



Muscles of the upper limb

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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

M

Greater Tuberosity

Lesser Tuberosity

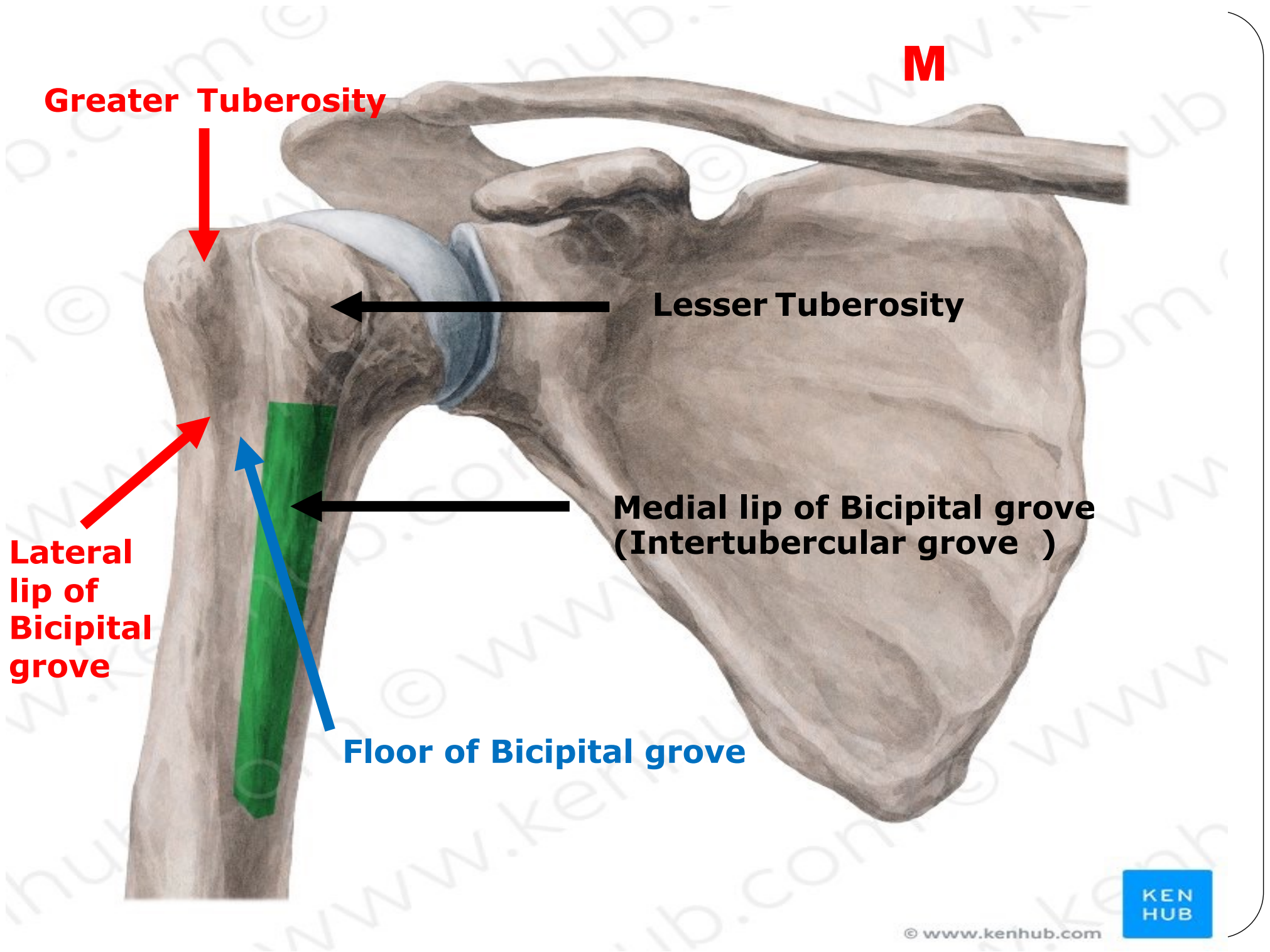
**Medial lip of Bicipital groove
(Intertubercular groove)**

**Lateral
lip of
Bicipital
grove**

Floor of Bicipital groove

**KEN
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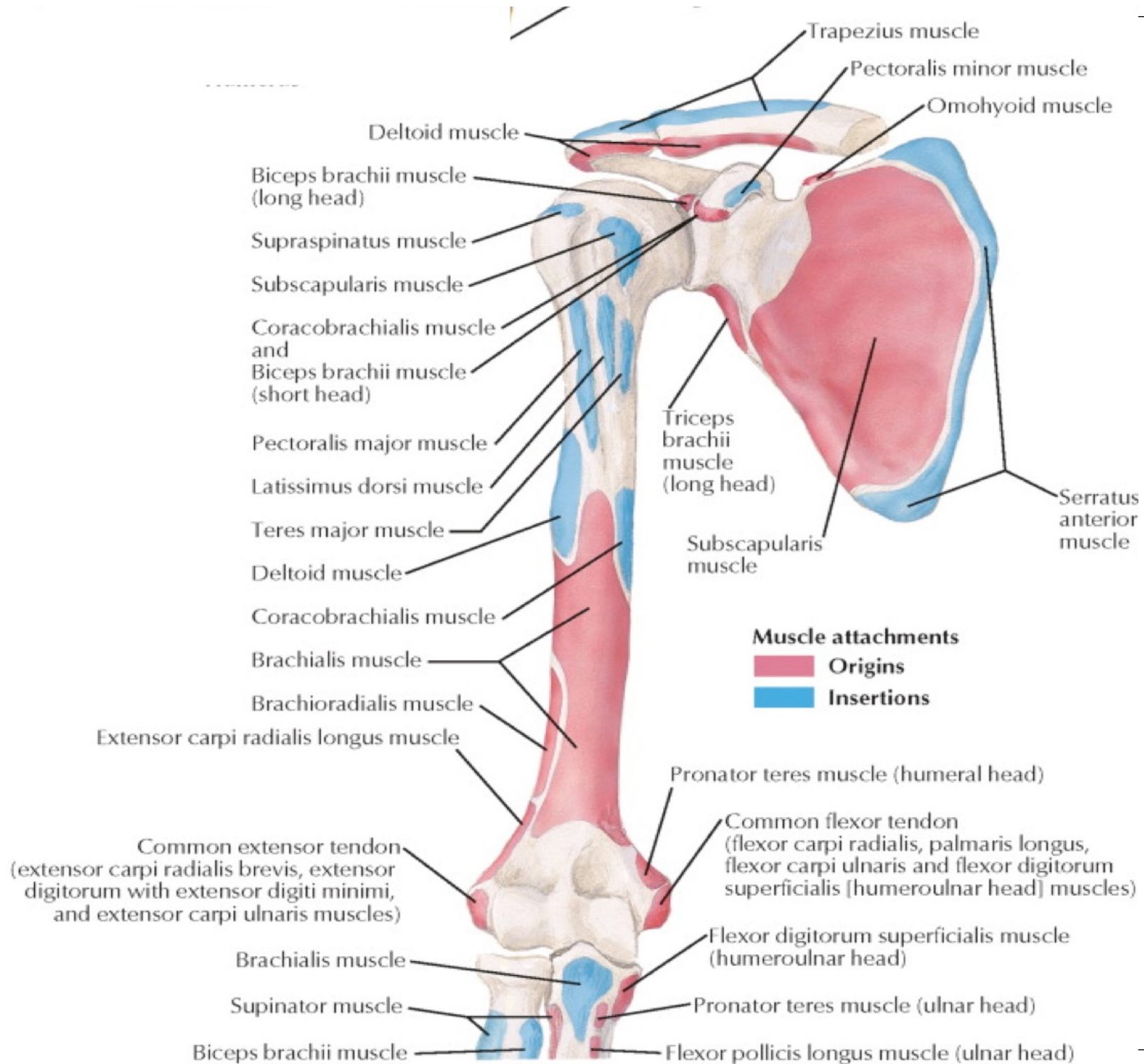
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Muscles connecting Upper Limb with Thoracic Wall

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.

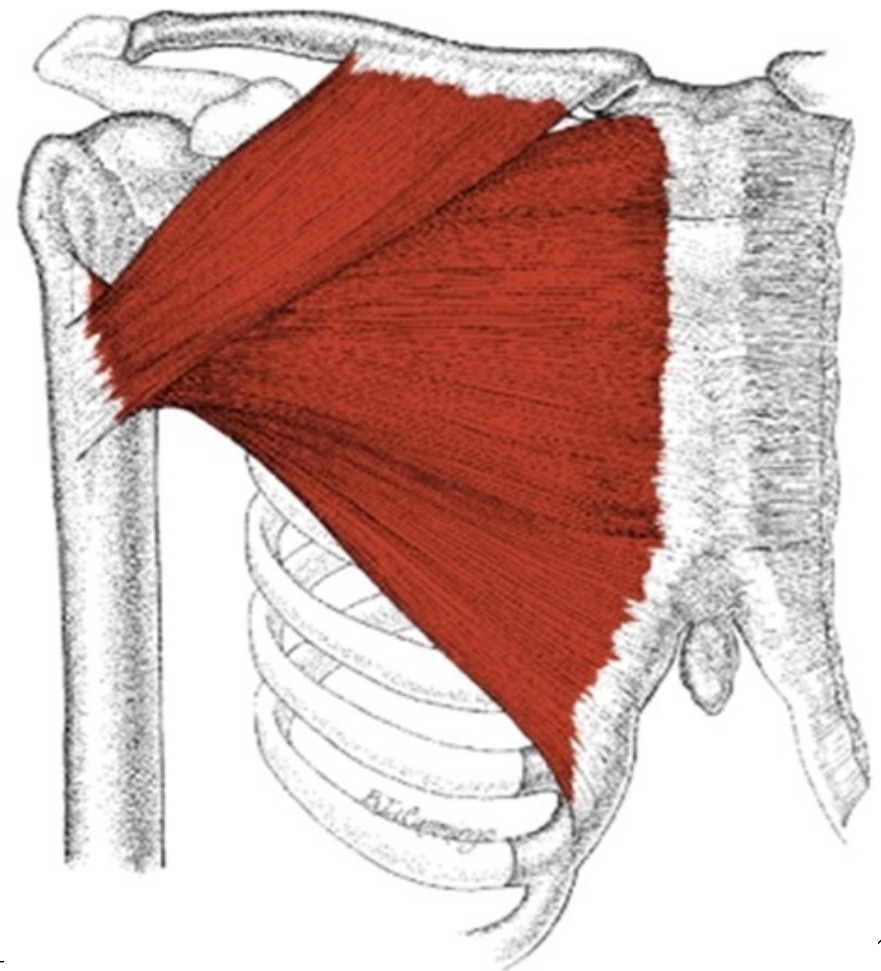
Sternocostal head:

- 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:

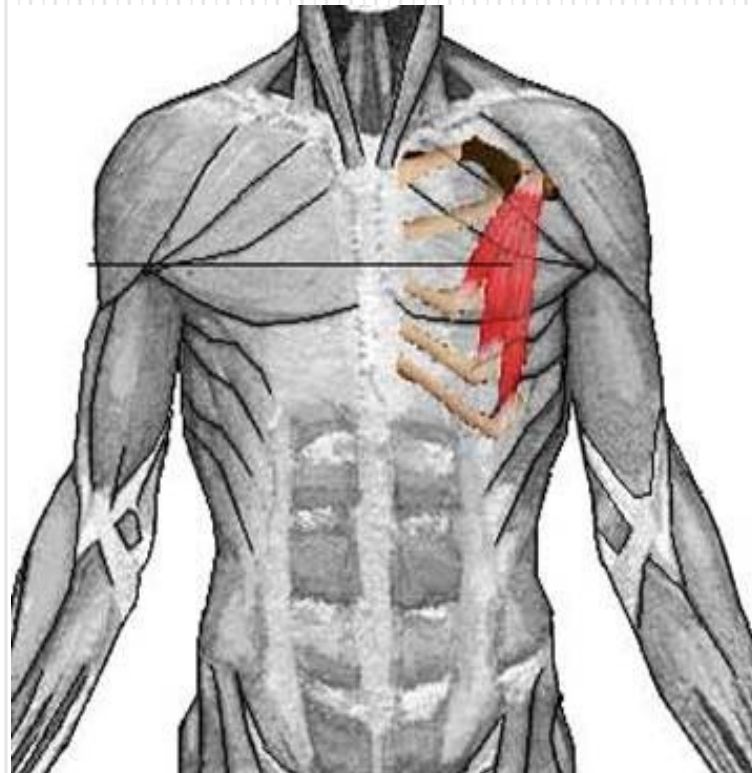
- 1-Adduction and medial rotation of the arm.
- 2- Flexion of the arm.
- 3-The sternocostal head, with the arm raised and fixed, can raise the trunk as in climbing



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

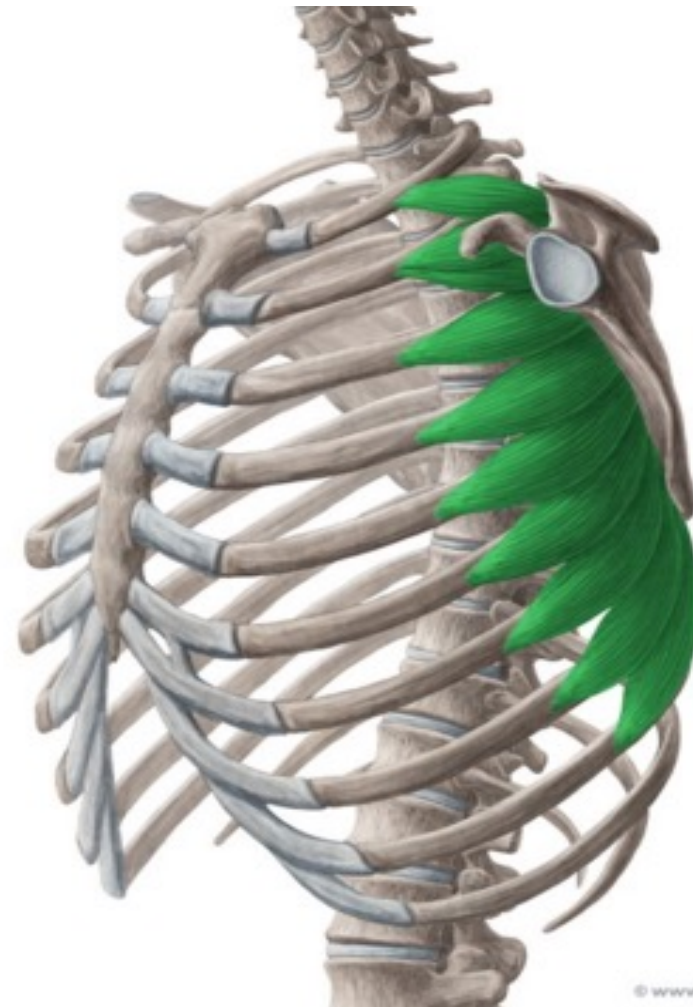
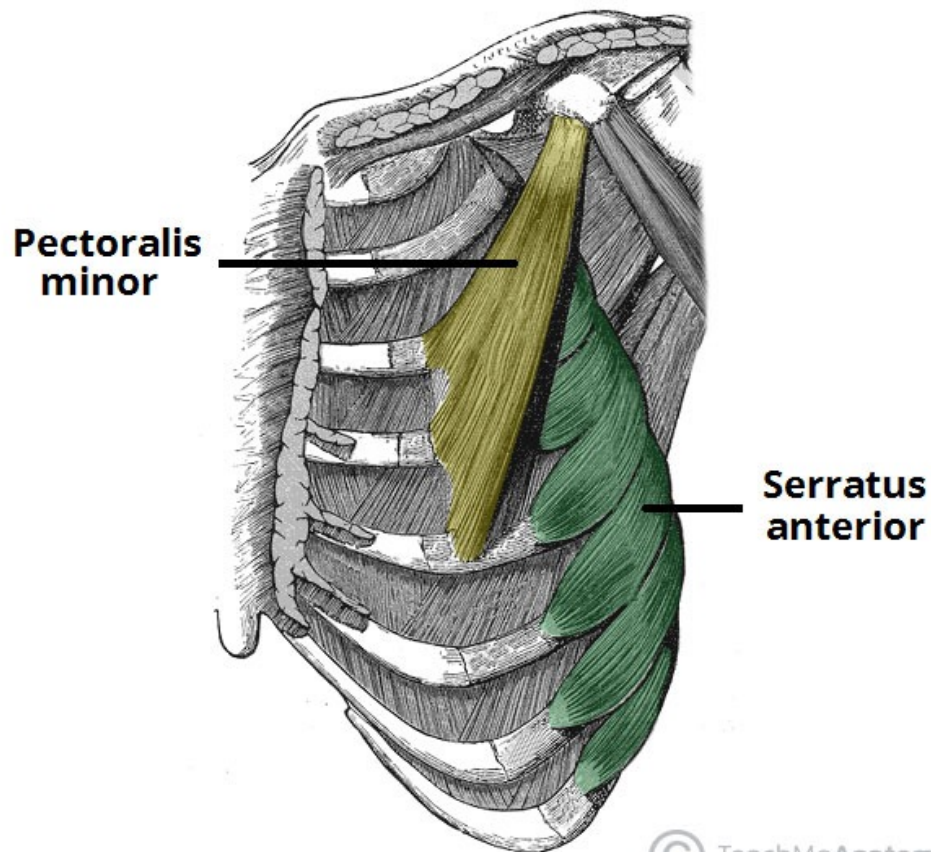


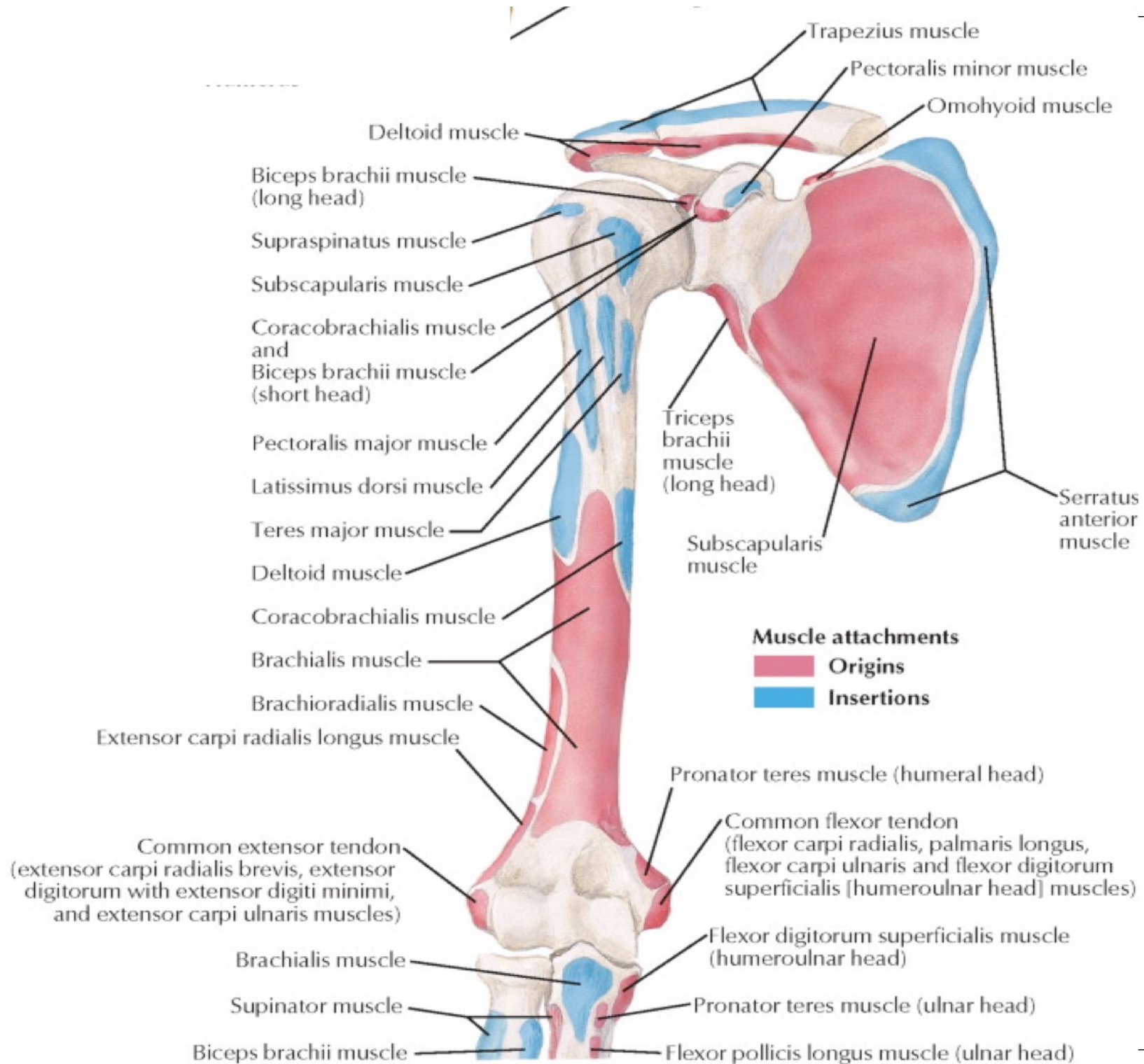
Origin

From Outer surfaces of the upper 8 ribs.

Insertion

Ventral lip of the medial border of the scapula.



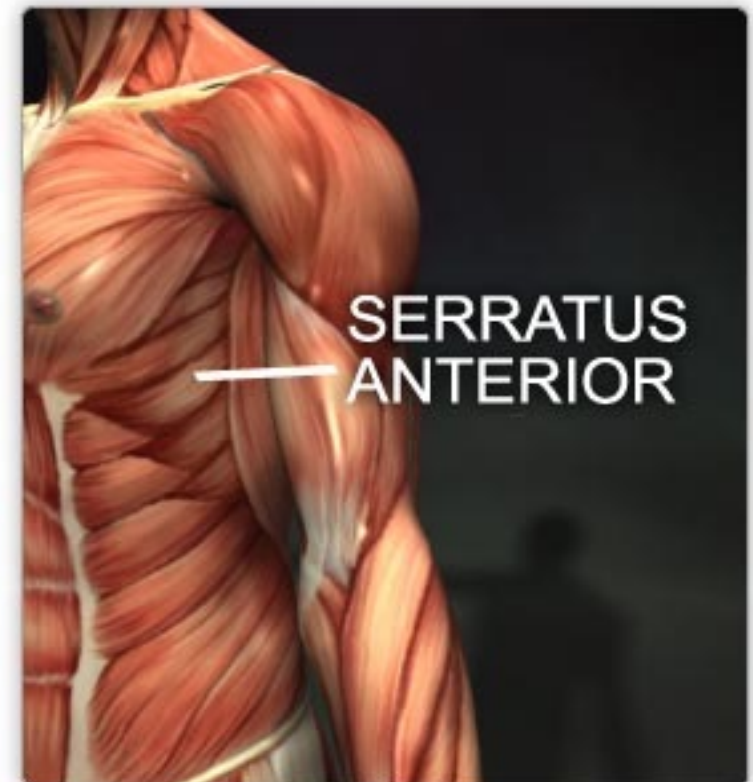
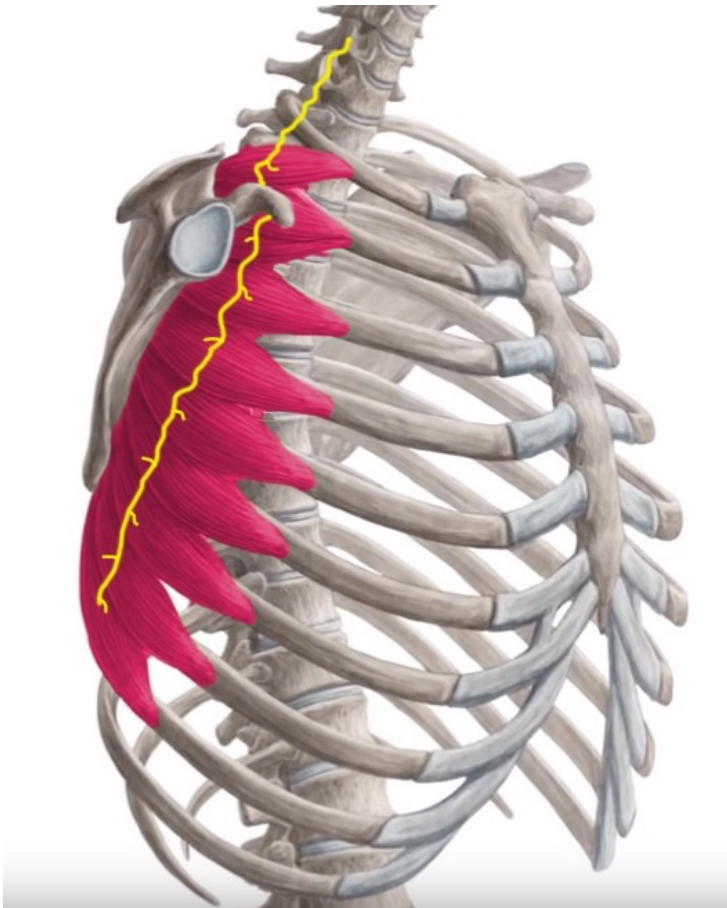


Nerve supply:

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



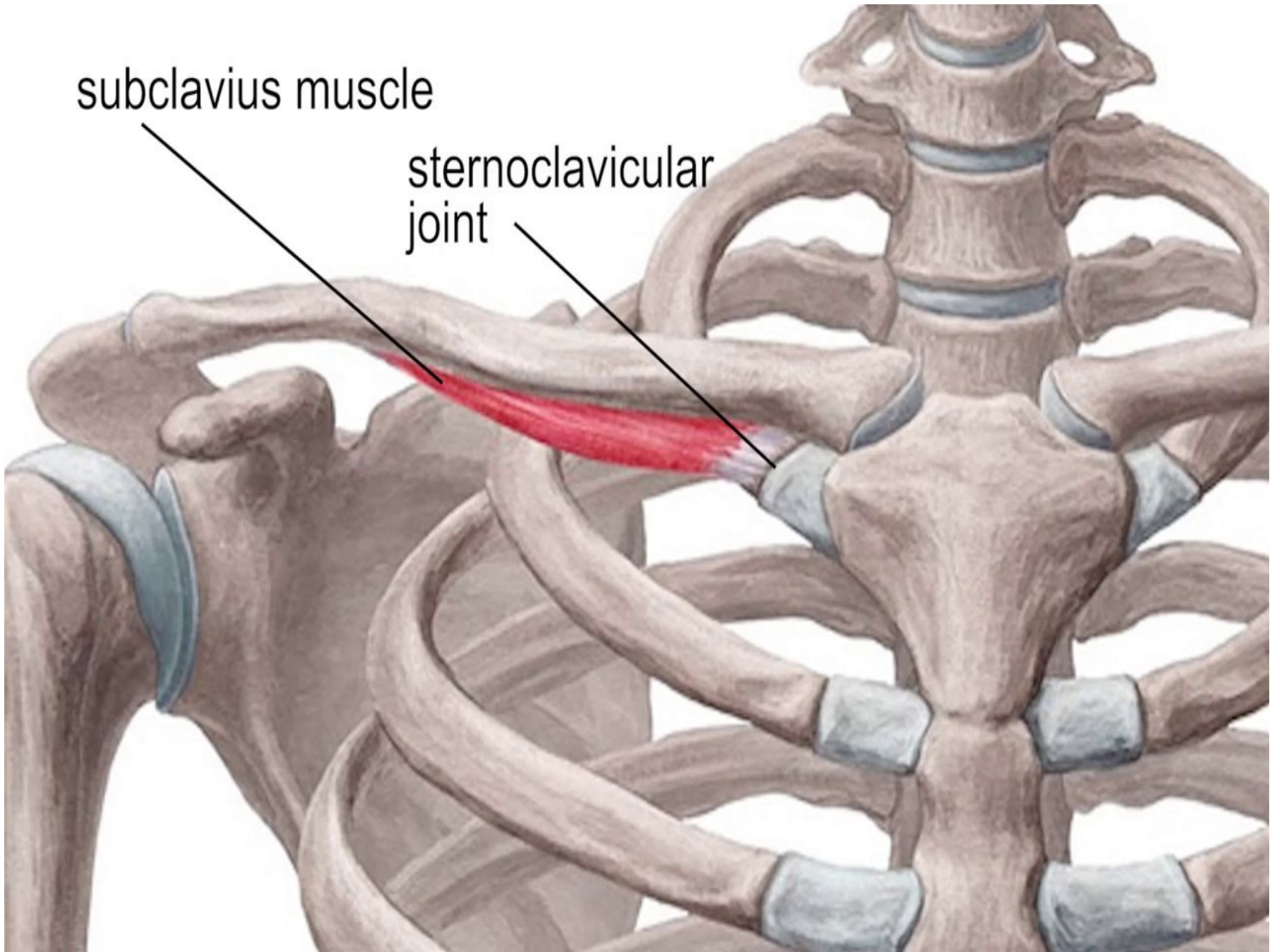
Winging of Scapula

Subclavius Muscle



subclavius muscle

sternoclavicular
joint



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

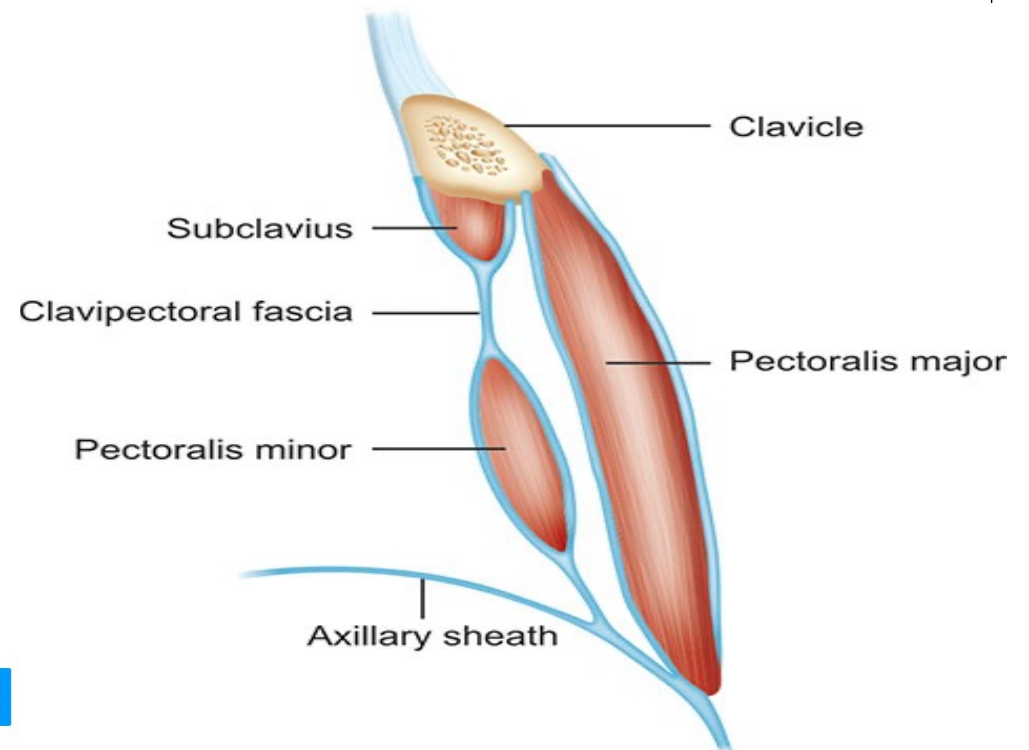
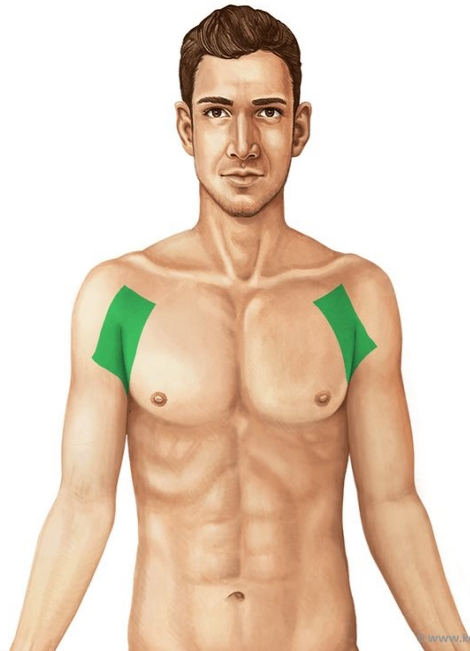
The clavipectoral fascia is a strong sheet of connective tissue

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

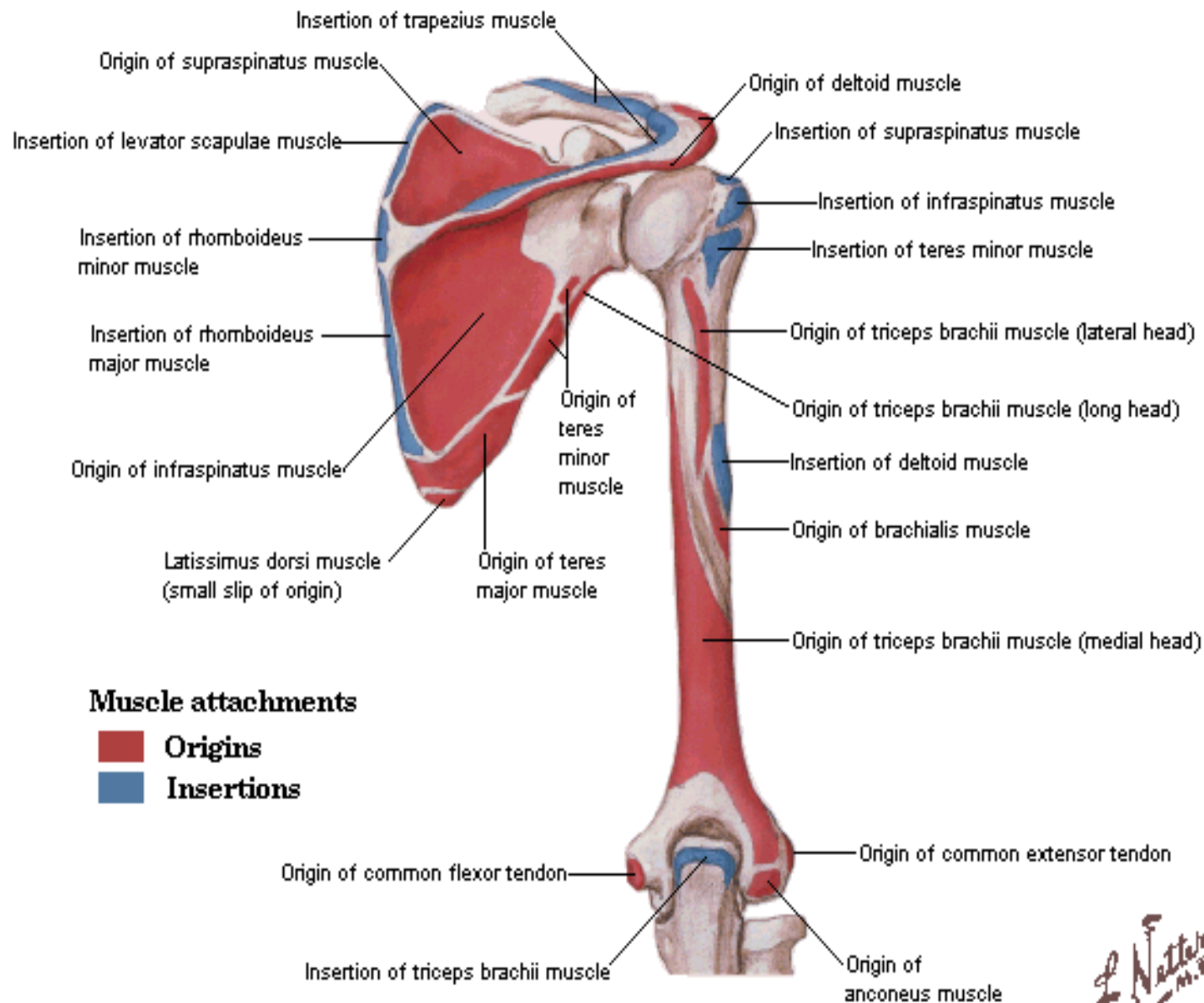
- 1- Trapezius
- 2- Latisssmus Dorsi

The second(deep) layer

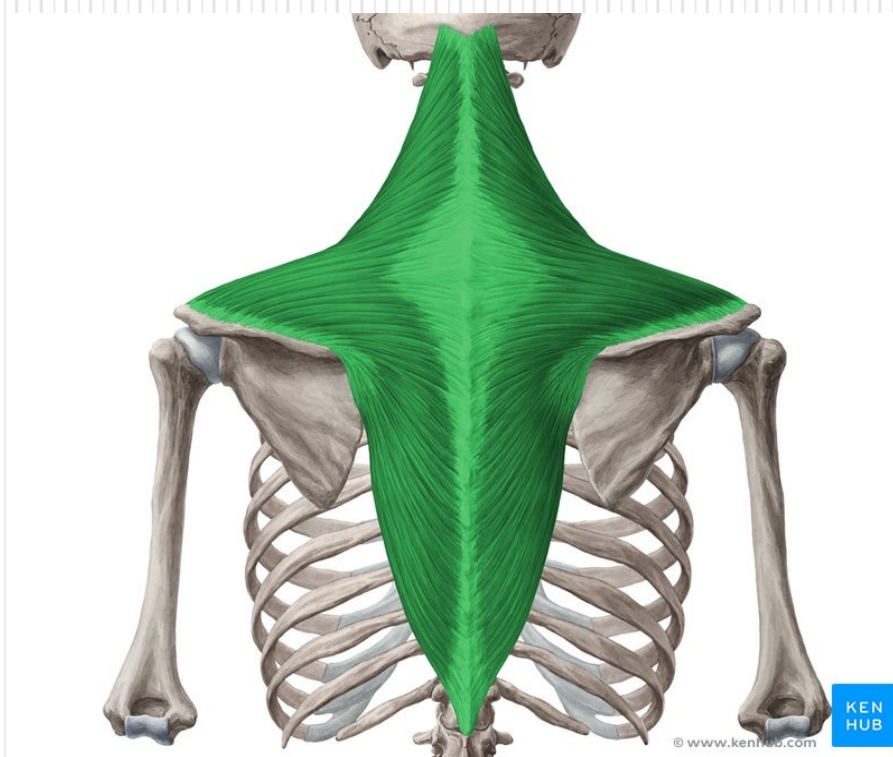
- 3- Levator Scapula
- 4- Rhomboids Minor
- 5- Rhomboids major

Humerus and Scapula

Posterior View - Muscle Attachments

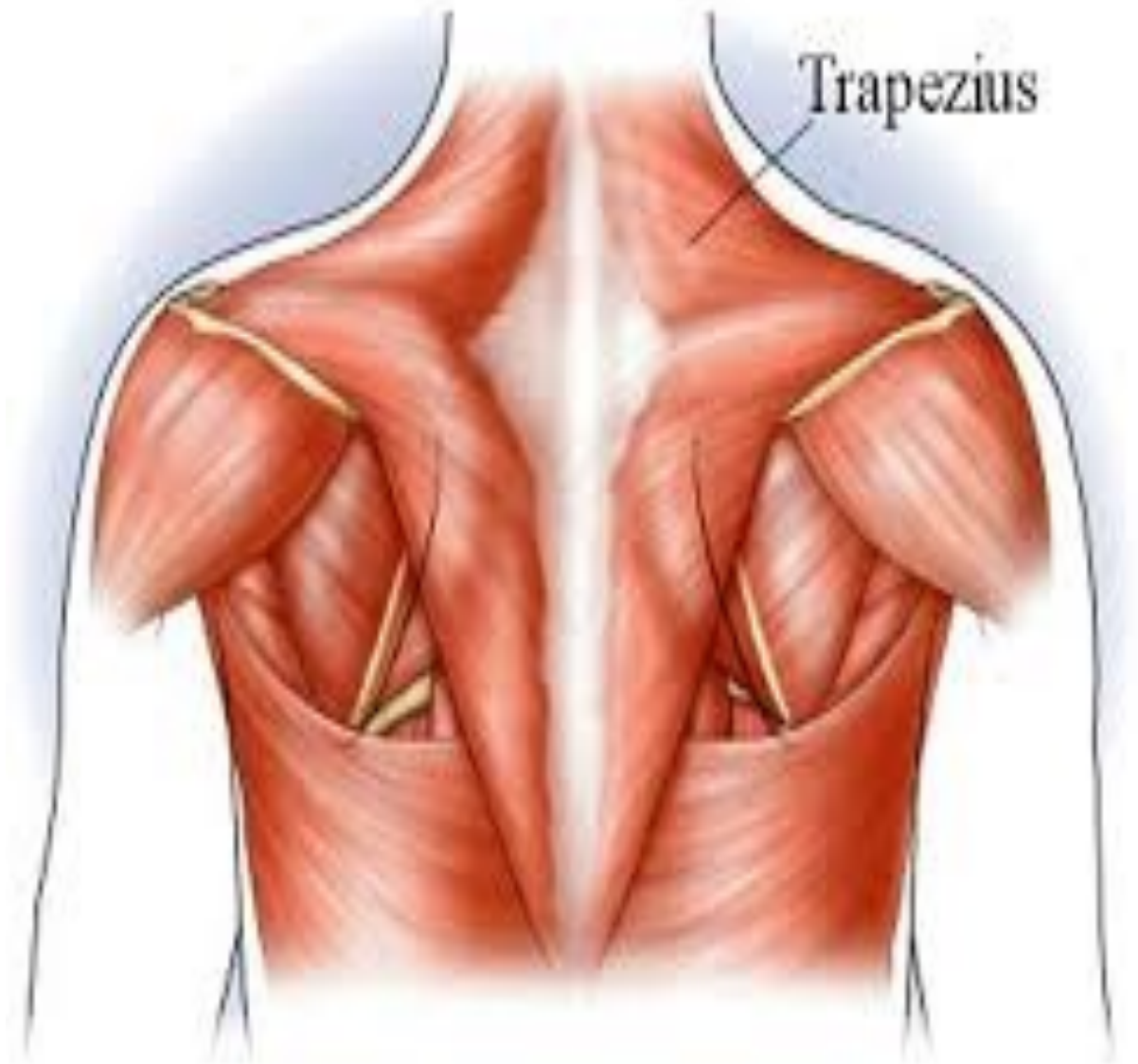


Trapezius





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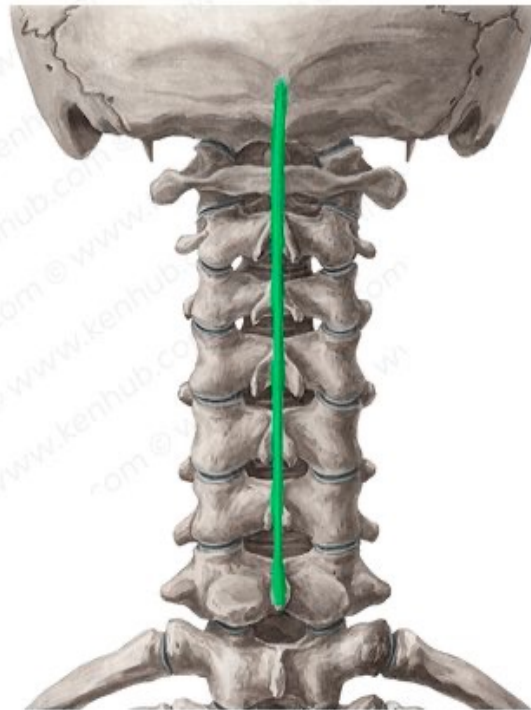
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Origin

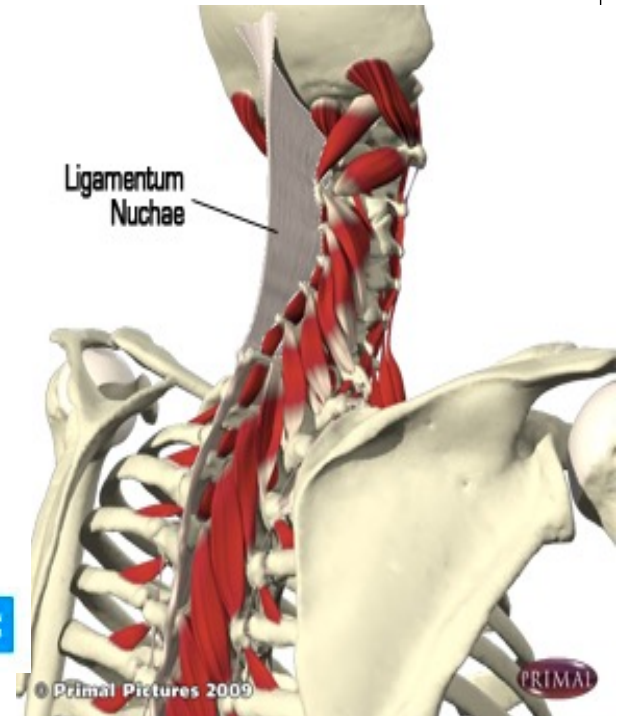
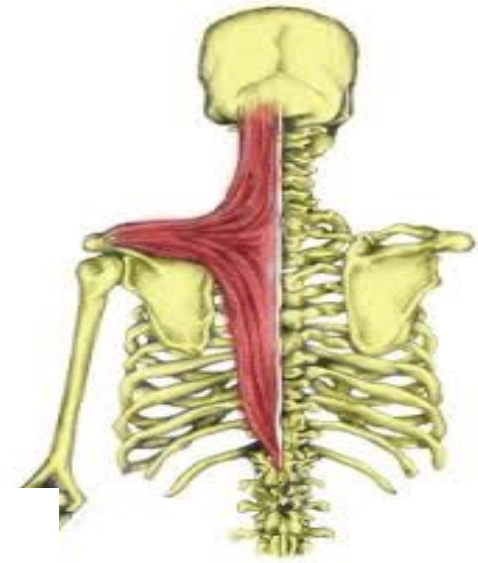
- ❖ External occipital protuberance
- ❖ Ligamentum Nuchae
- ❖ All the thoracic spines



External occipital protube



Ligamentum Nuchea



Insertion :

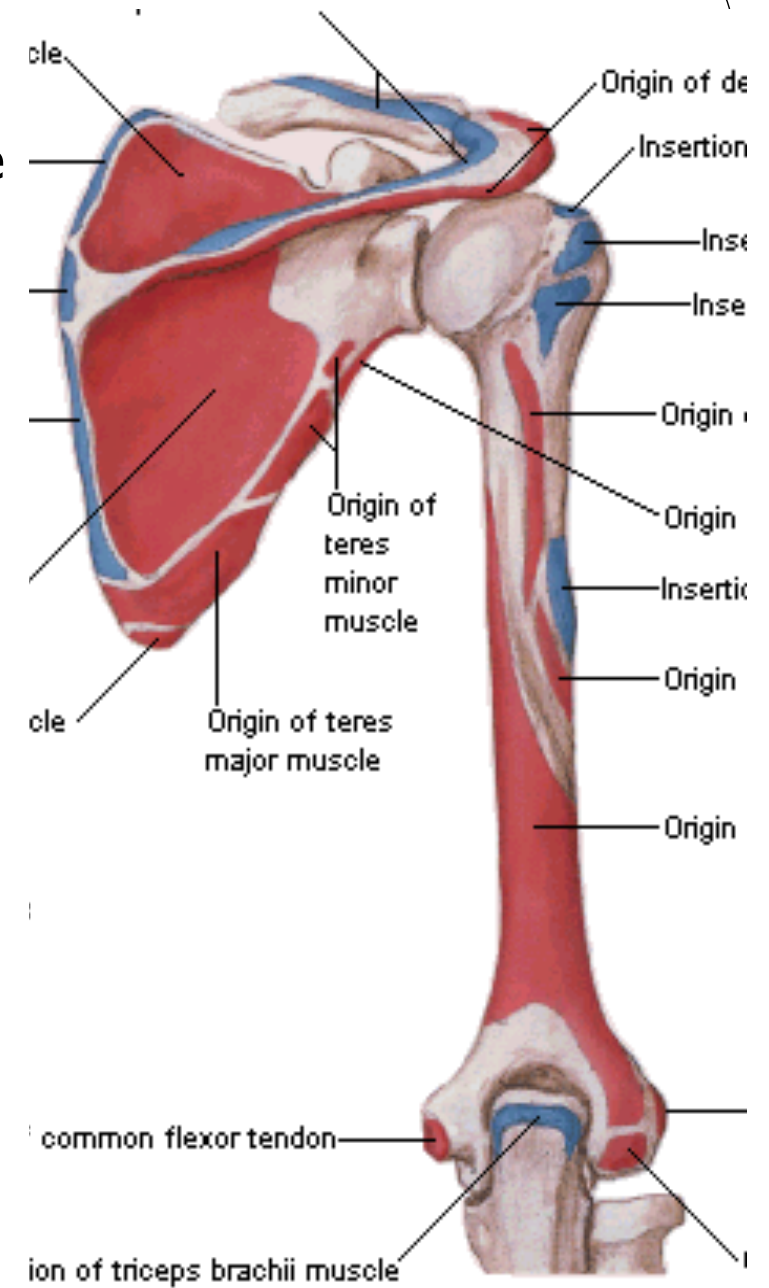
- Posterior border of lateral third of the clavicle
- Medial border of acromion
- Upper border of spine

Nerve supply:

Spinal accessory N .

Action

Elevates , retracts and **rotates** the scapula

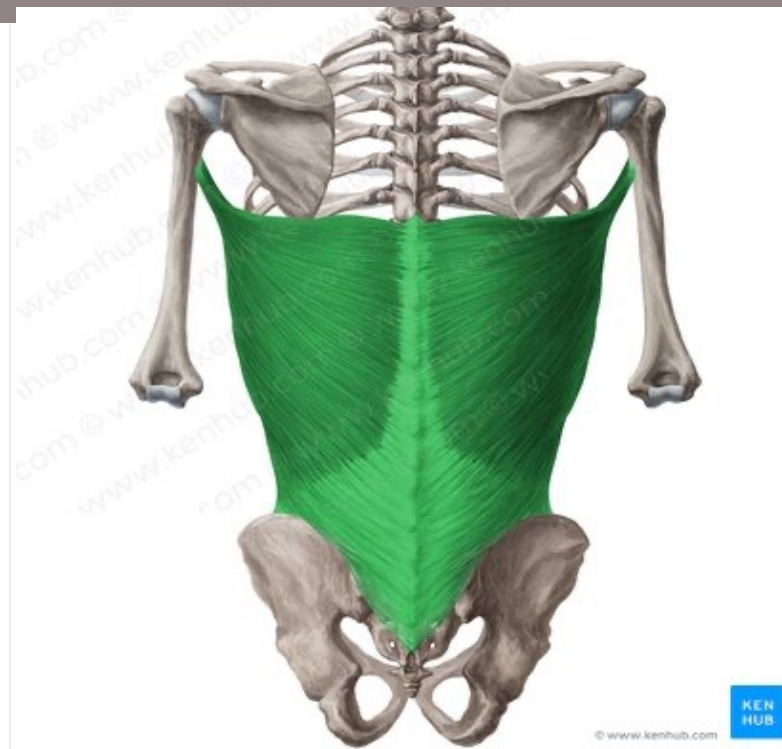




Paralysis of Trapezius

Dropping of the shoulder and can't elevate the shoulder

Latissimus dorsi

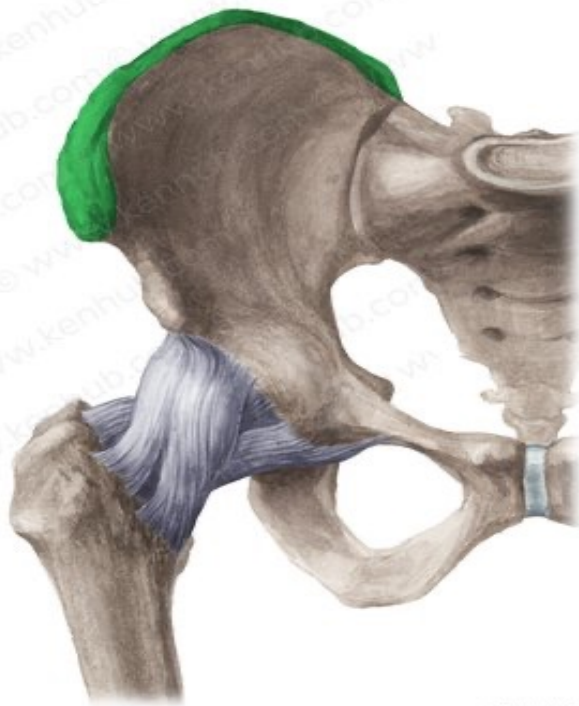
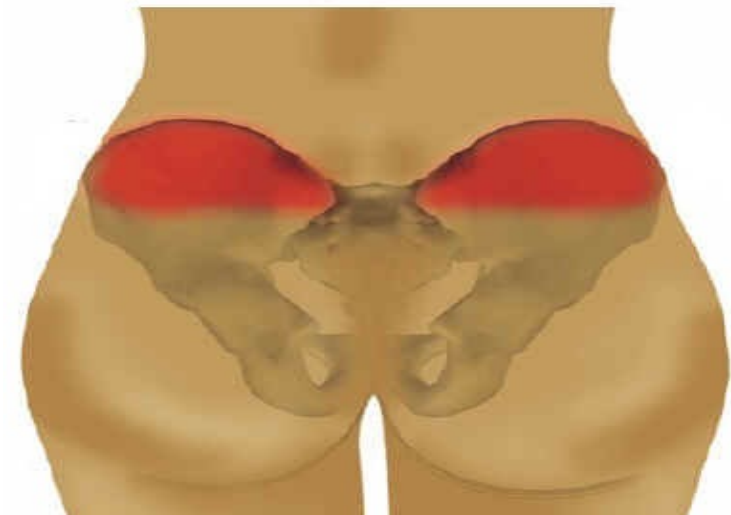
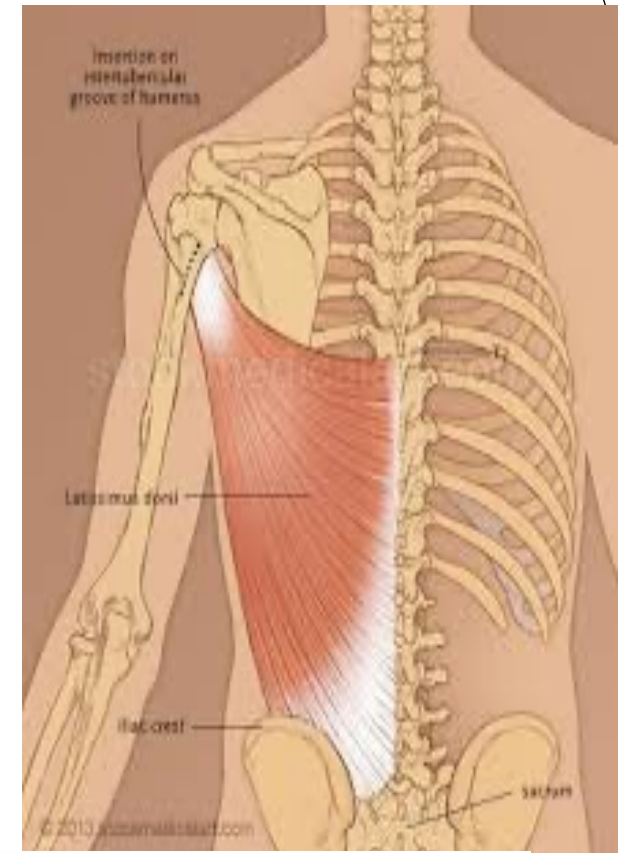


Origin

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



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Origin:

Transverse processes of the upper 4 cervical vertebrae.

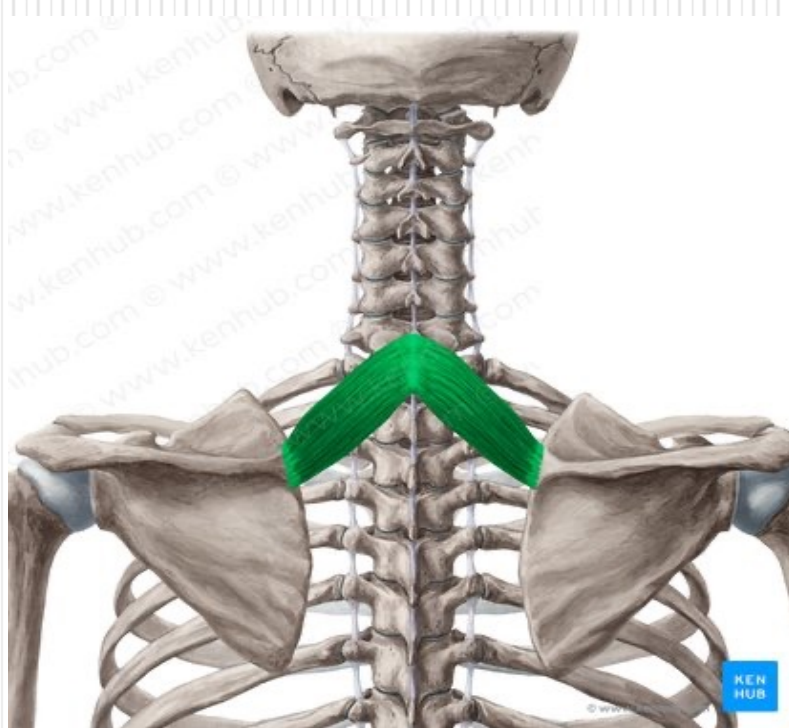
Insertion

Back of the medial border of the scapula

READ ONLY



Rhomboideus minor



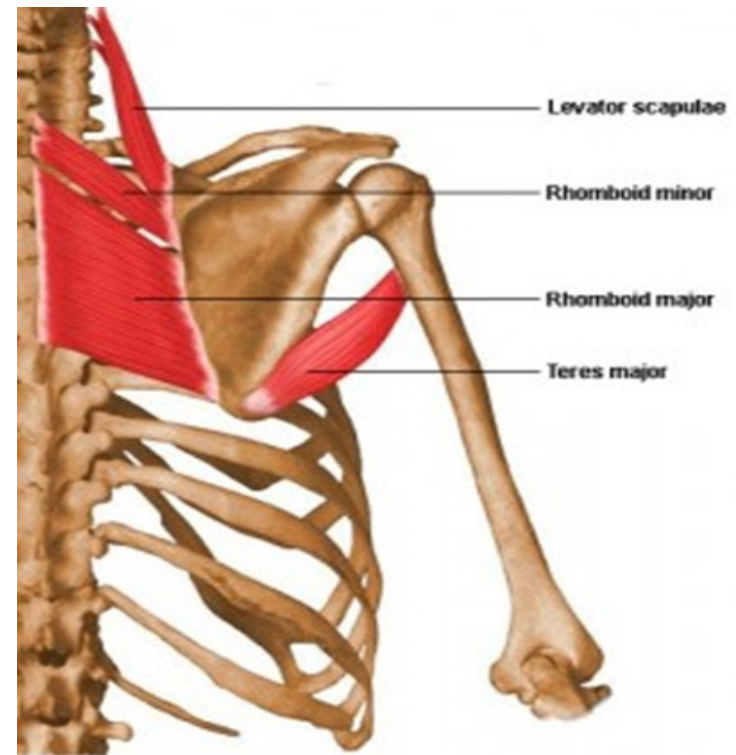
Origin:

Spine of 7th cervical and 1st thoracic vertebra.

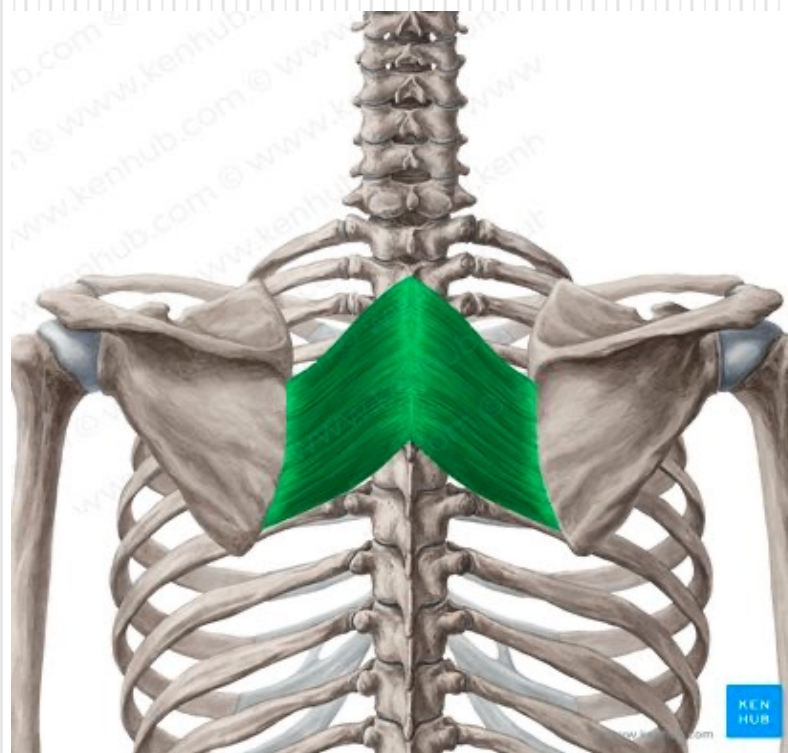
Insertion:

Medial end of the scapular spine.

READ ONLY



Rhomboideus major



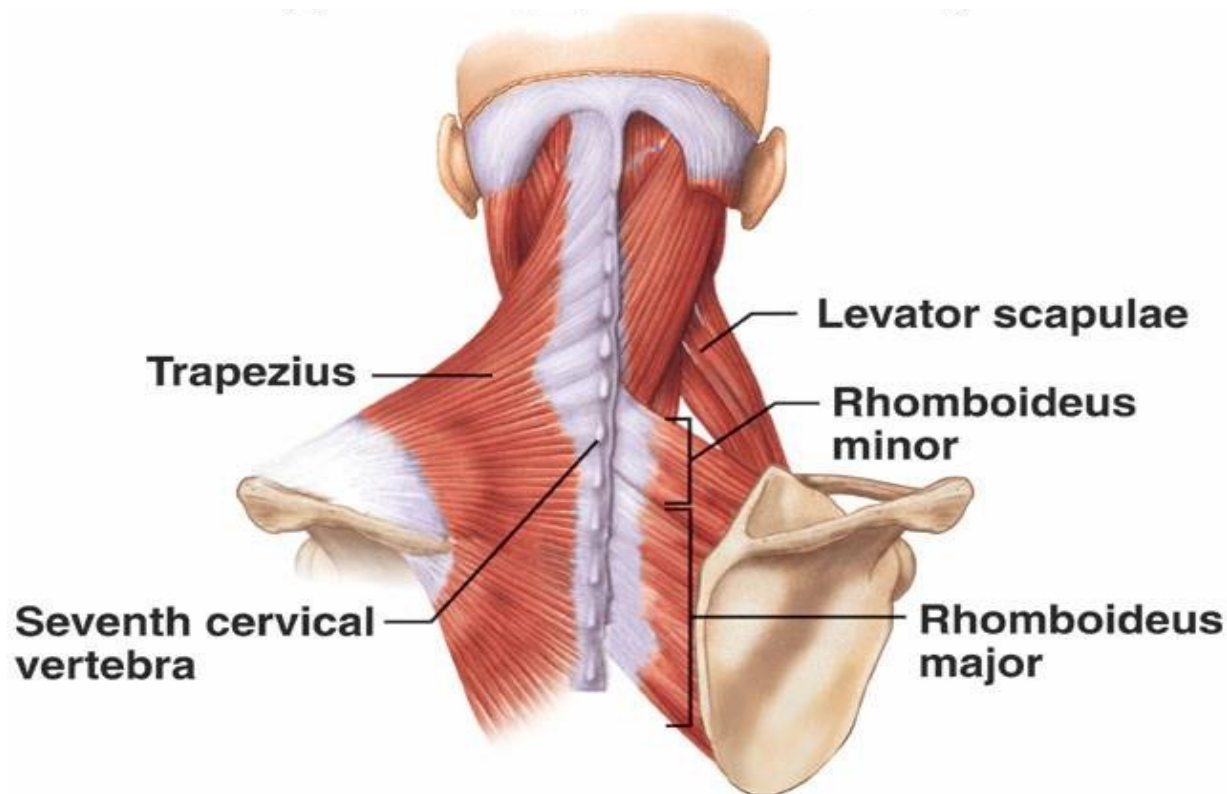
Origin:

spines of T 2,3,4,5

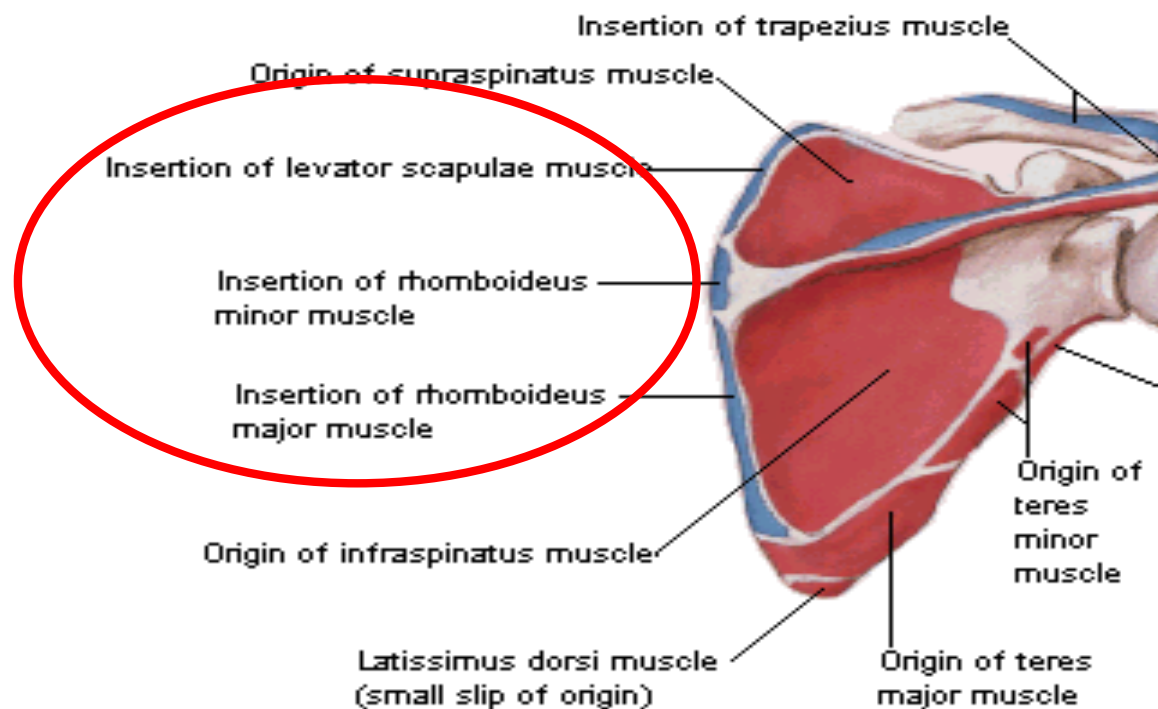
Insertion:

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

READ ONLY



Humerus and Posterior View - Mus



Muscle attachments

- Origins**
- Insertions**

Origin of common flexor tendon

Insertion of triceps brachii muscle

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: Latissimus Dorsi

E: Levator Scapula

