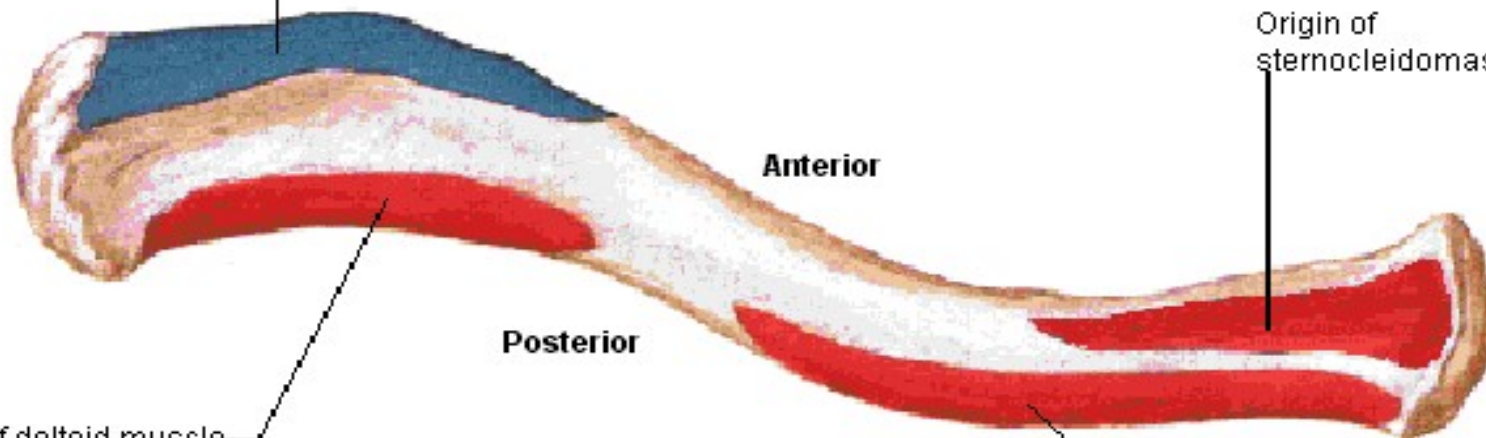
Snapped with HyperSnap-DX
<http://www.hyperionics.com>

-  **Muscle insertions**
-  **Muscle origins**
-  **Ligament attachments**

Insertion of trapezius muscle

Superior surface

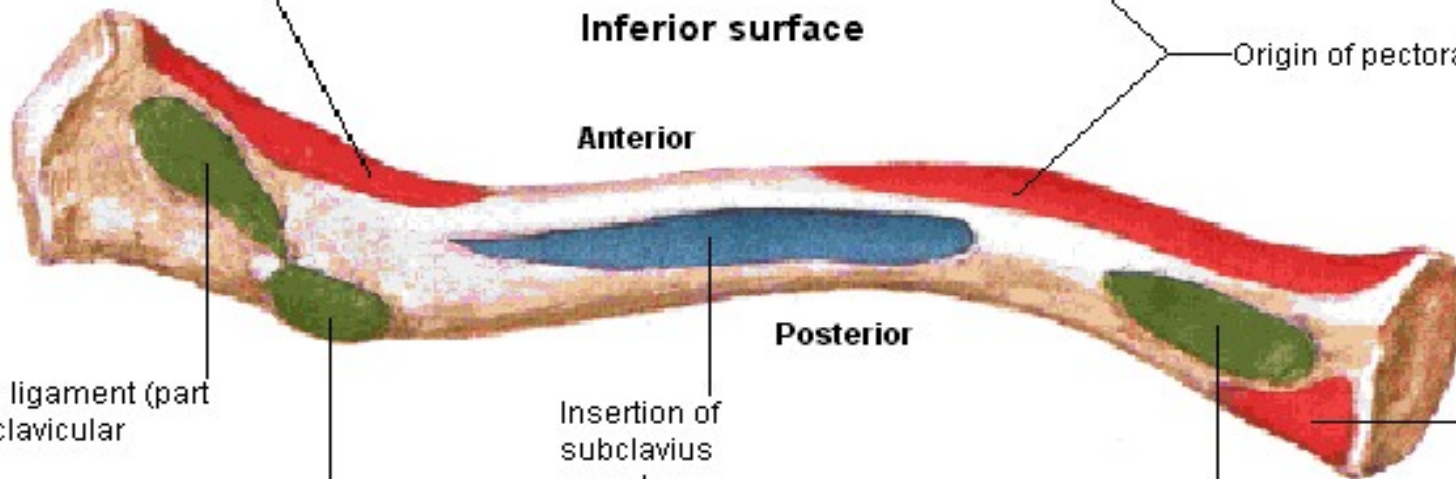
Origin of sternocleidomastoid muscle



Origin of deltoid muscle

Inferior surface

Origin of pectoralis major



Trapezoid ligament (part of coracoclavicular)

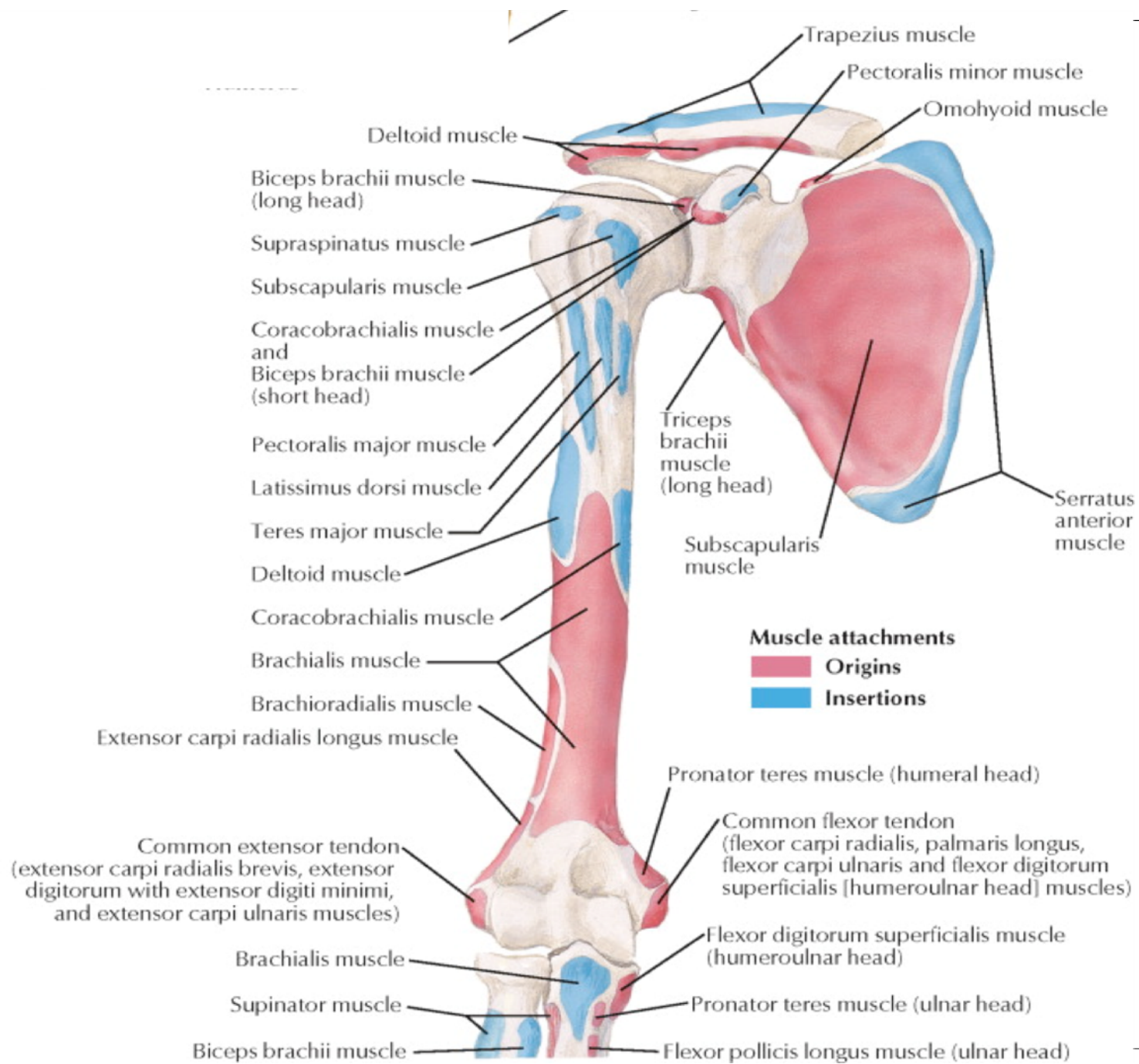
Insertion of subclavius muscle

Origin of sternohyoid muscle

Conoid ligament (part of coracoclavicular ligament)

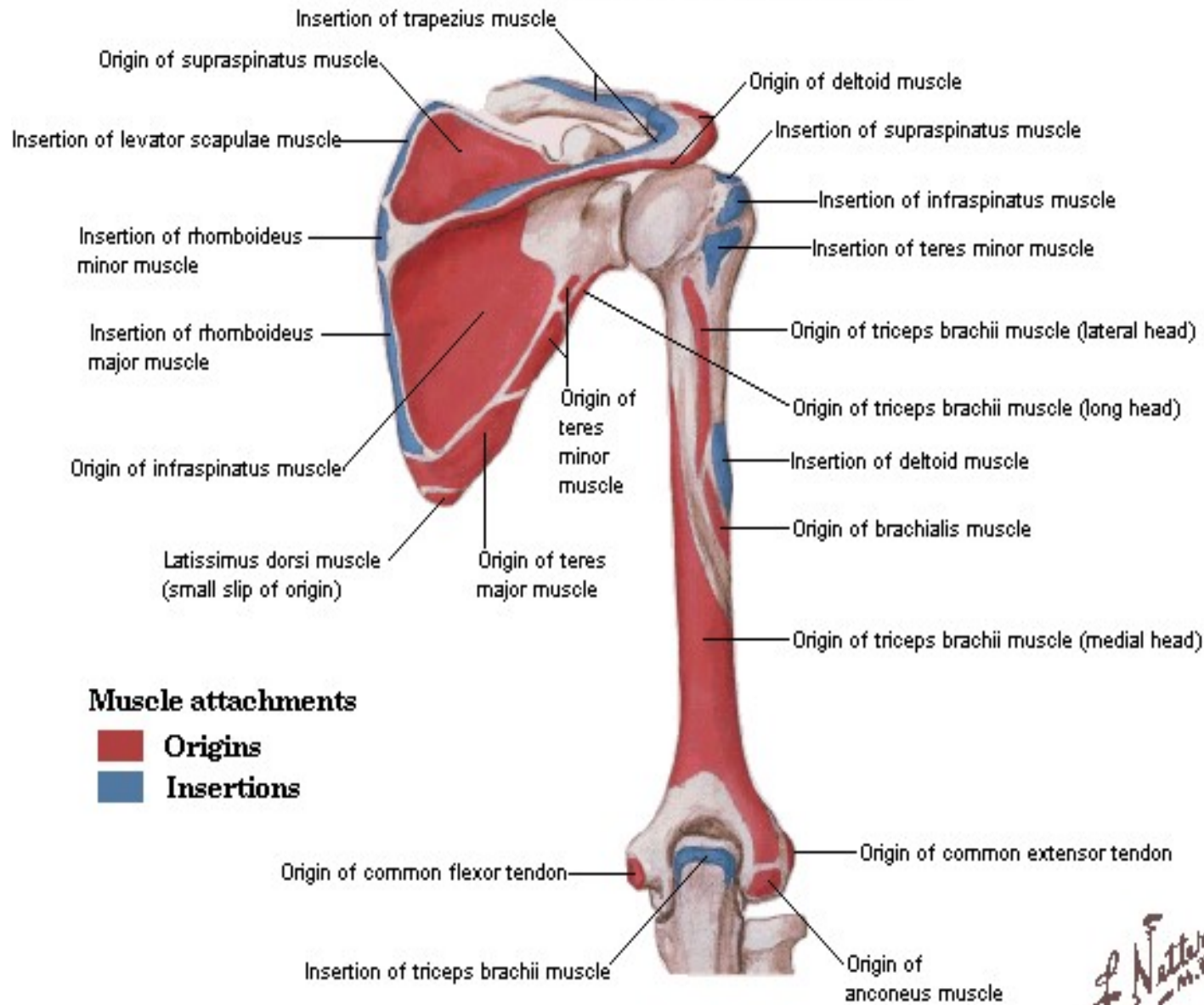
Costoclavicular





Humerus and Scapula

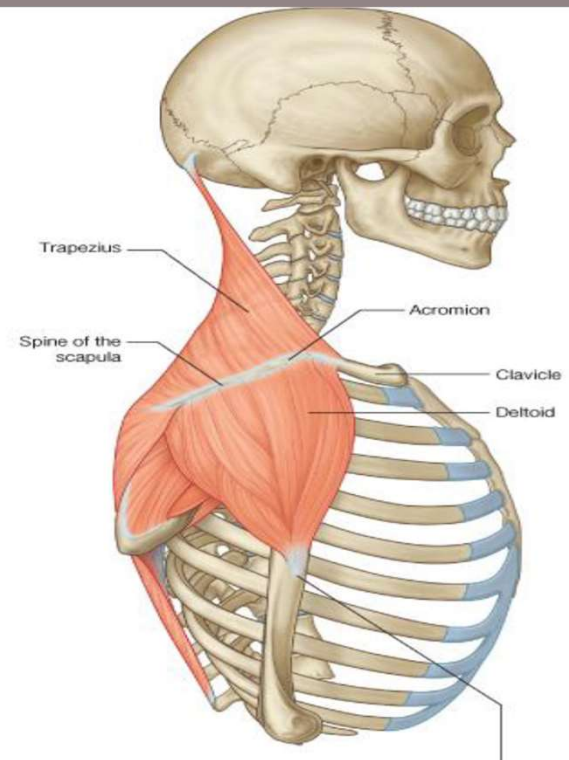
Posterior View - Muscle Attachments



Muscle attachments

- Origins
- Insertions

Deltoid

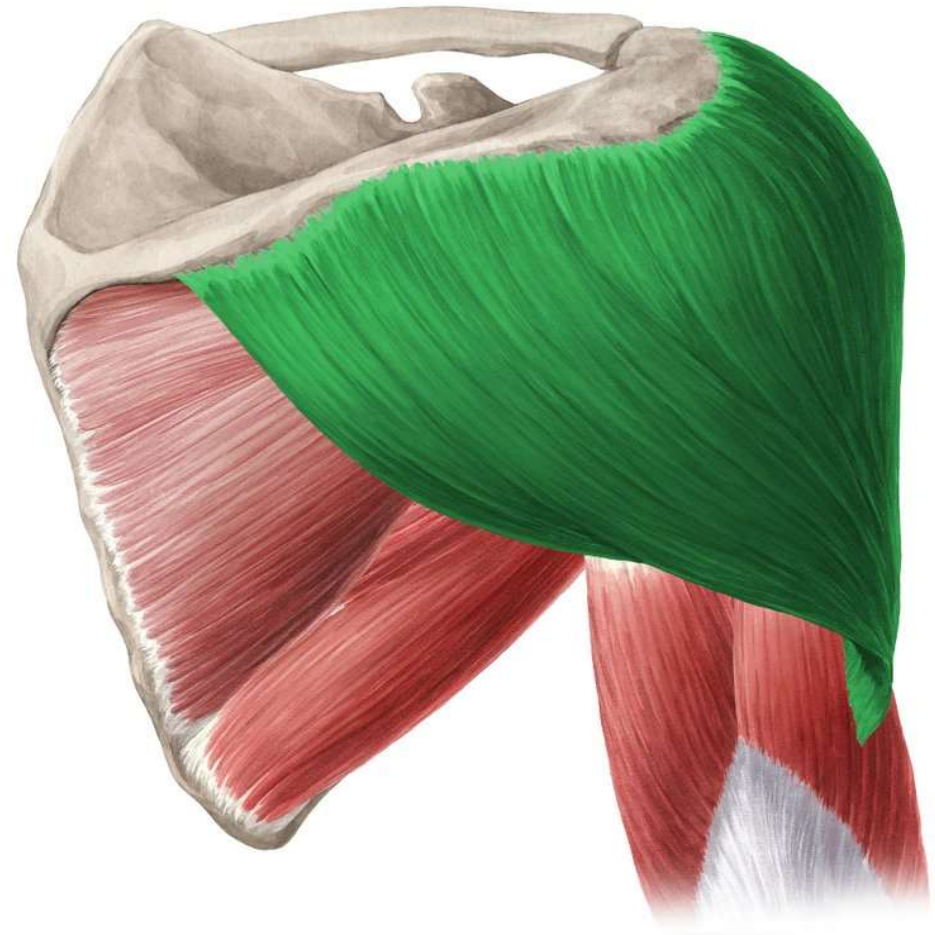


Origin (Opposite insertion of trapezius)

- Anterior border of lateral half of the Clavicle
- Lateral border of acromion
- Lower border of spine of scapula

Insertion

Deltoid tuberosity

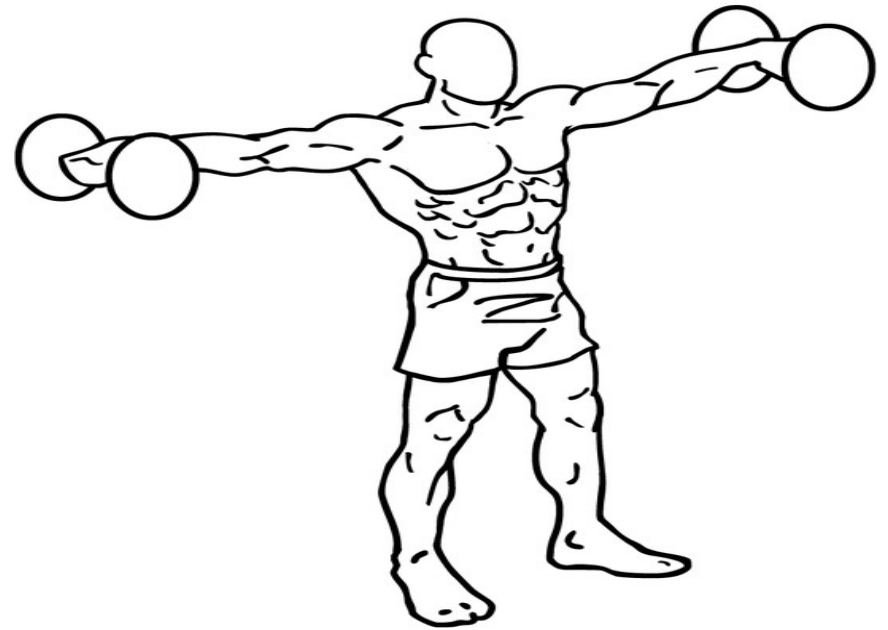


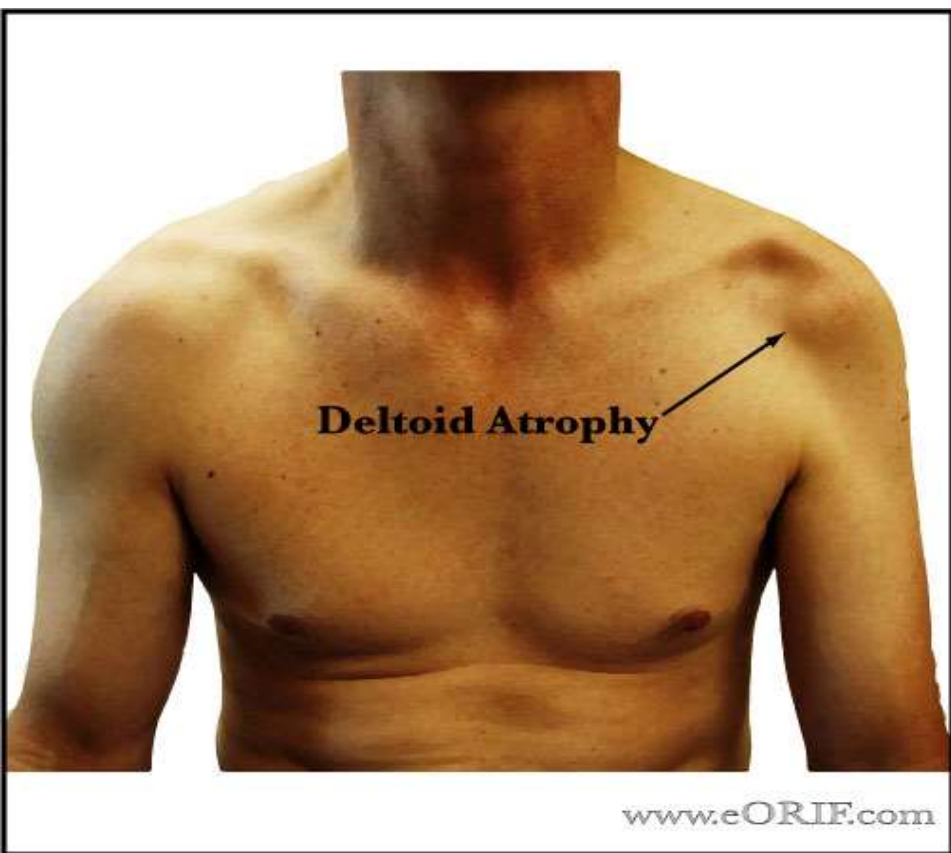
Nerve supply:

Axillary nerve .

Action:

- 1-**Anterior** fibers flexes and medial rotates the arm.
- 2-**Middle** fibers Abductor of the arm (15° - 90°).
- 3- **Posterior** fibers extents & laterally rotates the arm.

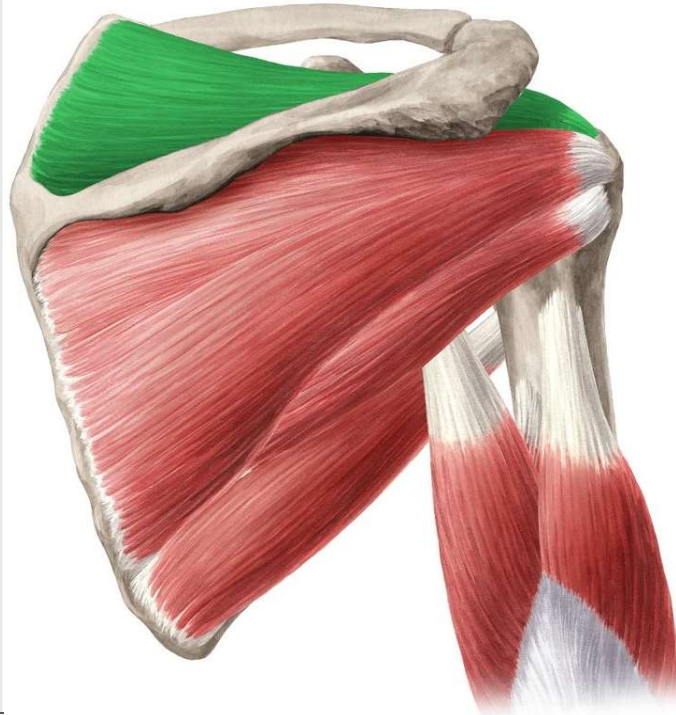




Deltoid muscle paralysis

- Atrophy of the shoulder
- Unable to abduct the arm to 90°

Supraspinatus

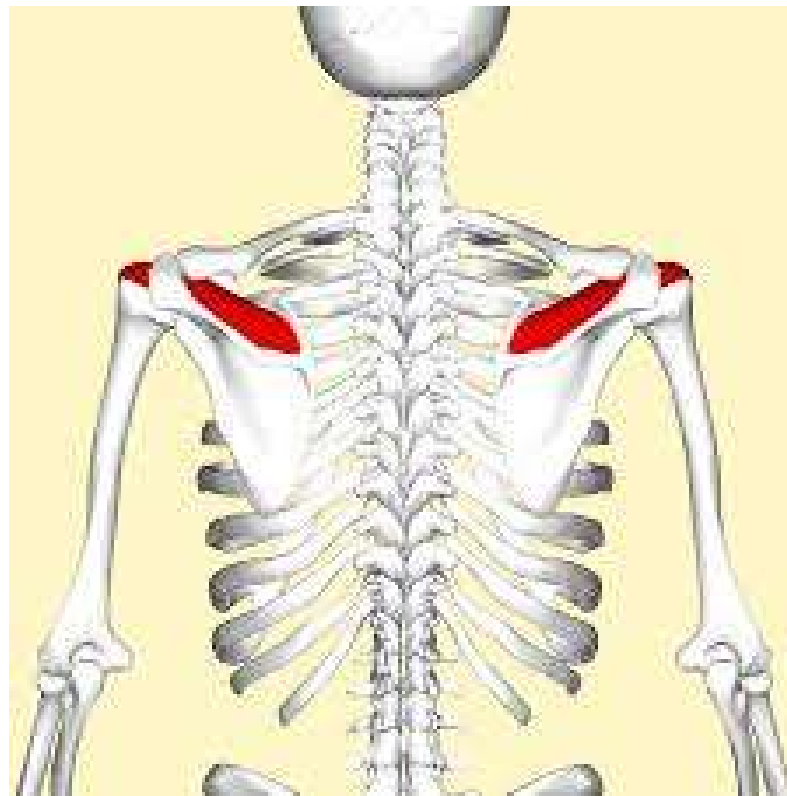


Origin

Supraspinous fossa

Insertion

Greater tuberosity of the humerus (upper impression)



Nerve supply:

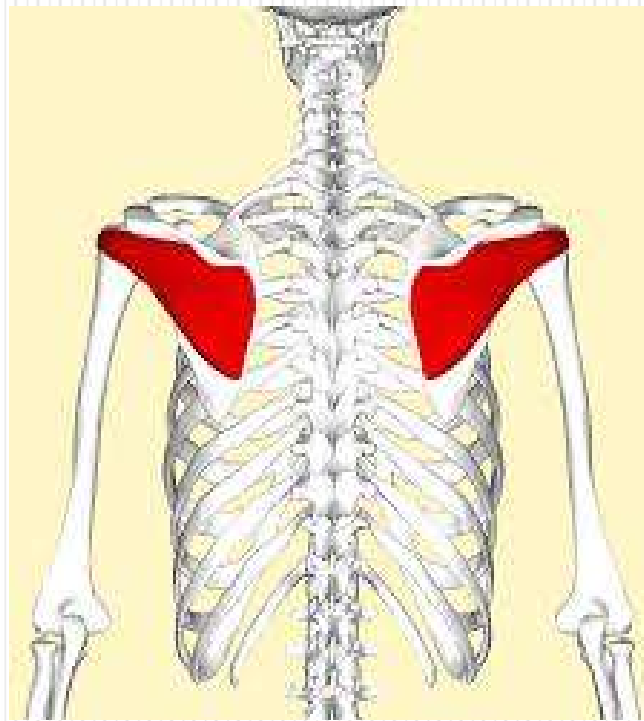
Suprascapular nerve .

Action:

Initiates abduction of the arm (from 0-15°)



Infraspinatus

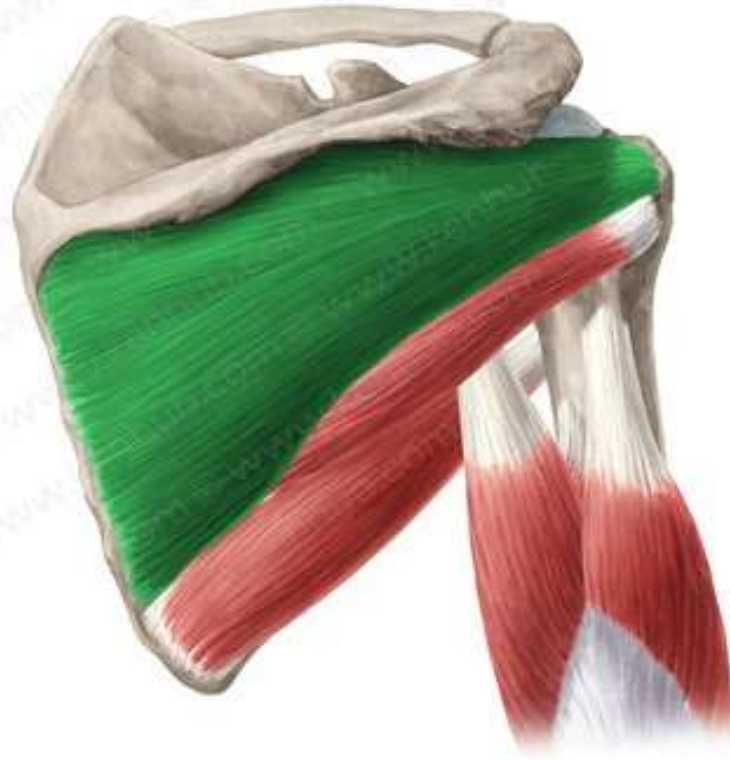


Origin

Infraspinous fossa

Insertion

Greater tuberosity of the humerus (Middle impression)

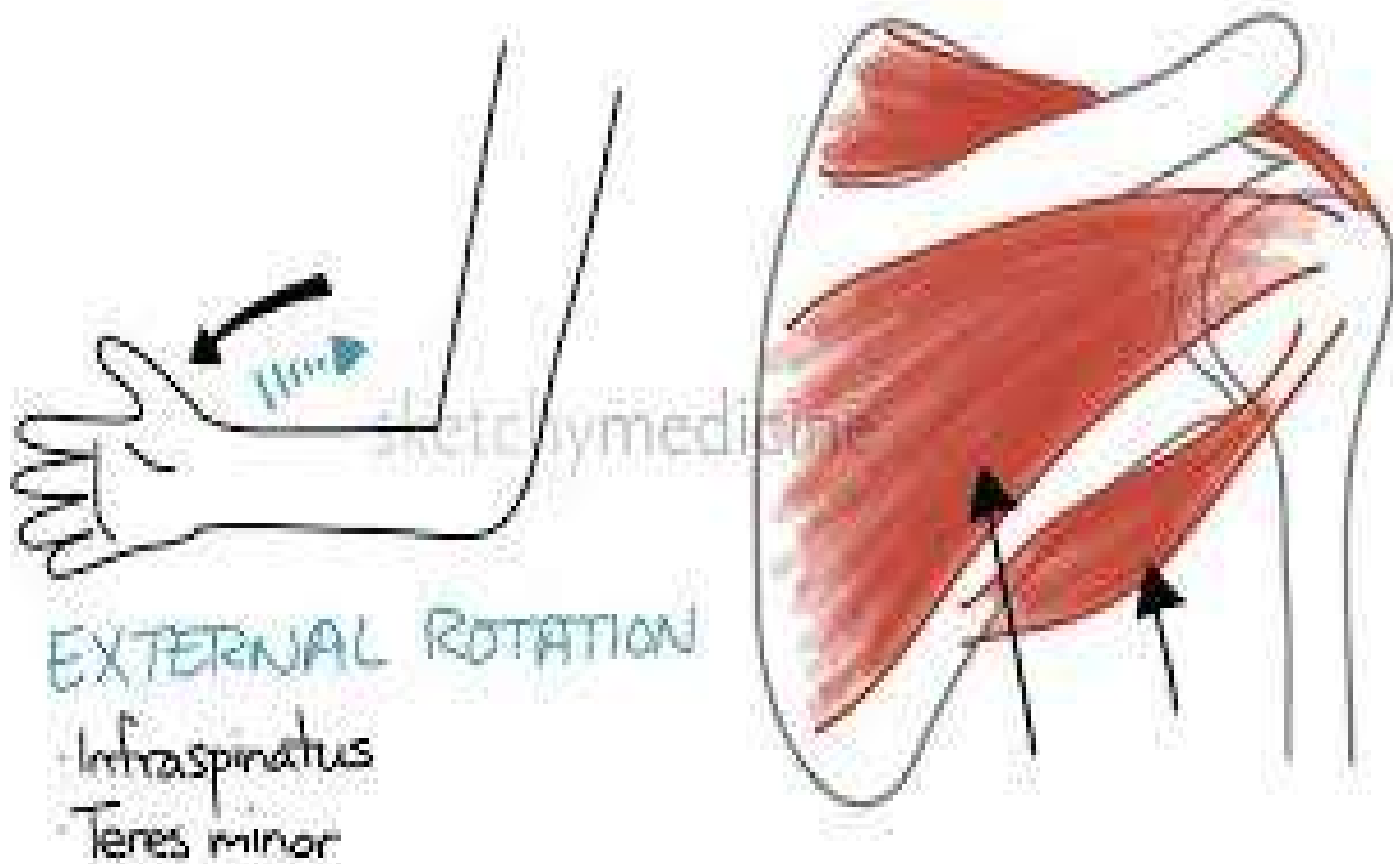


Nerve supply:

Suprascapular nerve

Action:

Lateral rotation of the arm



Teres Minor

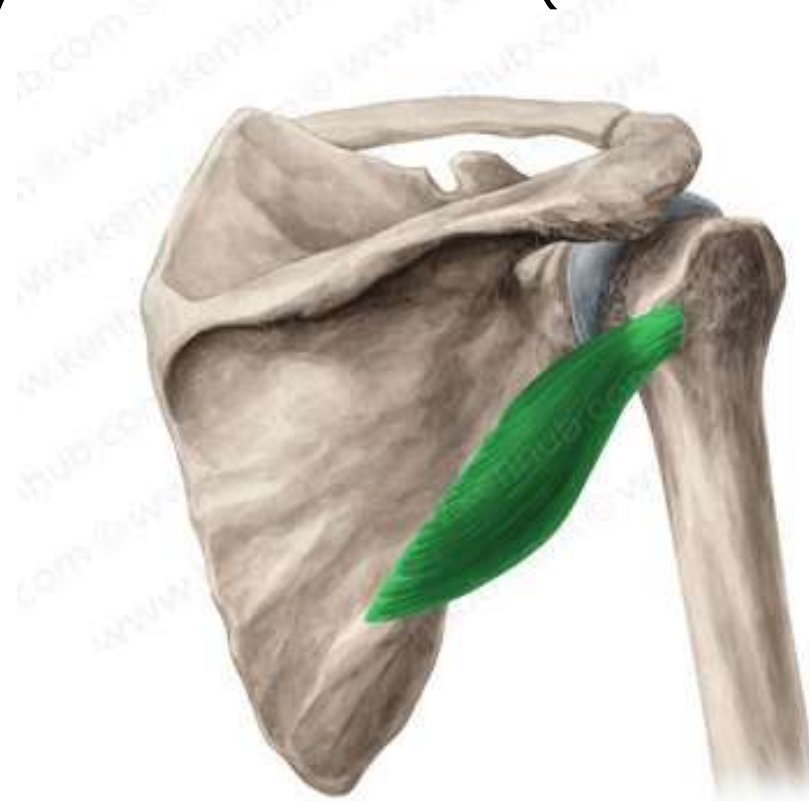


Origin

Dorsal aspect of Lateral border of the scapula (upper 2/3 thirds)

Insertion

Greater tuberosity of the humerus (lower impression).

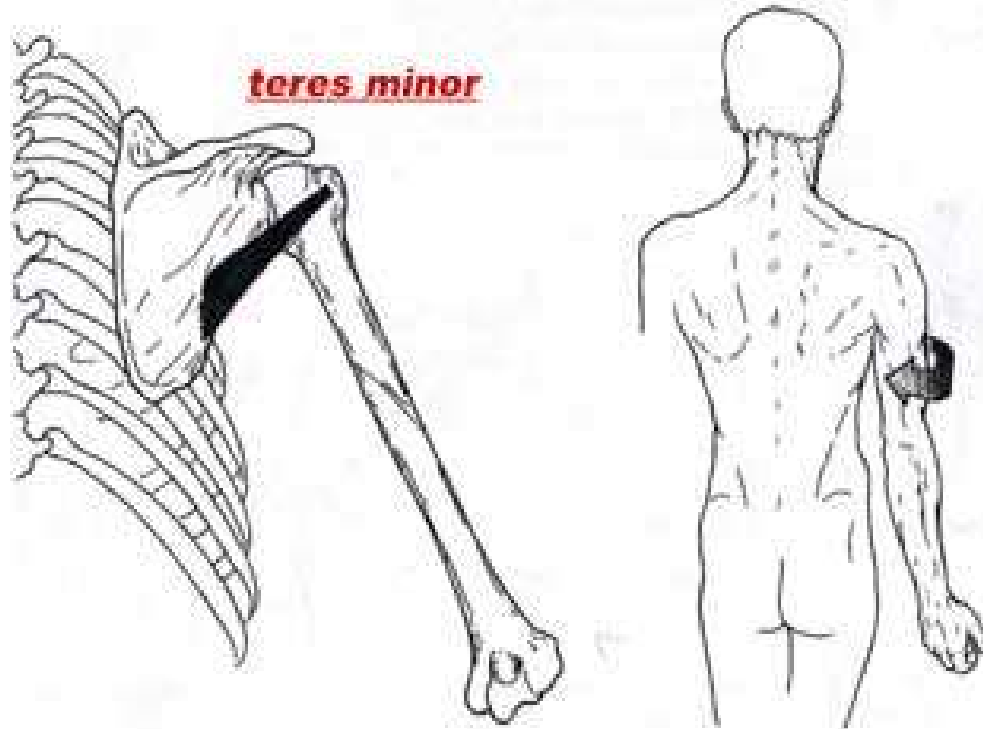


Nerve supply:

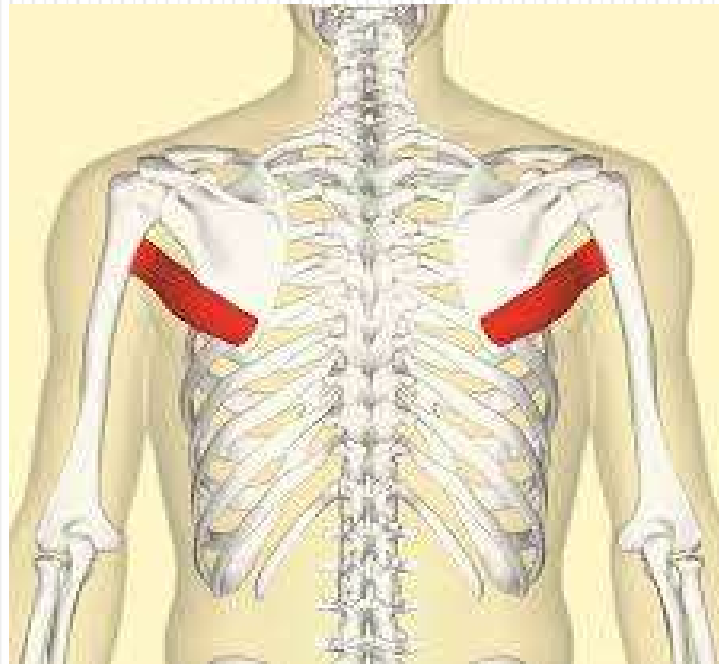
Axillary Nerve .

Action:

Adduction and lateral rotation of the arm.



Teres Major



Origin

Dorsal surface of the scapula above the inferior angle.

Insertion

Medial lip of bicipital groove.

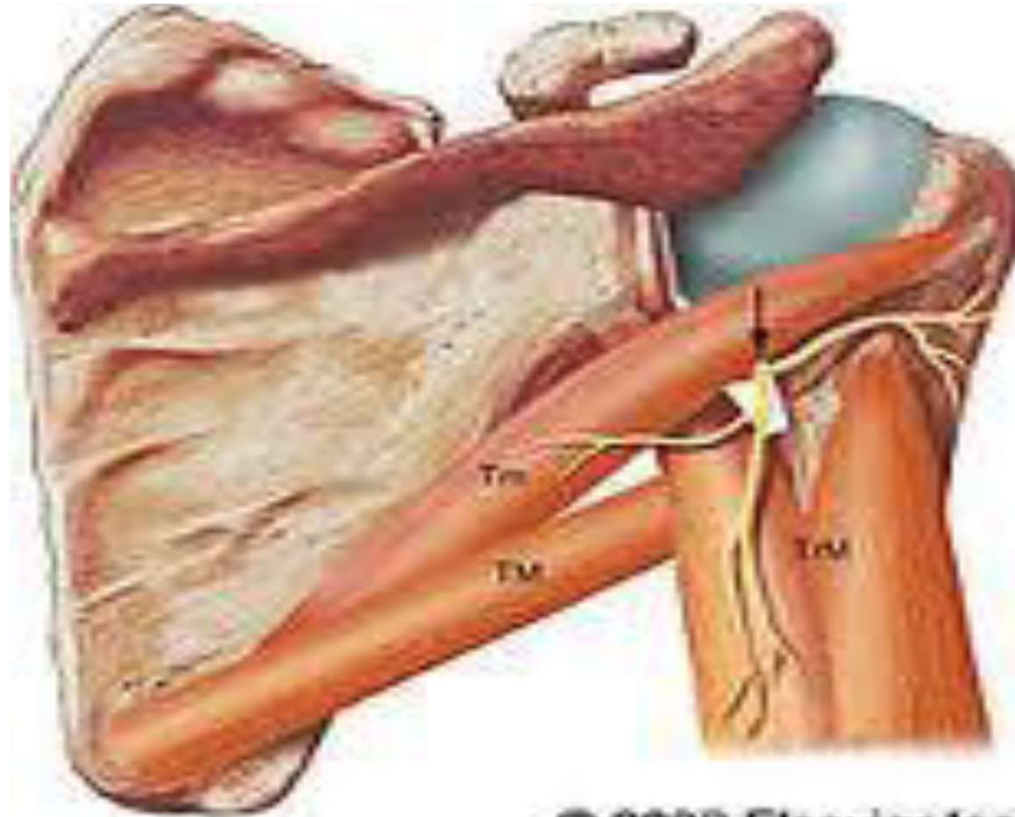


Nerve supply:

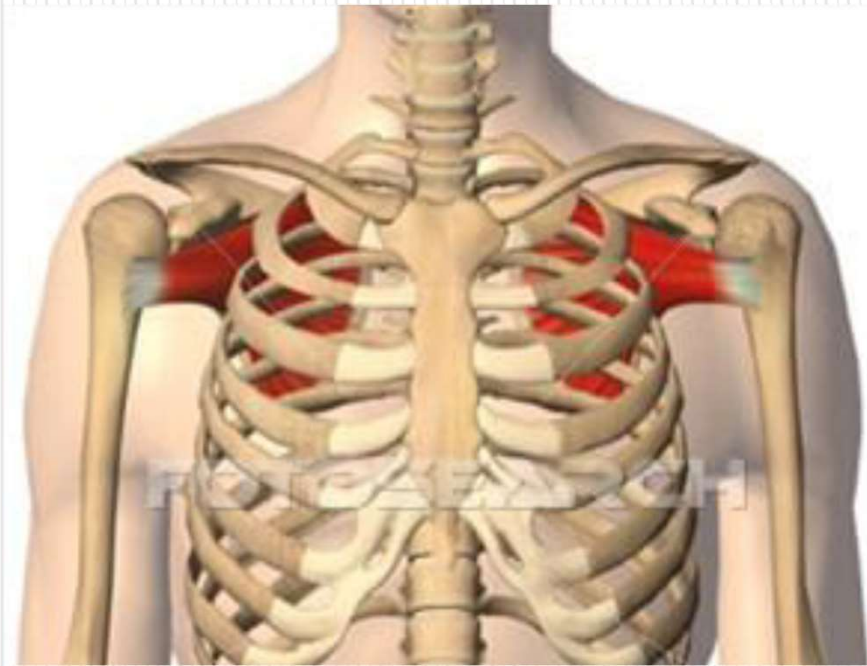
lower subscapular nerve .

Action:

Adduction, medial rotation.



Subscapularis

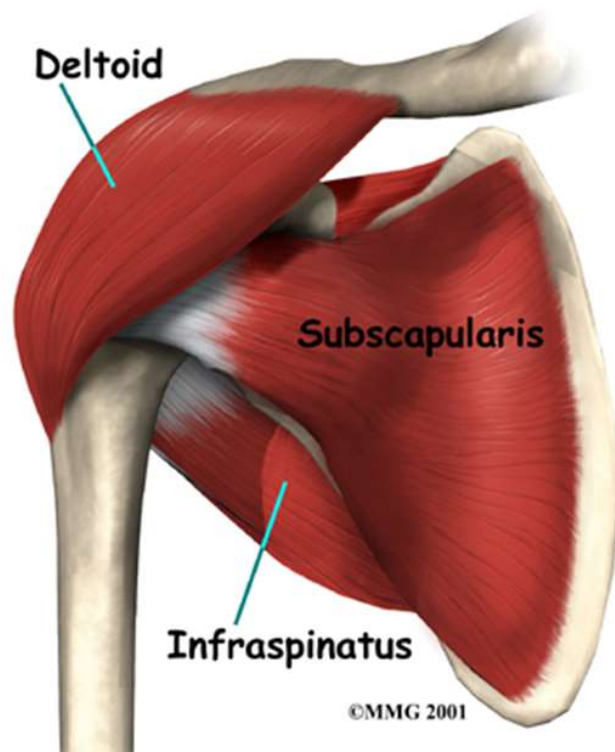


Origin

Subscapular Fossa

Insertion

Lesser Tuberosity.

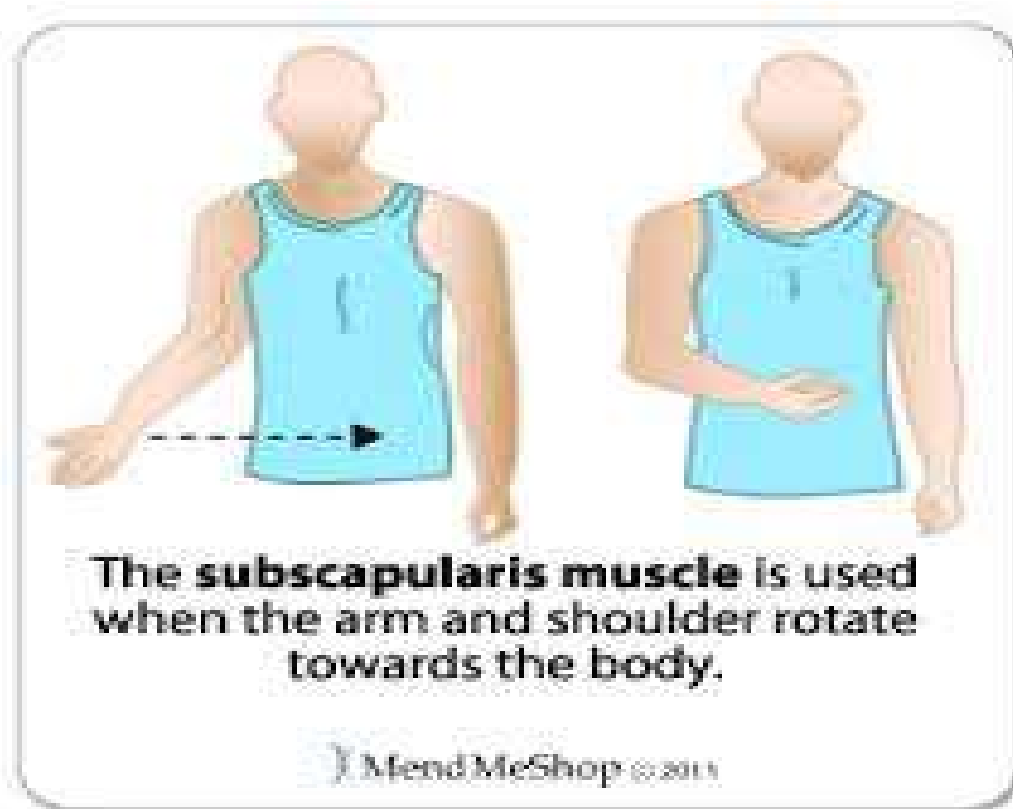


Nerve supply:

Upper and lower subscapular nerves.

Action:

Adduction and medial rotation of the arm.



Origin and insertion for shoulder muscles

MUSCLE	ORIGIN	INSERTION
Deltoid	Opposite insertion of trapezius	Deltoid tuberosity
Supraspinatus	Supraspinous fossa	Greater Tuberosity
Infraspinatus	Infraspinous fossa	Greater Tuberosity
Teres minor	Dorsal, lateral ,scapula	Greater Tuberosity
Teres major	Dorsal, inferior angle ,scapula	Medial lip bicipital grove
Subscapularis	Subscapular fossa	lesser Tuberosity

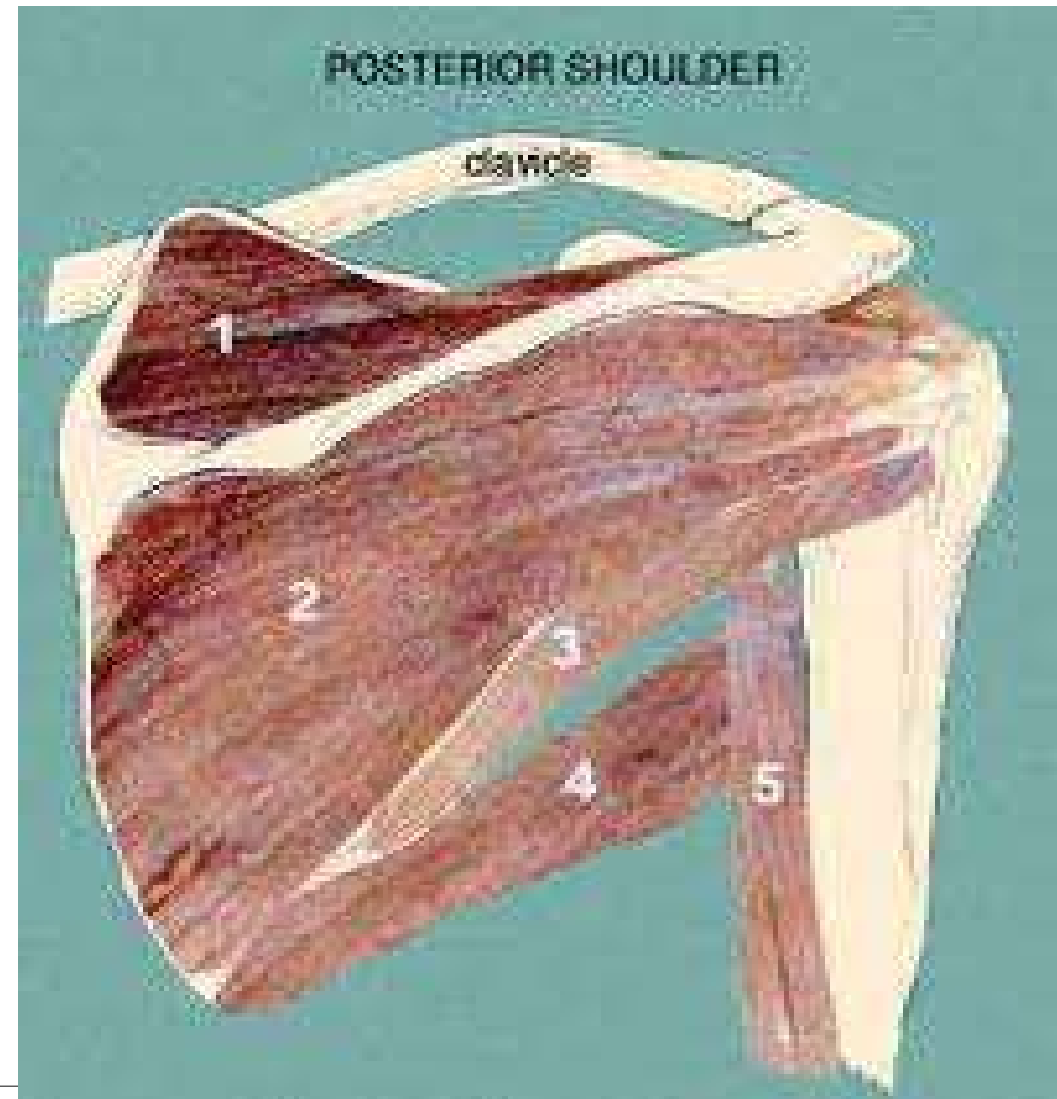
Nerve supply and action for shoulder muscles

Supraspinatus (ABDUCTION)	Suprascapula Nerve
Infraspinatus (<u>Lateral Rotation</u>)	
Teres minor (<u>Lateral Rotation</u>)	Axillary Nerve
Deltoid (ABDUCTION)	
Subscapularis Teres major (Medial Rotation ,adduction)	Subscapular Nerve

	Origin	Insertion	Nerve Supply	Action
Deltoid				
Supraspinatus				
Infraspinatus				
Teres Minor				
Subscapularis				
Teres Major				

Identify the labelled muscles

1. Supraspinatus
2. Infraspinatus
3. Teres minor
4. Teres Major



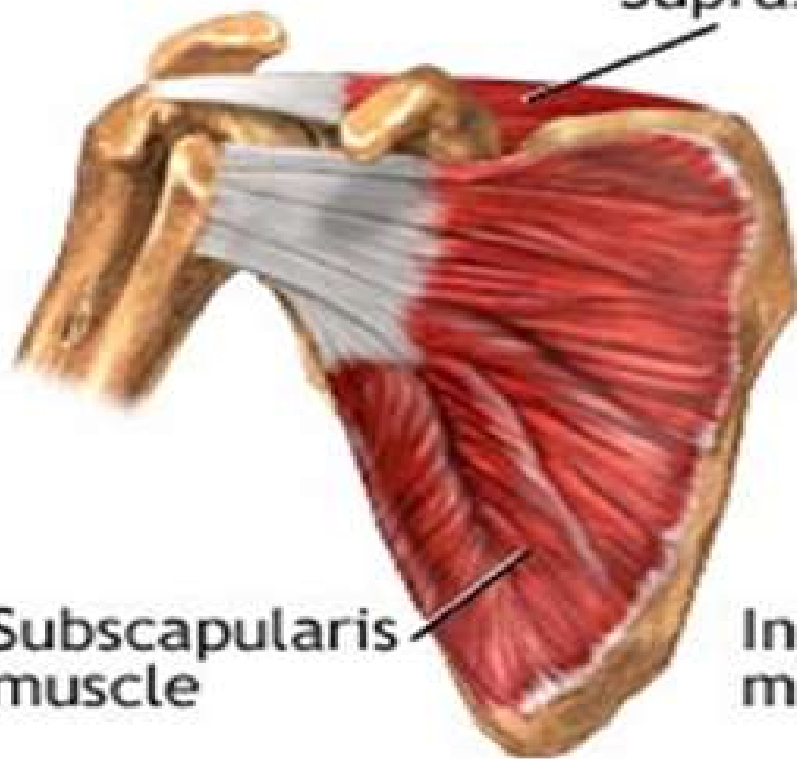
Rotator Cuff

They are muscles attached to greater and lesser tuberosities .
They blends with capsule of shoulder joint to strength it.

1. Supraspinatus
2. Infraspinatus
3. Teres minor
4. Subscapularis

Rotator cuff muscles

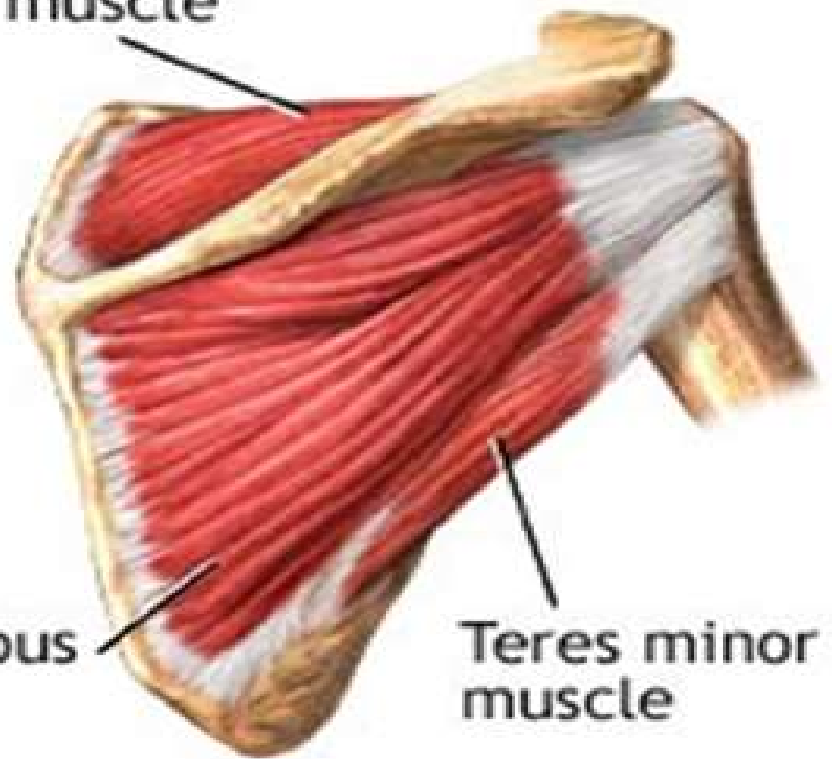
Supraspinatous muscle



Subscapularis muscle

Infraspinatous muscle

Anterior shoulder



Teres minor muscle

Posterior shoulder

Front View

Muscles of the Rotator Cuff

Back View

Subscapularis

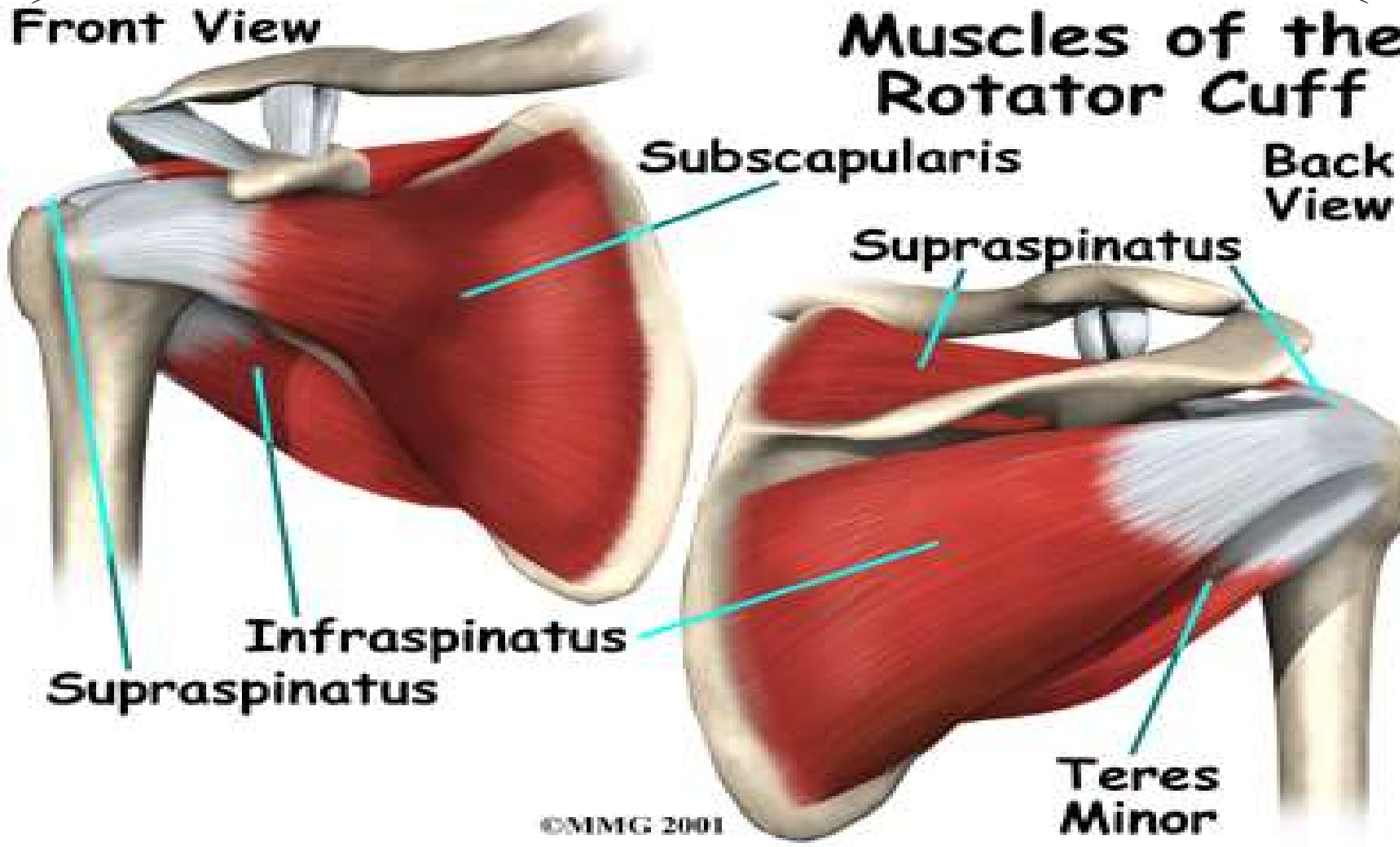
Supraspinatus

Infraspinatus

Supraspinatus

Teres Minor

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Rotator cuff Tendinitis



Symptoms : pain and swelling in the shoulder area, limited motion or weakness of the arm.

It occurs mostly in athletes playing sports that require lifting their arm over their head as:

- swimmer's shoulder
- pitcher's shoulder
- tennis shoulder



Pitcher's shoulder

Rotator cuff tendon tears lead to swelling and further impingement beneath arch

Supraspinatus muscle

Head of biceps muscle



Anterior view of right shoulder

Subacromial Bursa

- **Situated Between**

- 1- Above**

- a) Coracoacromial arch

- b) Deltoid Muscle

- 2-Below**

- a) Supraspinatus tendon

- b) Greater tuberosity

- **Function**

- 1-Protection (supraspinatus)

- 2-Helping (Abduction)

**Shoulder
Bursa
(arm
raised)**

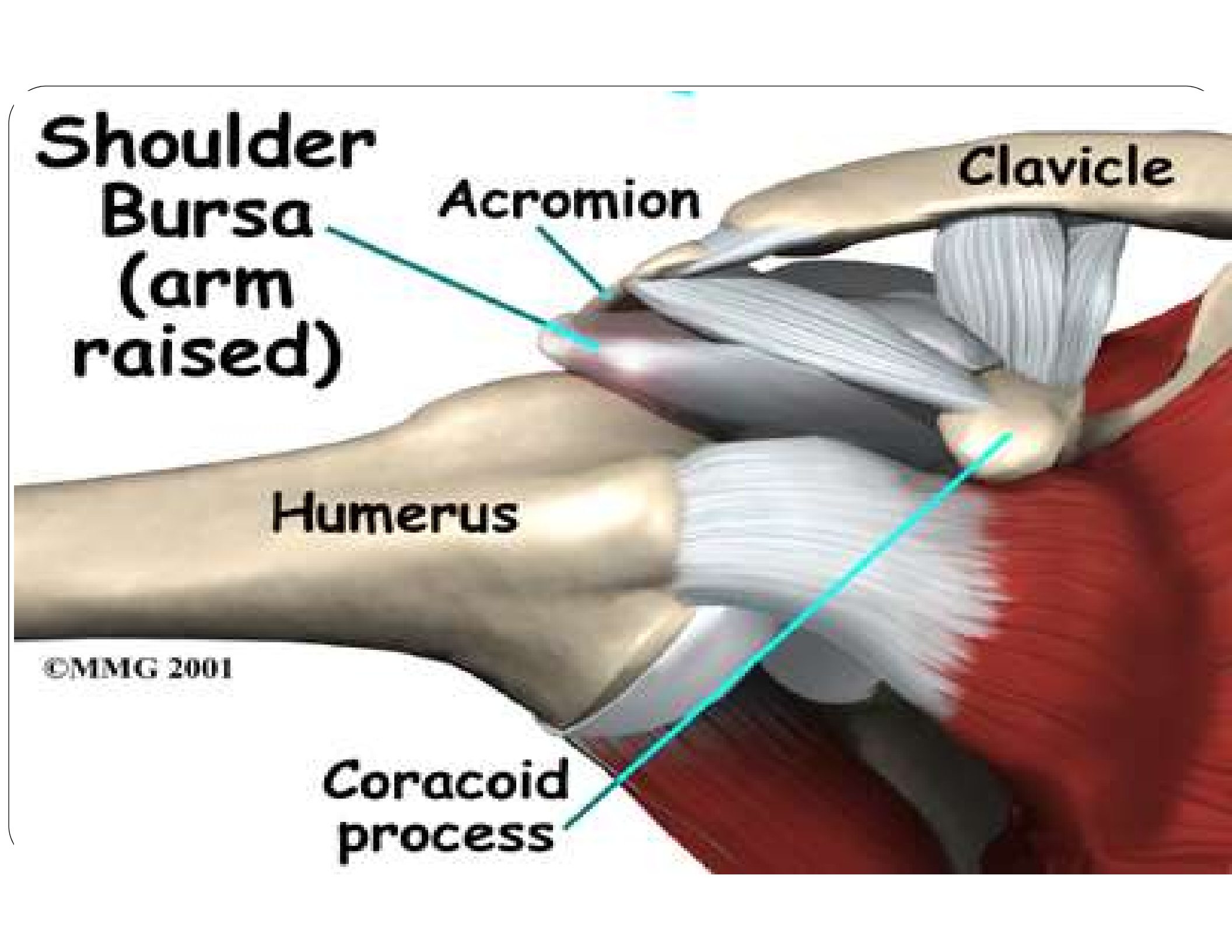
Acromion

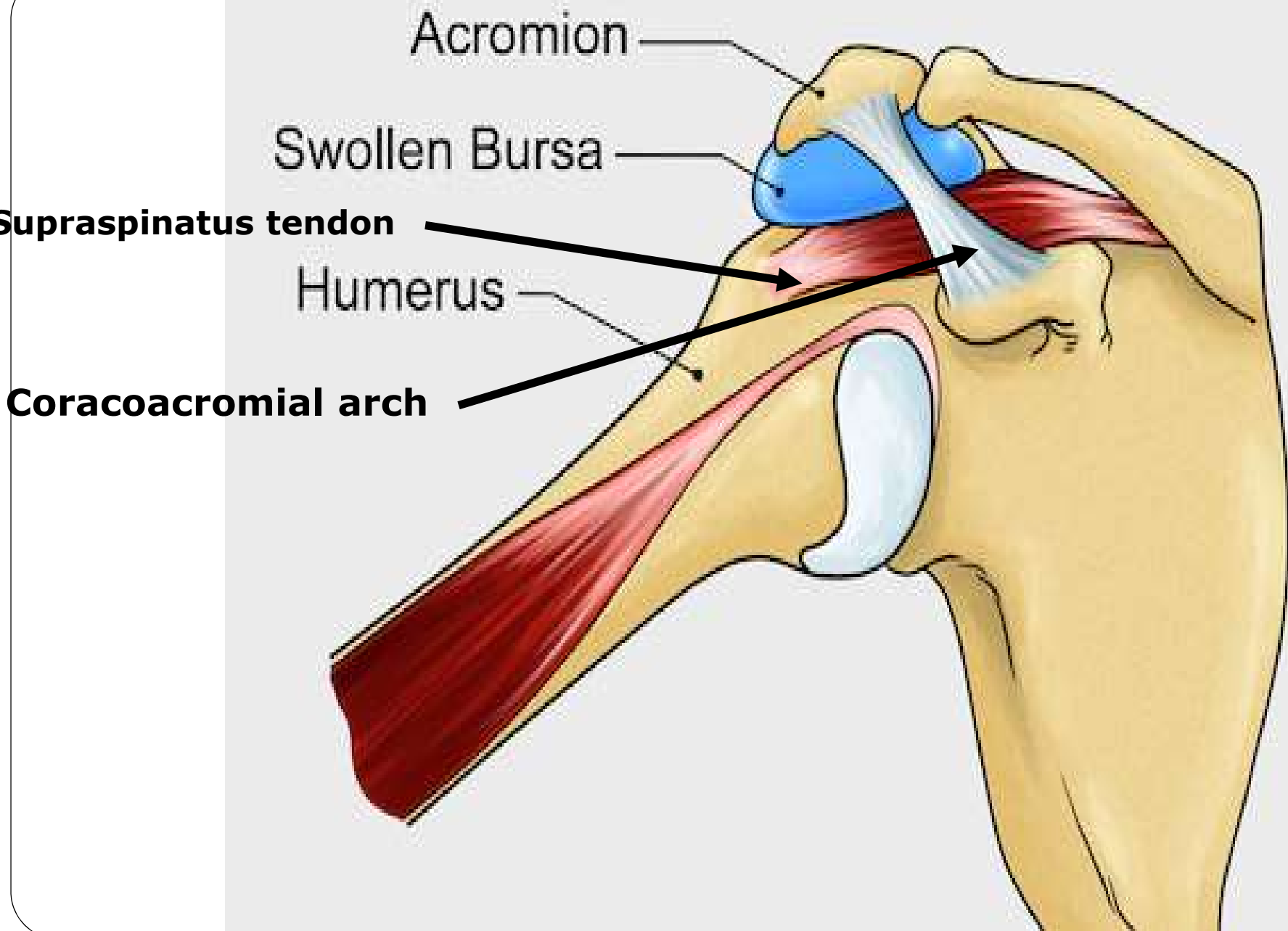
Clavicle

Humerus

**Coracoid
process**

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Subacromial Bursitis



Dawbarn's test

Arm by side **Pain**

Right angle abduction **No Pain**

Abduction of The Arm

A- Zero -90 degree (movement of the humerus)

1. From Zero to 15 :Supraspinatus
2. From 15 -90 : Deltoid

B-From 90-180 degree (Rotation of scapula)

1. Trapezius
2. Serratus Anterior

Thank You