



Muscles of the upper limb

By

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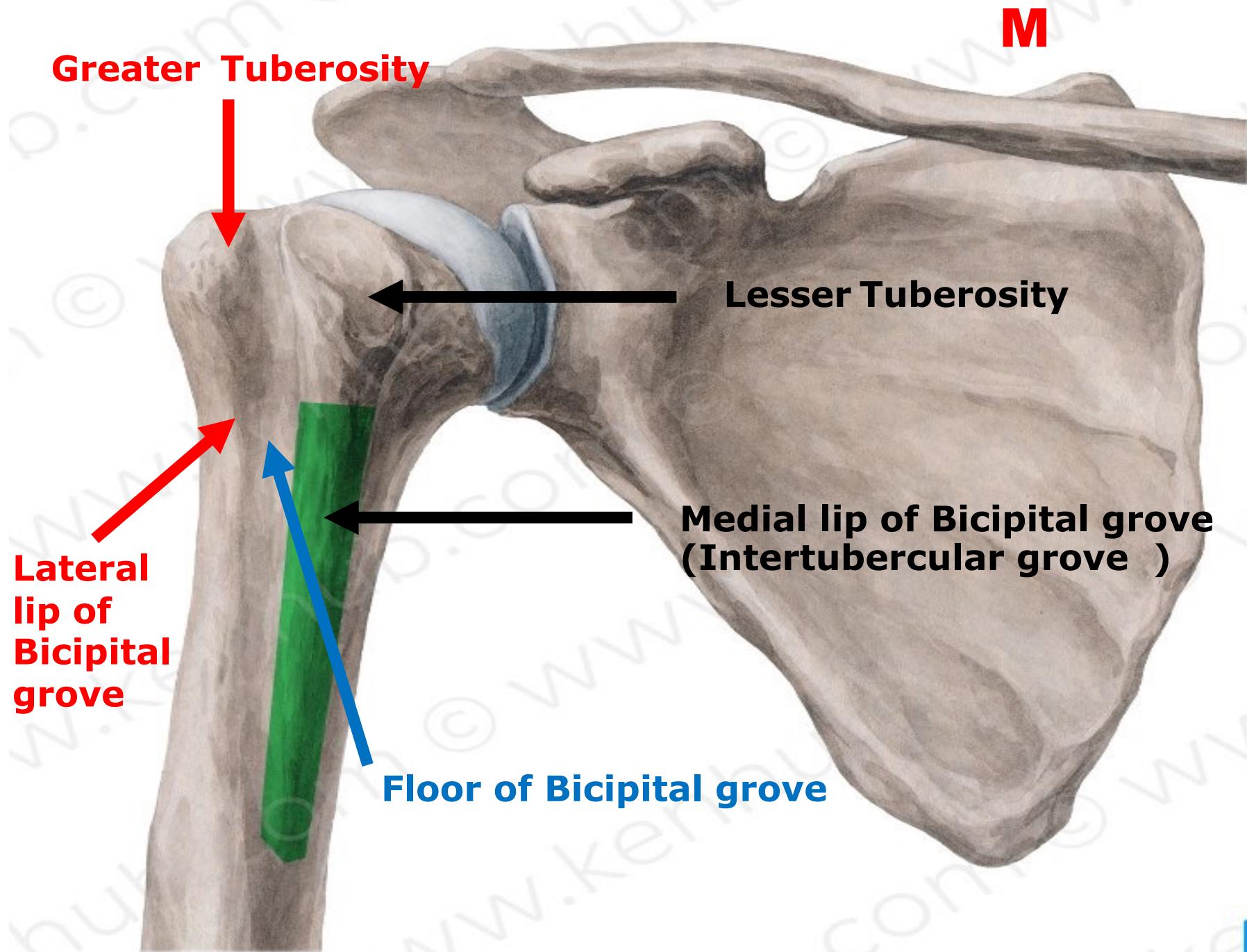
Associate Professor of Anatomy

Learning Objectives

- 1- Identify different Muscles group of upper limb.
- 2-Identify attachment of muscles of pectoral region
- 3-Know nerve supply and action of pectoral muscles

Muscle Groups

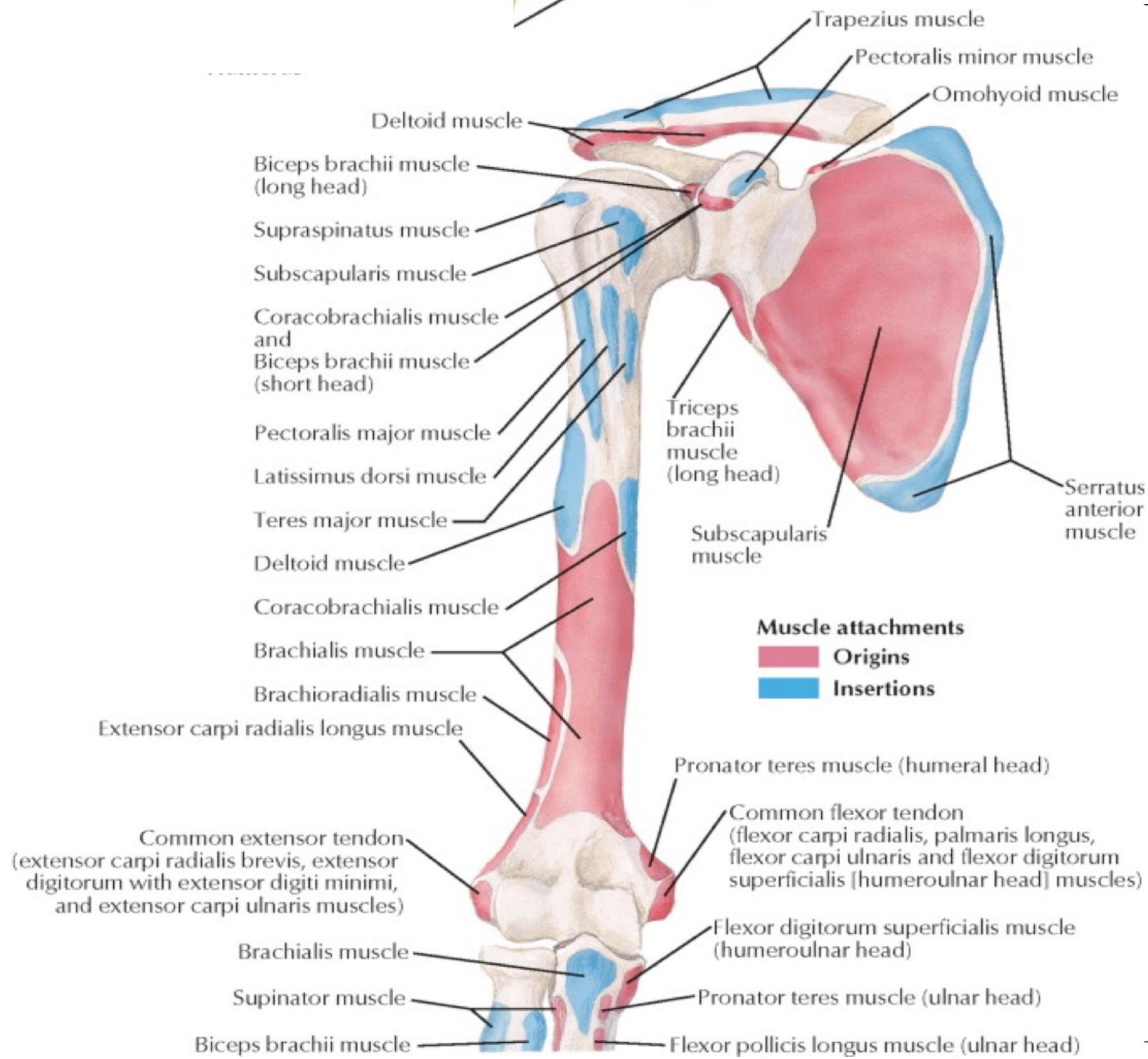
- 1- Muscles connecting Upper Limb with Thoracic Wall (**Muscles of pectoral region**)
- 2-Muscles connecting Upper Limb with Vertebral column (**Back muscles**)
- 3- Muscles connecting Scapula with Humerus (**Muscles of shoulder region**)
- 4- Muscles of The arm (Anterior & Posterior)
- 5- Muscles of The Forearm (Anterior &Posterior)
- 6-Muscles of Hand



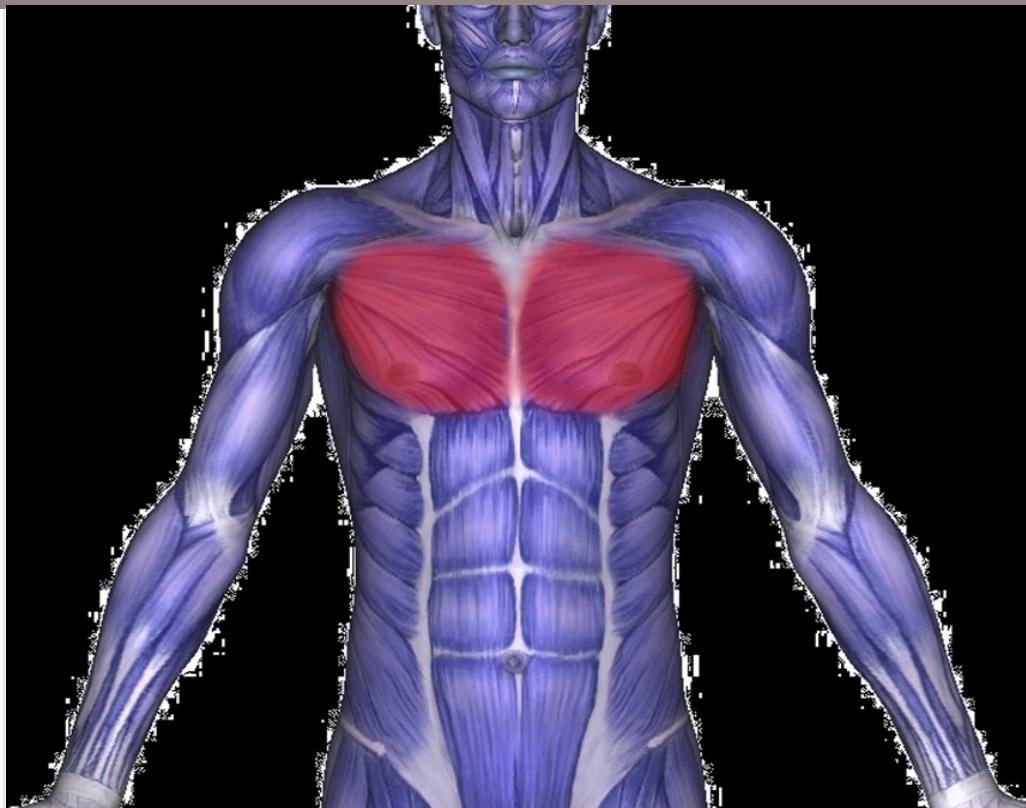
Muscles connecting Upper Limb with Thoracic Wall

Muscles of the pectoral region

- 1-Pectoralis Major
- 2-Pectoralis minor
- 3-Serratus anterior
- 4-Subclavius



Pectoralis Major



Origin

Clavicular head:

Anterior border of medial 2/3 of clavicle.

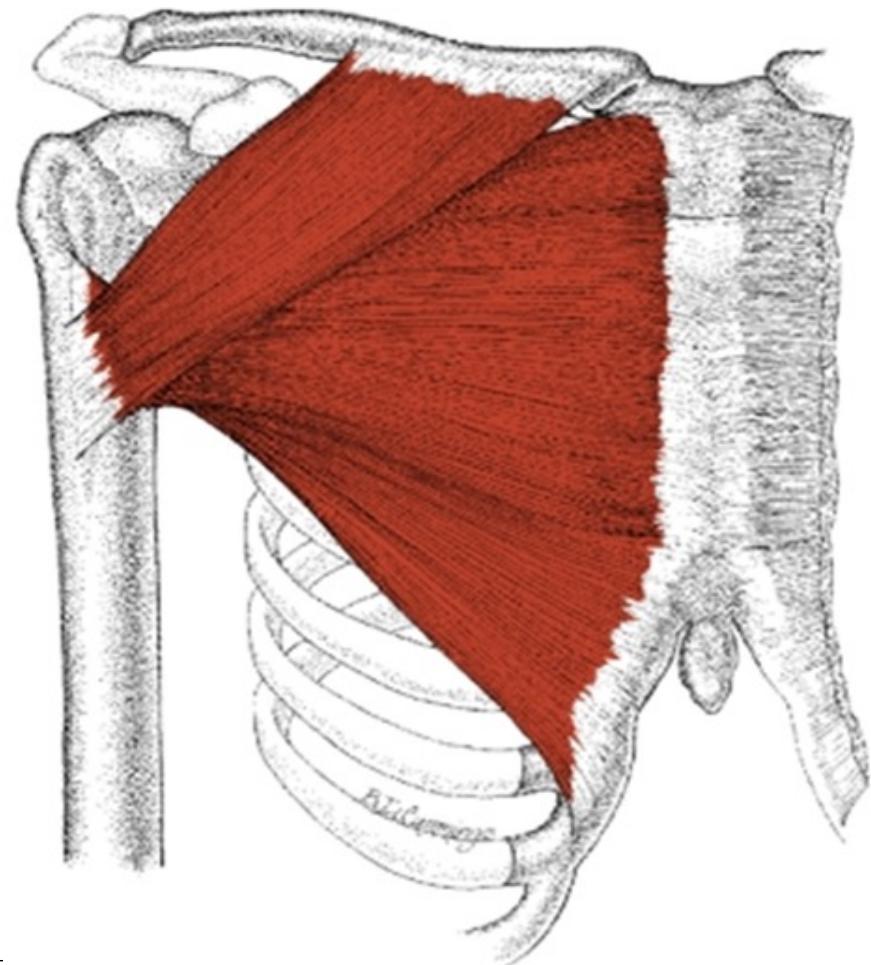
Sternocostal head:

- Anterior surface of the sternum.
- The upper 6 costal cartilages.

Insertion

Lateral lip of the bicipital groove .

Pectoralis Major



Nerve supply:

Medial and lateral pectoral nerves

Action:

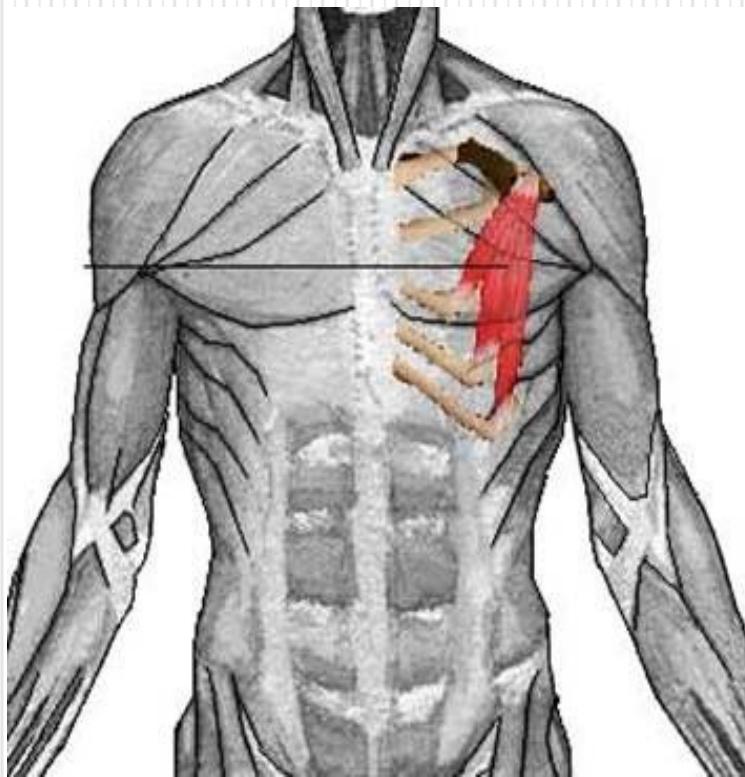
- 1-Adduction and medial rotation of the arm.
- 2- Flexion of the arm.
- 3-The sternocostal head, with the arm raised and fixed, can raise the trunk as in climbing



**All Muscles Attached to
Bicipital groove**

**Adduct and Medially rotates the
Arm**

Pectoralis Minor

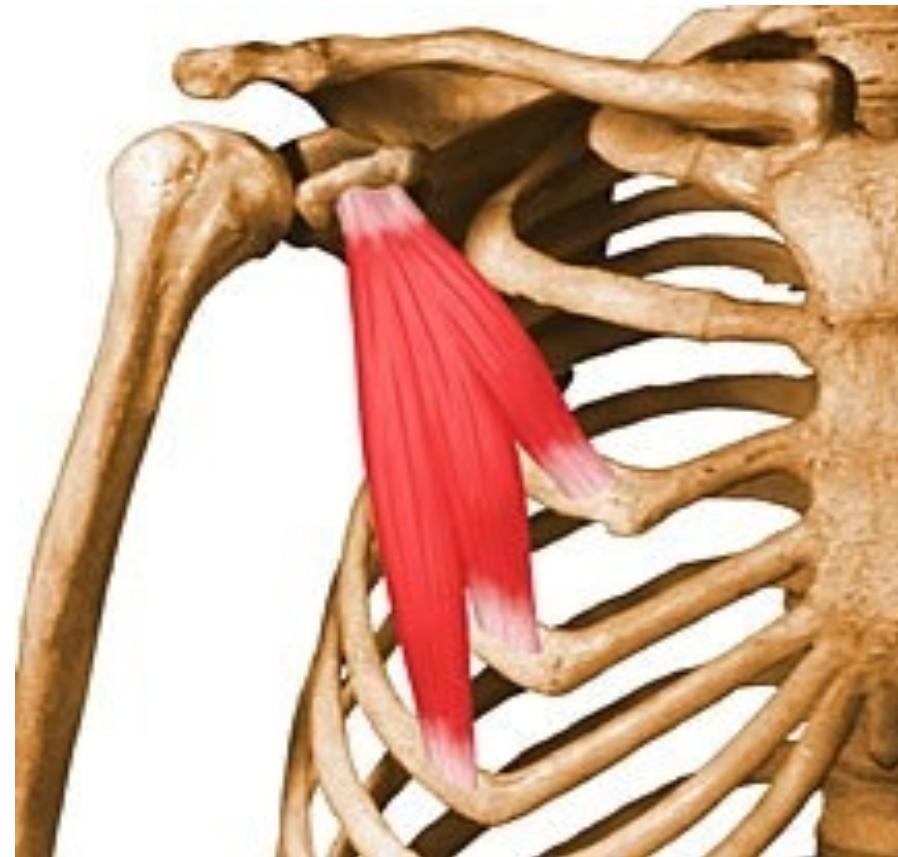


Origin

From outer surfaces of 3rd , 4th and 5th ribs close to their costal cartilages

Insertion

Coracoid process of the scapula.



Nerve supply:

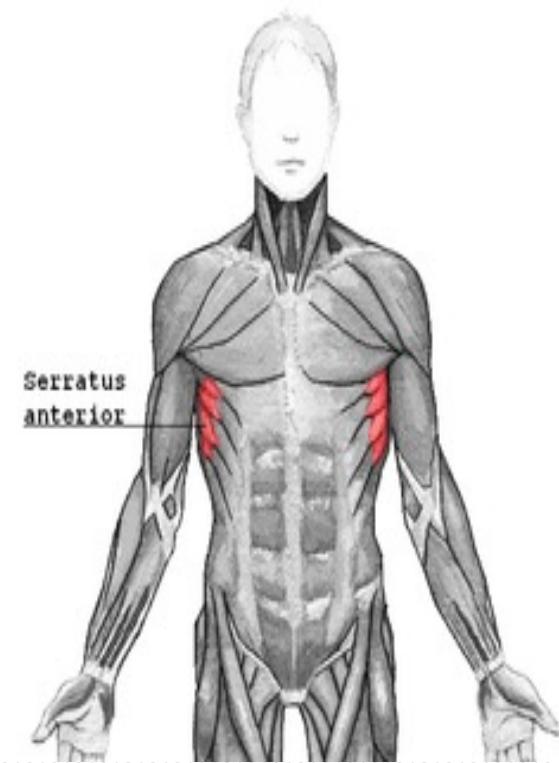
Medial pectoral nerve

Action:

- Protraction of the scapula.
- Depresses the shoulder
- If the scapula is fixed, it elevates the ribs



Serratus Anterior

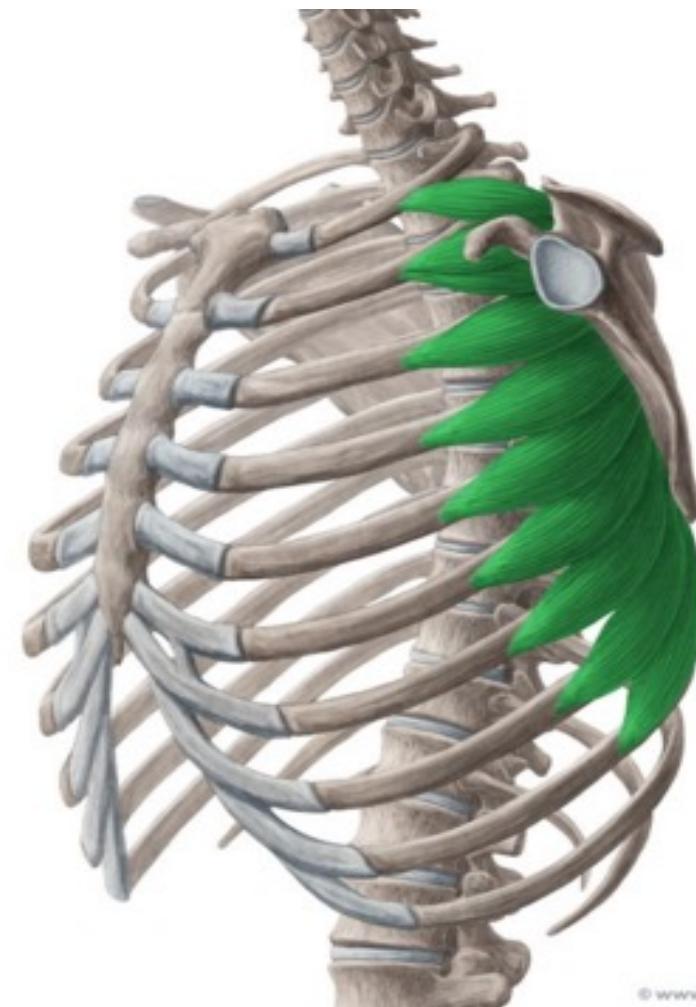
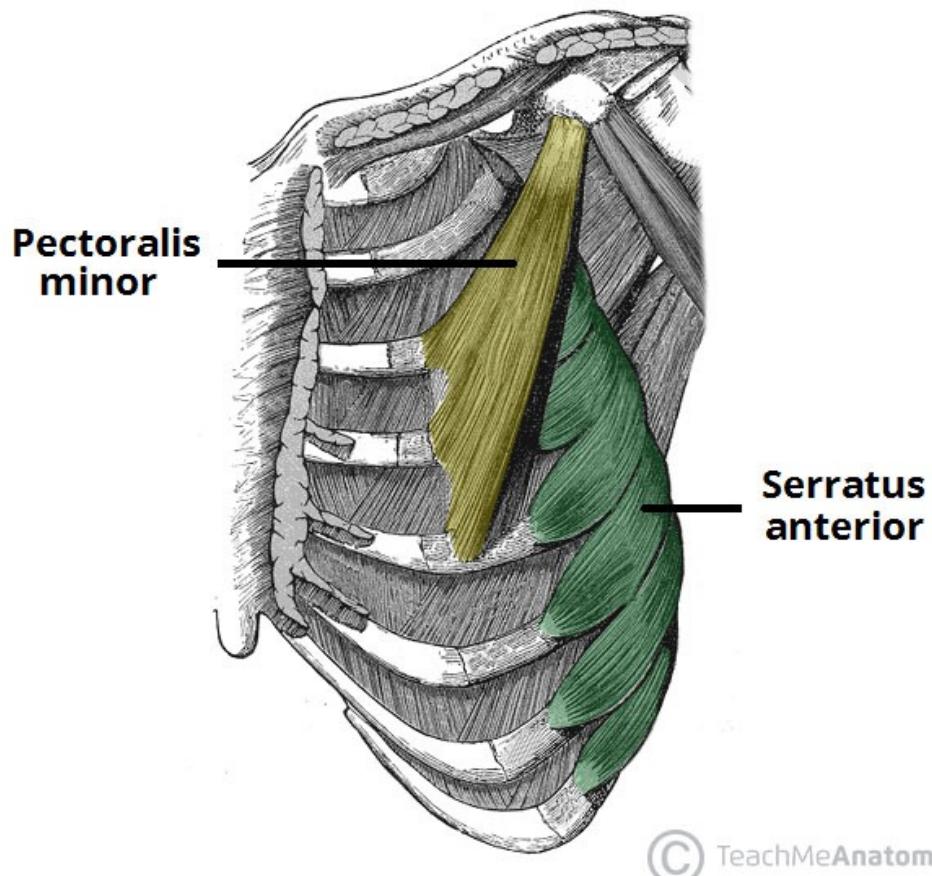


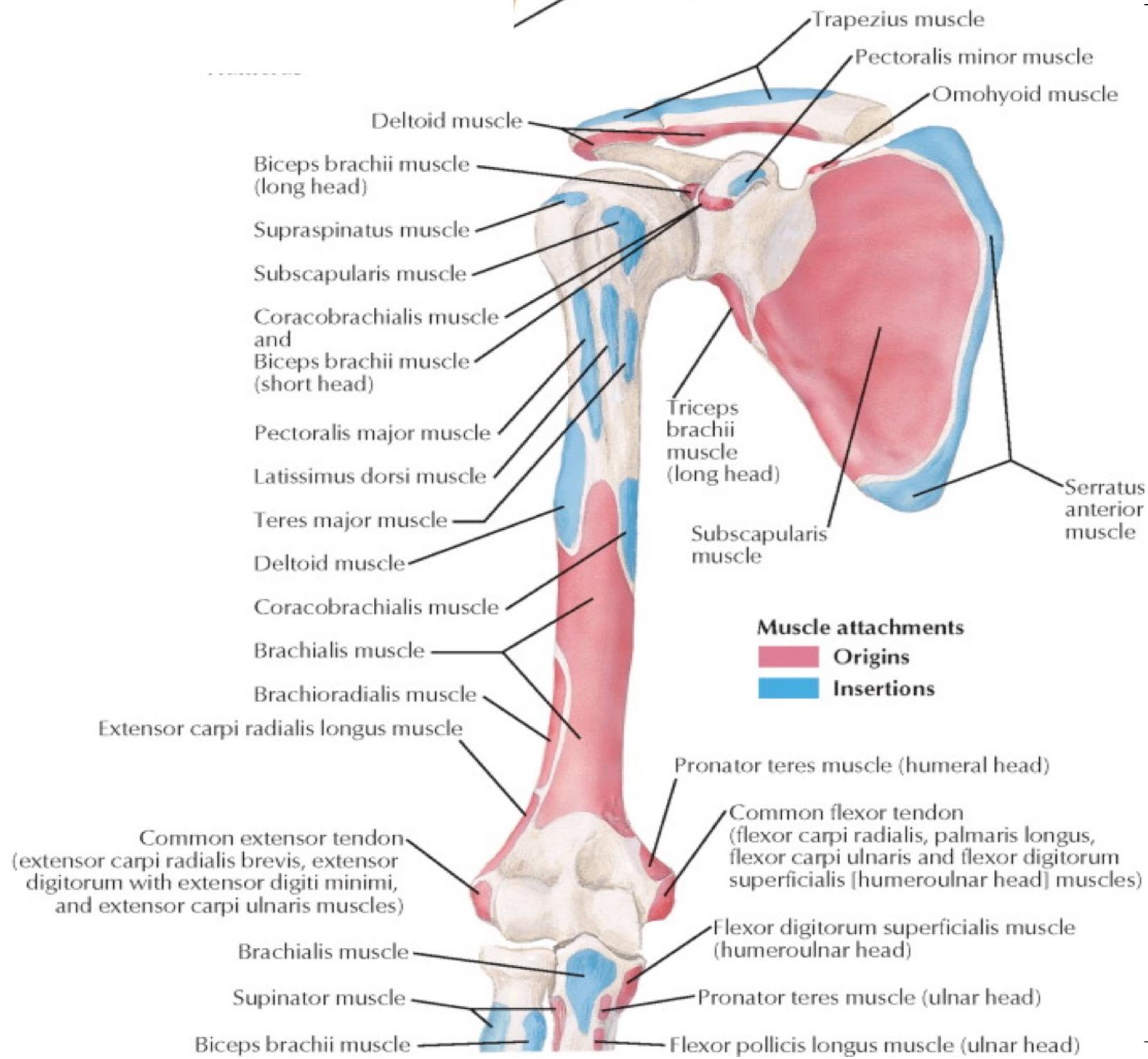
Origin

From Outer surfaces of the upper 8 ribs.

Insertion

Ventral lip of the medial border of the scapula.





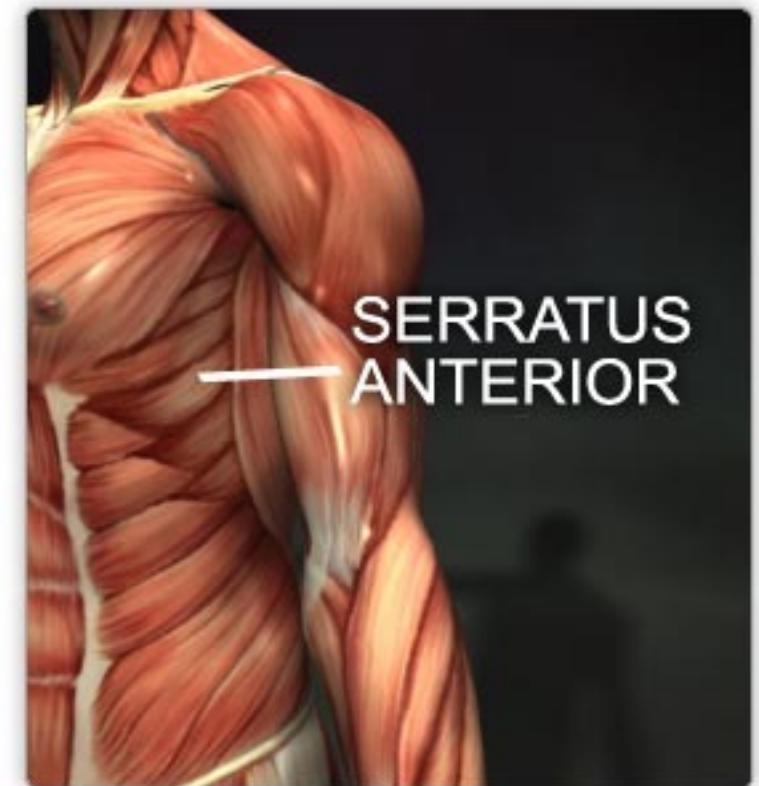
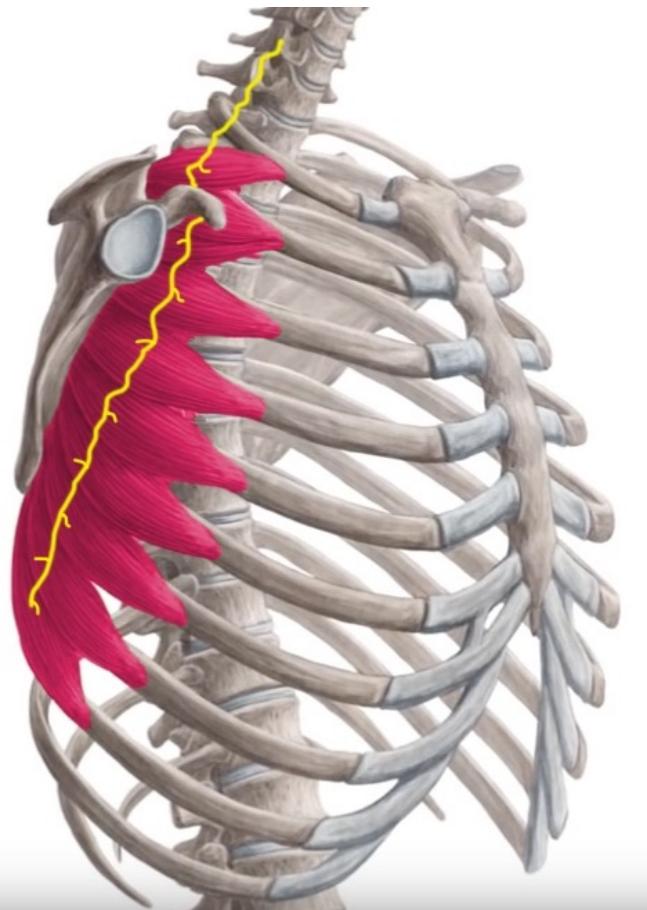
Nerve supply:

Nerve to serratus anterior (long thoracic nerve)

Action:

-Protraction of the scapula.

-Rotate the scapula upward during raising the arm above the head.



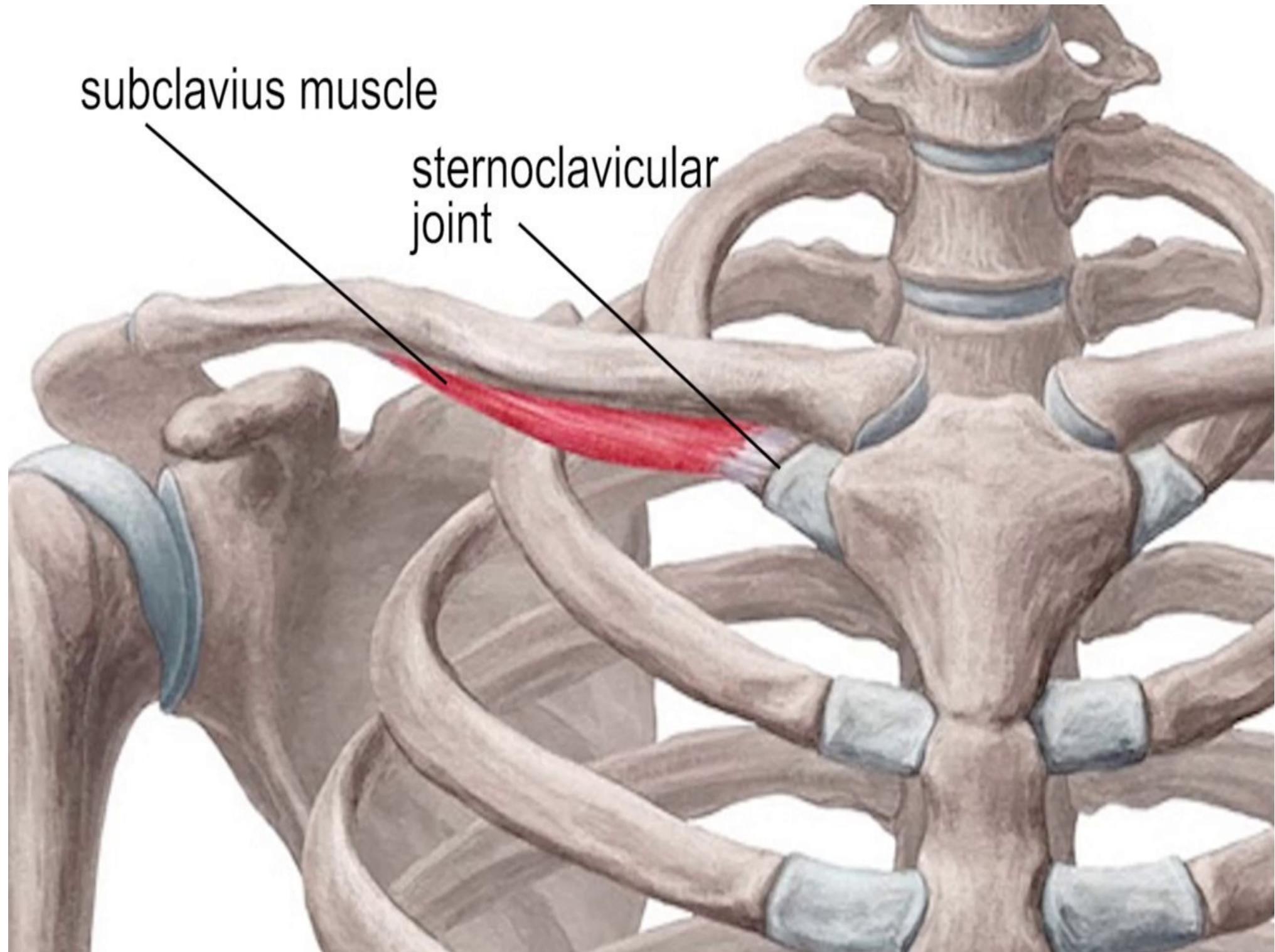
Serratus anterior Paralysis



Winging of Scapula

Subclavius Muscle





Nerve supply:

Nerve to subclavius from upper trunk of brachial plexus

Action:

- Depresses the clavicle
- Steadies the clavicle during movements of the shoulder girdle

Clavipectoral Fascia

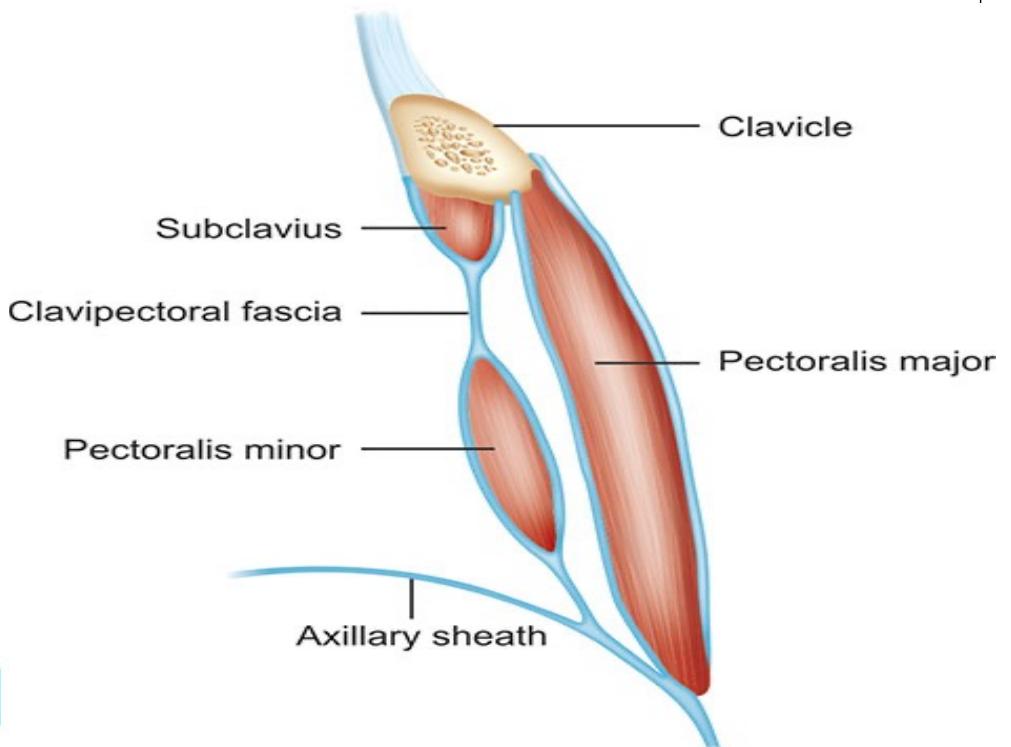
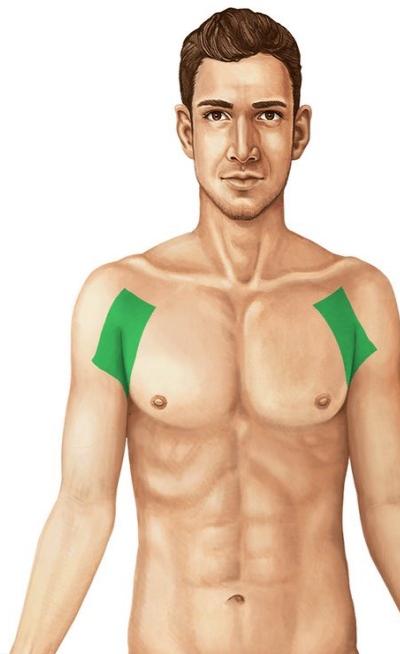
The clavipectoral fascia is a strong sheet of connective tissue

Attachment :

Above to the clavicle

Below it splits to enclose the pectoralis minor muscle and then continues downward as the **suspensory ligament of the axilla**

It forms “arm pits”, when the arm is abducted.



Muscles connecting Upper Limb with Vertebral column

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

Learning Objectives

- 1-Identify Muscles connecting Upper Limb with Vertebral column
- 2-Know attachment of Back Muscles
- 3- Identify nerve supply and action of back muscles

Layers of The Back Muscles

The first (Superficial) layer

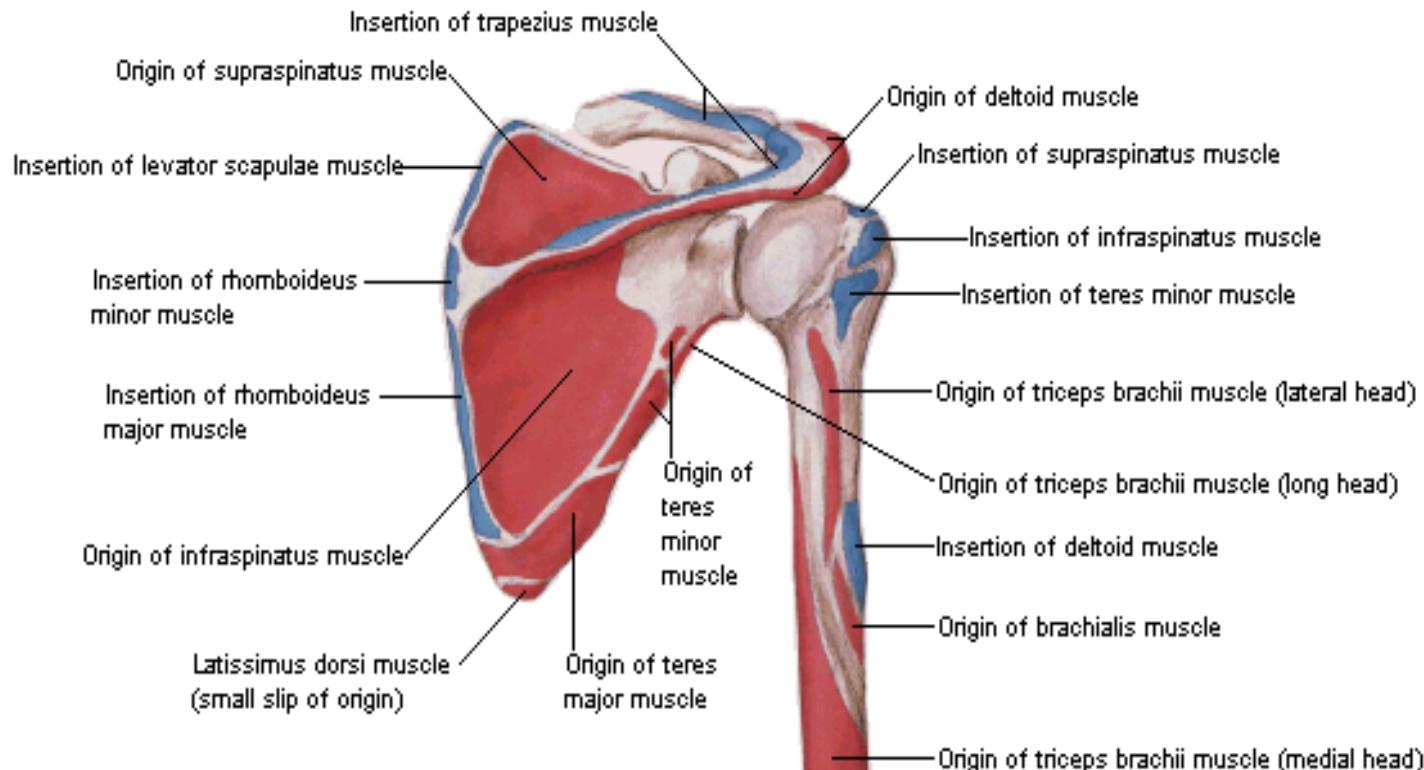
- 1- Trapezius
- 2-Latisssmus Dorsi

The second(deep) layer

- 3- Levator Scapula
- 4- Rhomboids Minor
- 5- Rhomboids major

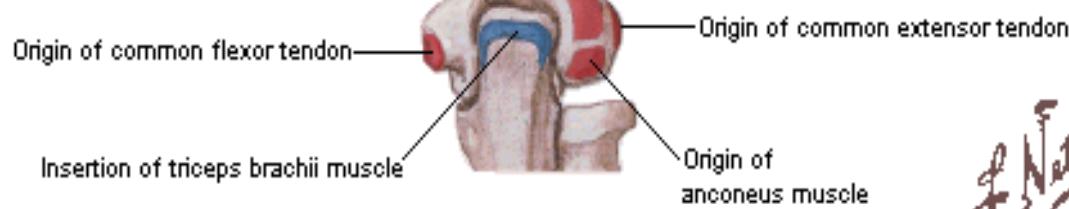
Humerus and Scapula

Posterior View - Muscle Attachments

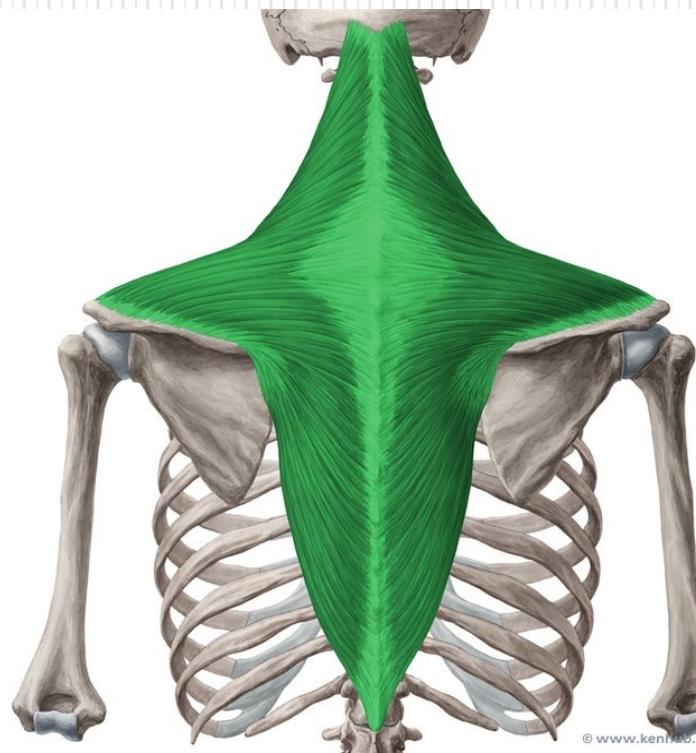


Muscle attachments

- Origins
- Insertions

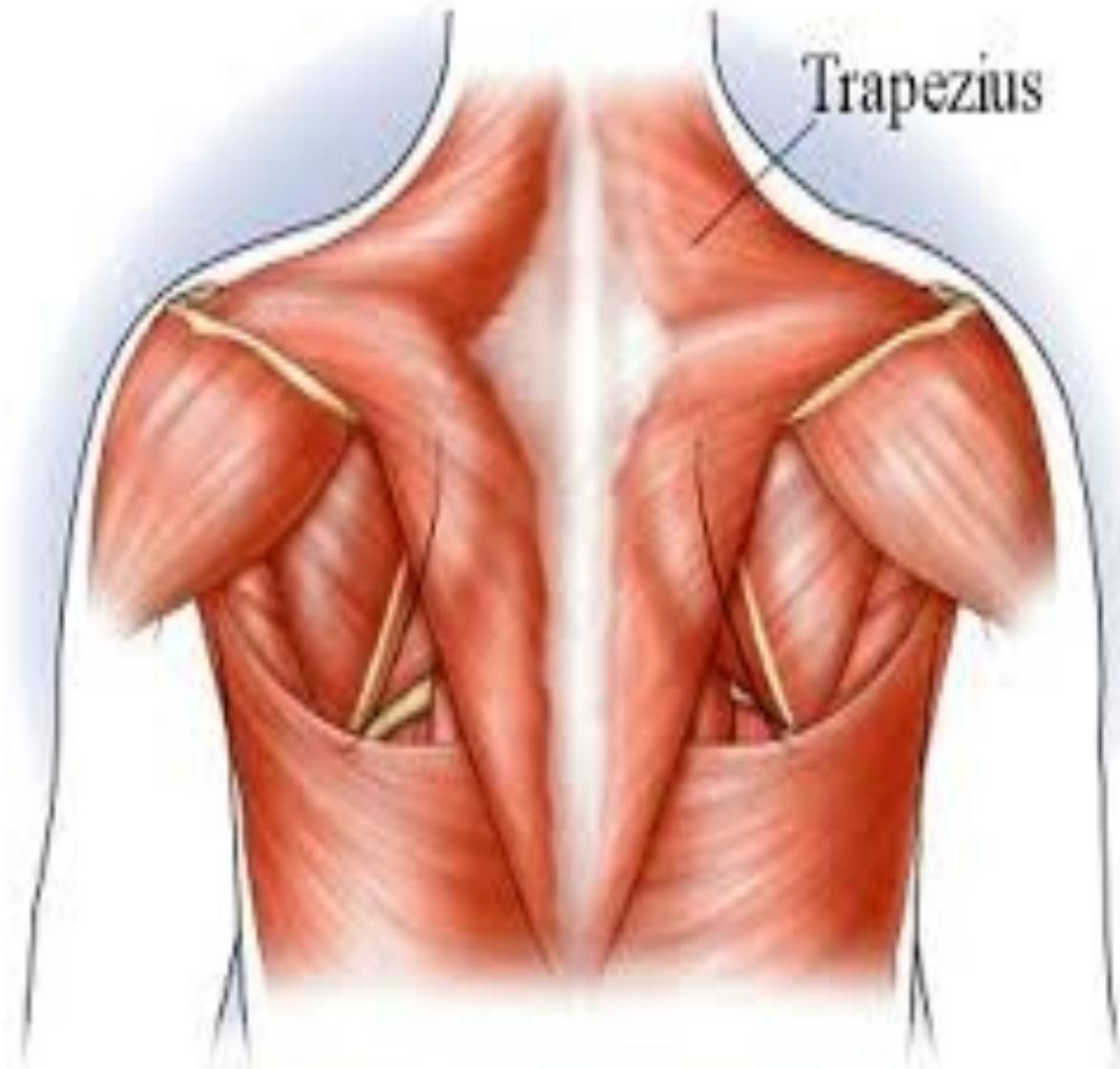


Trapezius





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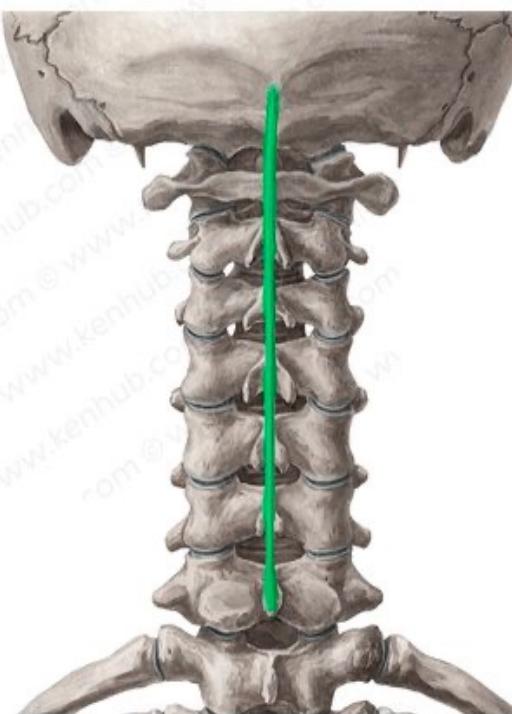
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Origin

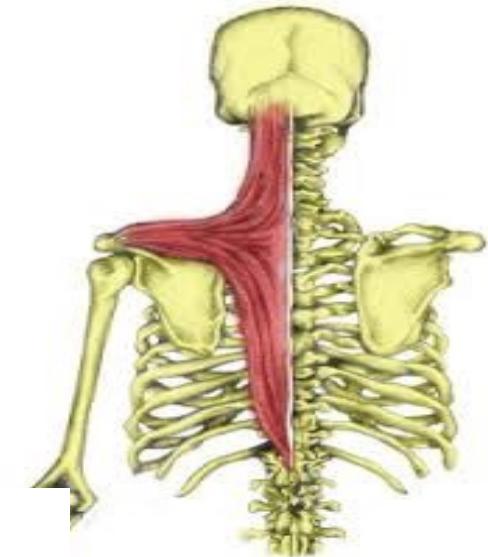
- ❖ External occipital protuberance
- ❖ Ligamentum Nuchae
- ❖ All the thoracic spines



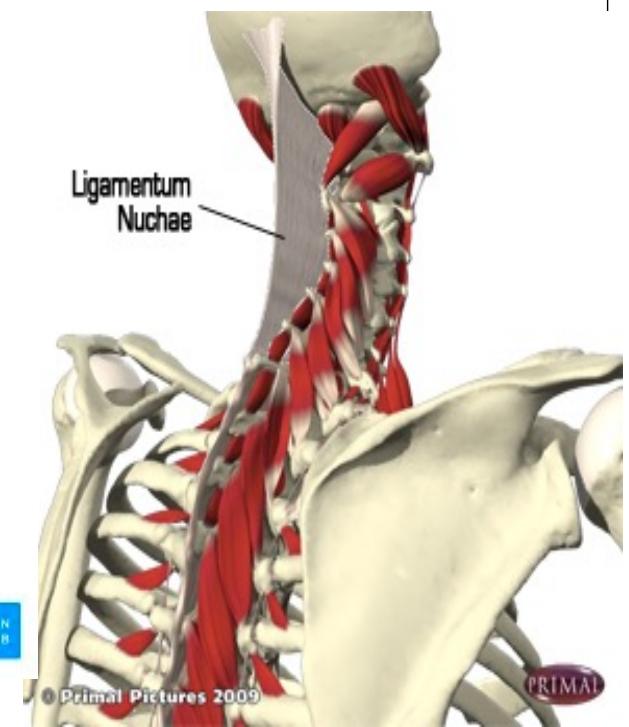
External occipital protuberance



Ligamentum Nuchae



Ligamentum
Nuchae



Insertion :

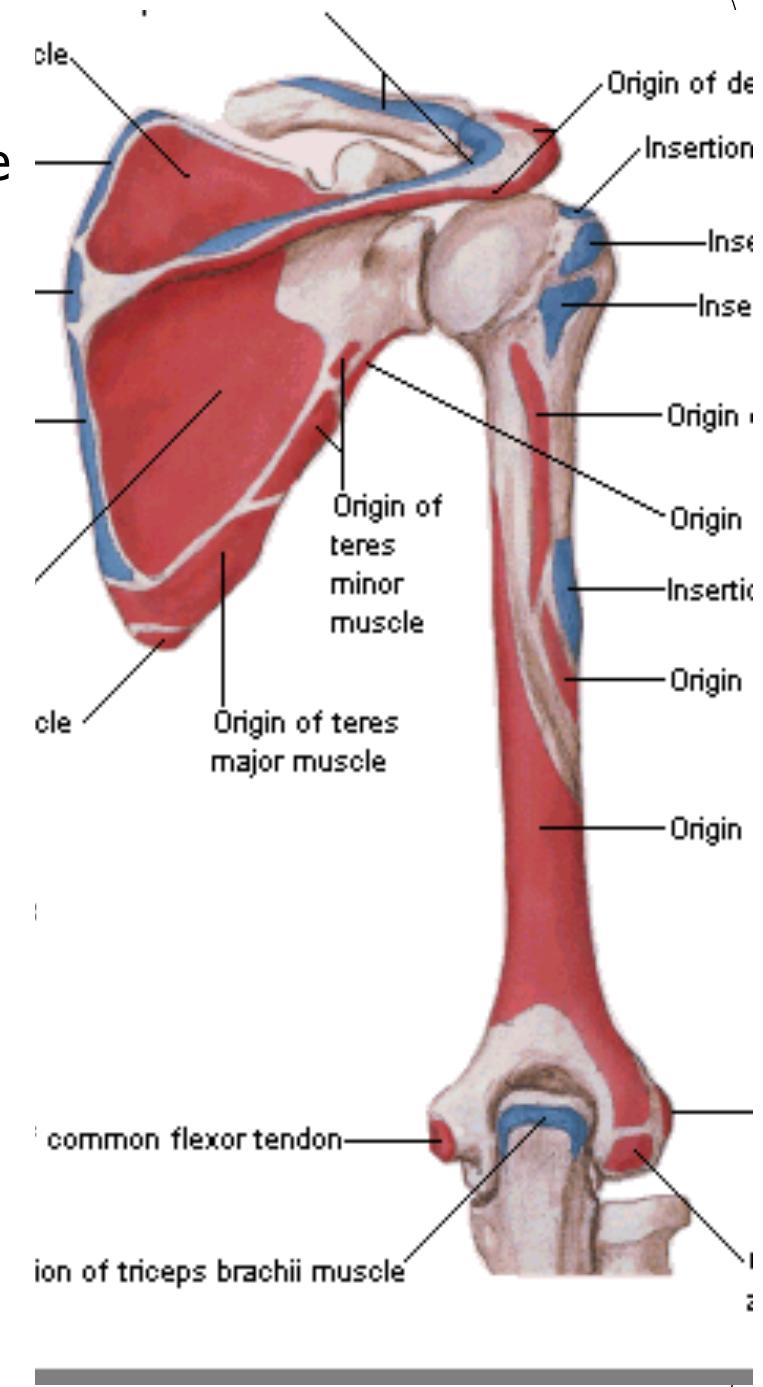
- Posterior border of lateral third of the clavicle
- Medial border of acromion
- Upper border of spine

Nerve supply:

Spinal accessory N .

Action

Elevates , retracts and **rotates** the scapula





Paralysis of Trapezius

Dropping of the shoulder and can't elevate the shoulder

Latissimus dorsi

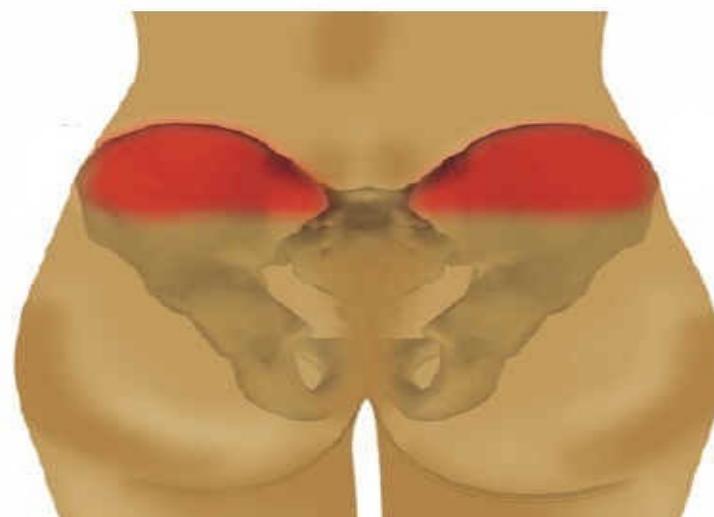
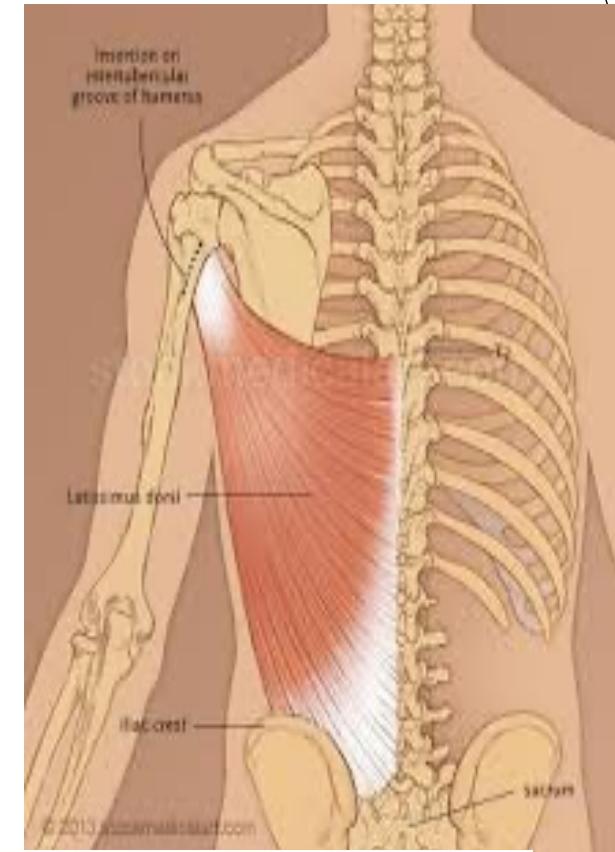
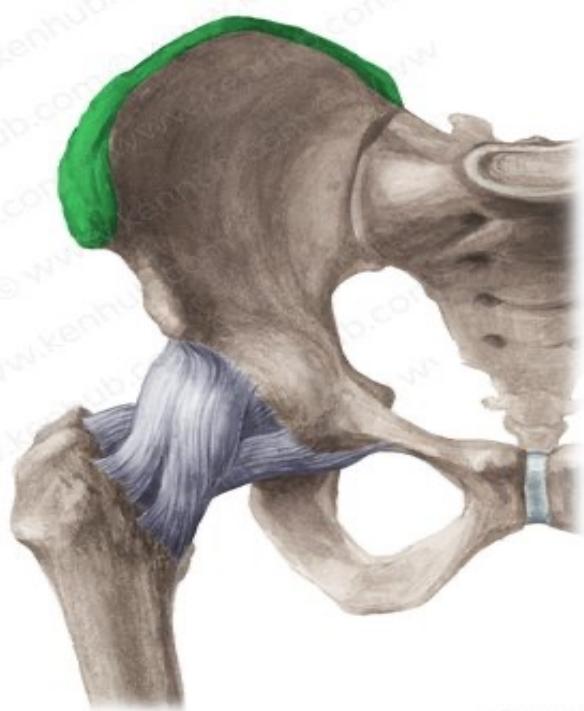


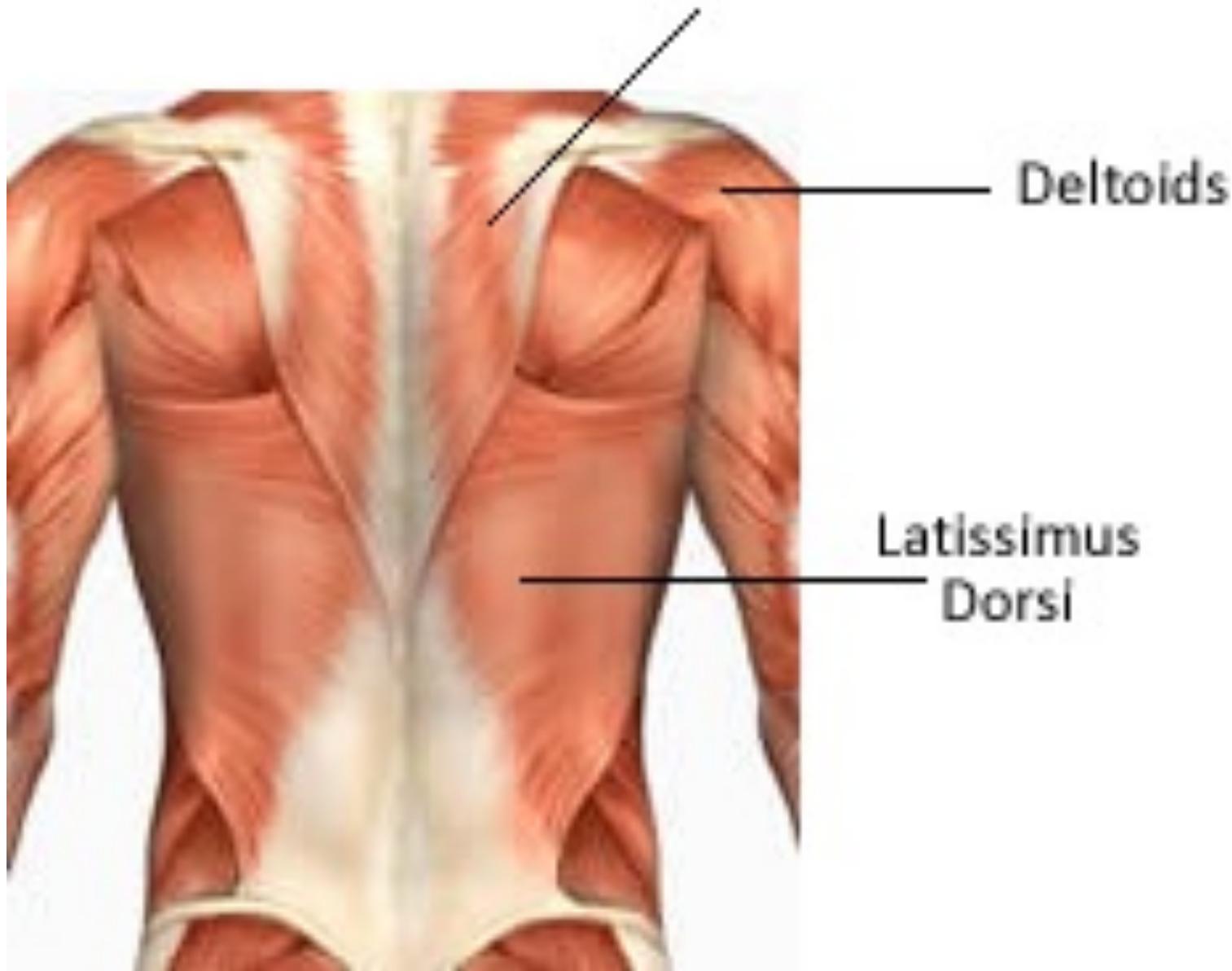
Origin

1. Spines of lower six thoracic vertebrae
2. Iliac crest of hip bone
3. Inferior angle of scapula

4. Insertion

The floor of the bicipital groove.





Trapezius

Deltoids

Latissimus
Dorsi

Nerve supply:

Thoracodorsal nerve (C6,7,8).

Action:

1. Adduction and Medial rotation
2. Extension of the arm

(Swimming !!)



Levator Scapula



Origin:

Transverse processes of the upper 4 cervical vertebrae.

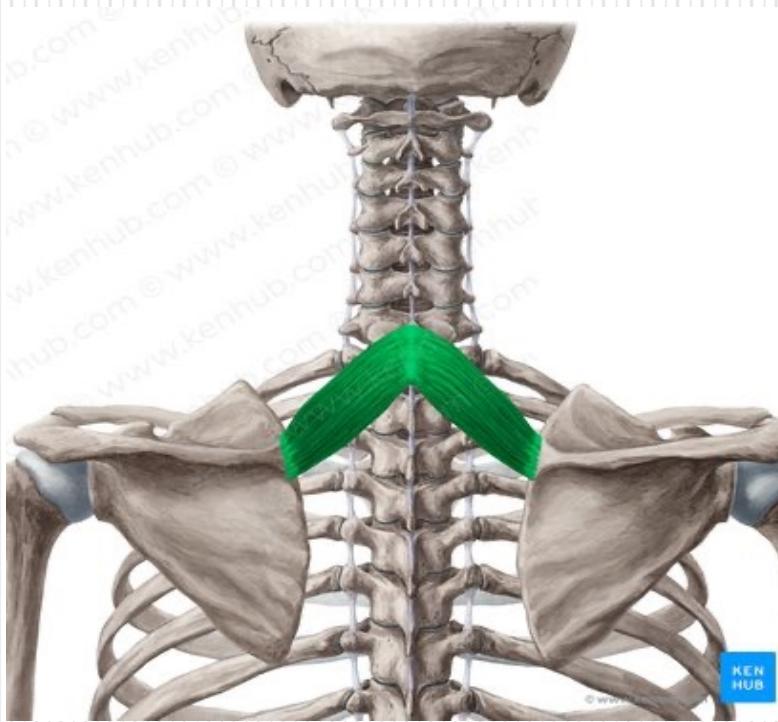
Insertion

Back of the medial border of the scapula

READ ONLY



Rhomboids minor



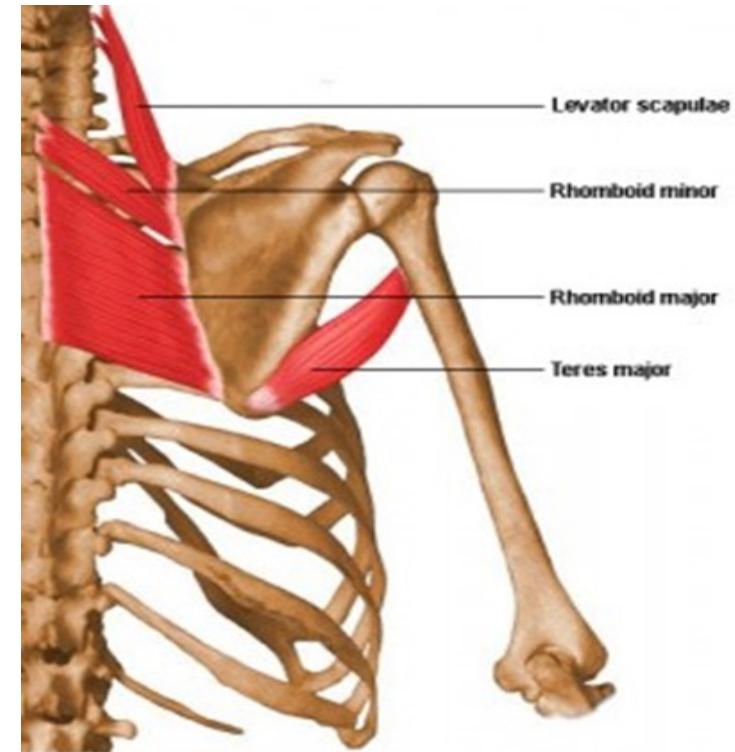
Origin:

Spine of 7th cervical and 1st thoracic vertebra.

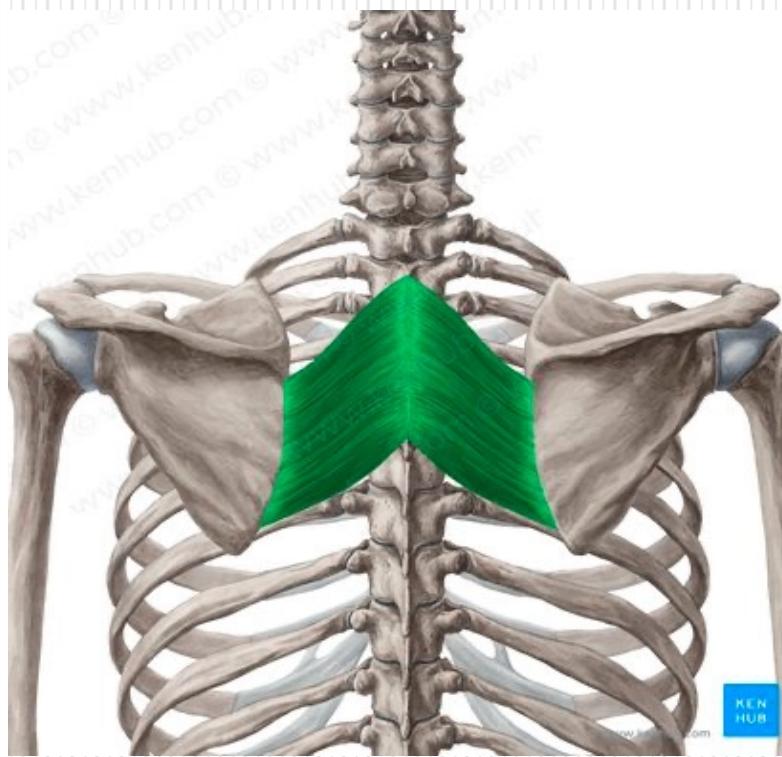
READ ONLY

Insertion:

Medial end of the scapular spine.



Rhomboids major



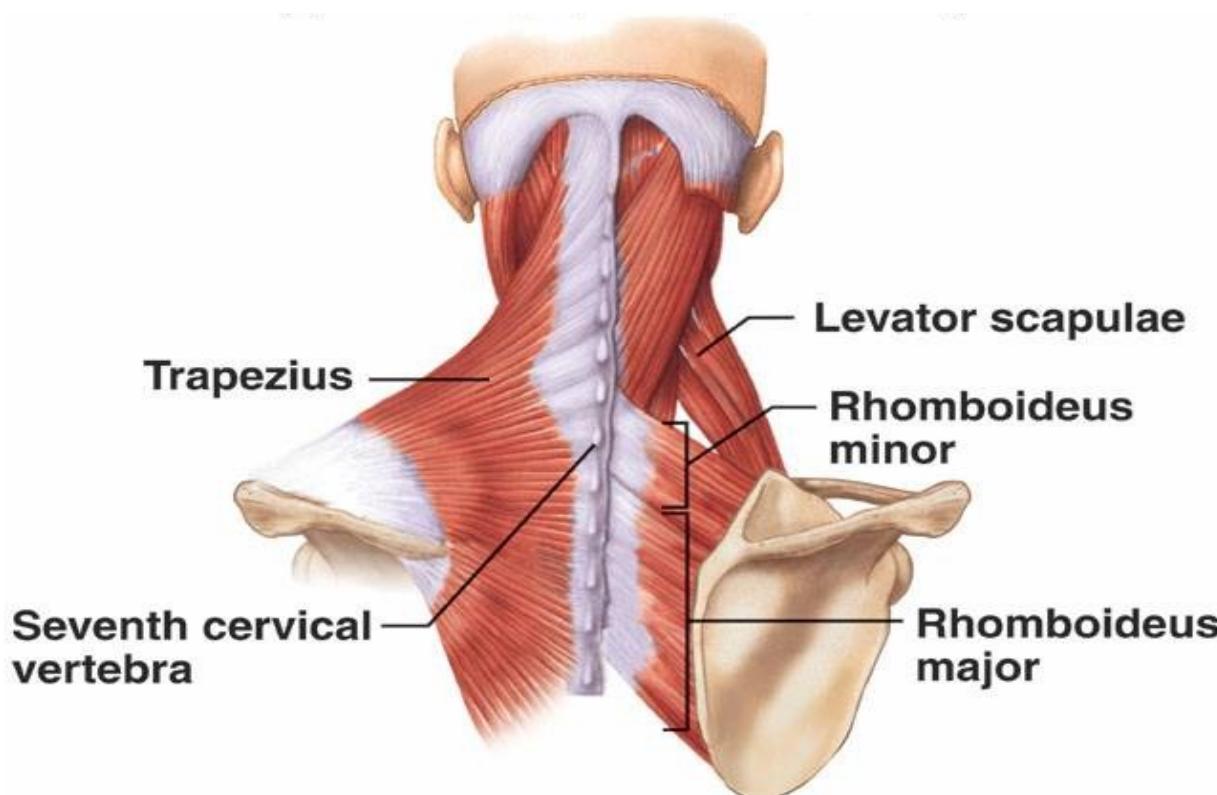
Origin:

spines of T 2,3,4,5

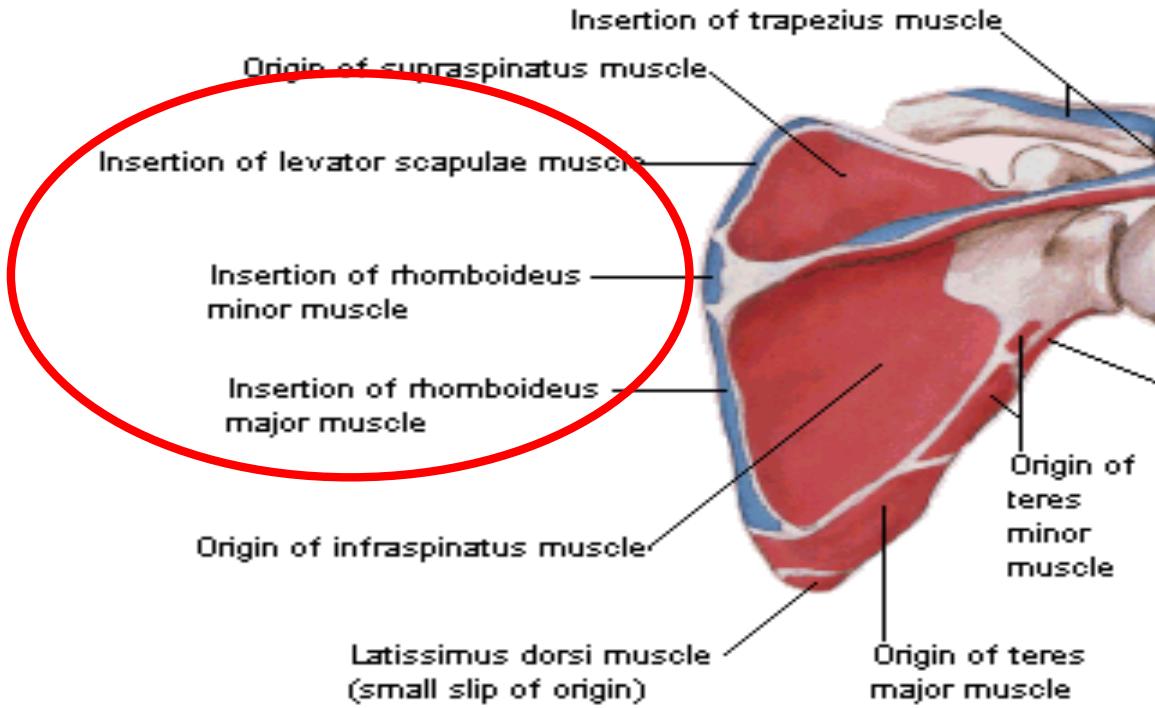
READ ONLY

Insertion:

Back of the medial border of the scapula from spine to inferior angle

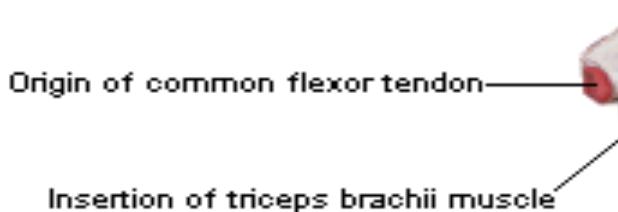


Humerus and Posterior View - Mus



Muscle attachments

- Origins
- Insertions



Nerve supply & Action of Rhomboids & Levator Scapulae

Nerve supply

Dorsal scapular nerve

Actions

- These muscles, retract of the scapula.
- Levator scapula, elevates the scapula ,and when shoulder is fixed, it laterally flexes of the neck

- A: Rhomboids Minor
- B: Rhomboids major
- C: Trapezius
- D: Latisssmus Dorsi
- E: Levator Scapula

