

MUSCLES OF PECTORAL REGION

DR NAJMA ATTAULLAH

LECTURER KGMC

- Muscles of the pectoral region are divided into anterior and posterior muscles.
- Four anterior thoracoappendicular (pectoral) muscles move the pectoral girdle:
 - ❑ Pectoralis major, pectoralis minor, subclavius, and serratus anterior.

PECTORAL MUSCLES

ANTERIOR MUSCLES

- Pectoralis major
- Pectoralis minor
- Subclavius
- Serratus anterior

POSTERIOR MUSCLES

- **SUPERFICIAL MUSCLES**
- Deltoid
- Trapezius

- **DEEPER MUSCLES**
- Levator scapulae
- Rhomboid major
- Rhomboid minor

Pectoralis major. 1

Origin:

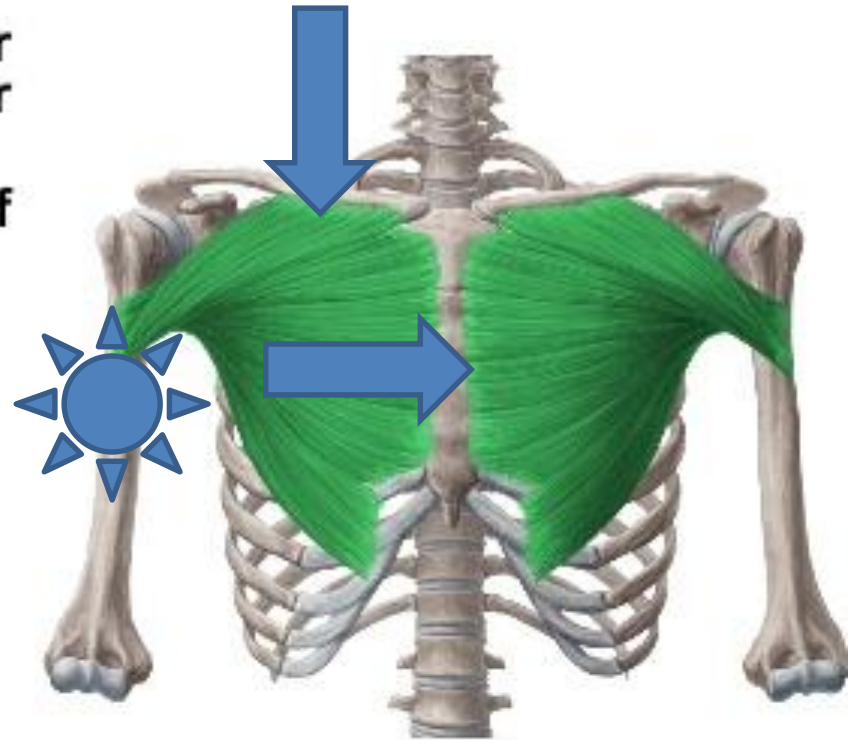
1. Clavicular head; from the front of the medial third of the clavicle
2. Sternocostal head; from the anterior aspect of the sternum and the upper six costal cartilages

Insertion: Lateral lip of bicipital groove of the humerus

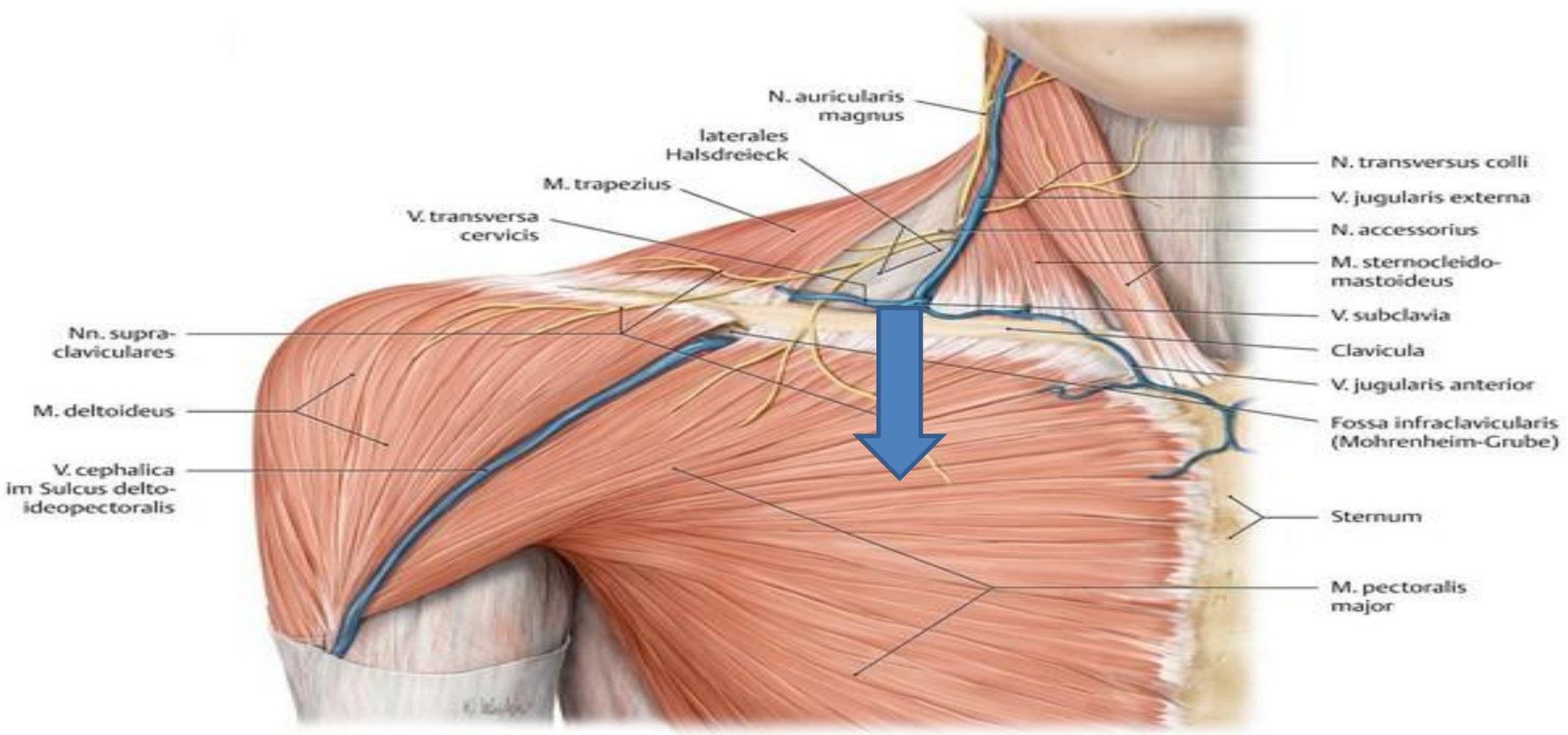
- Action:**
1. Adduction and medial rotation of the arm
 2. Flexion of the arm (clavicular portion)

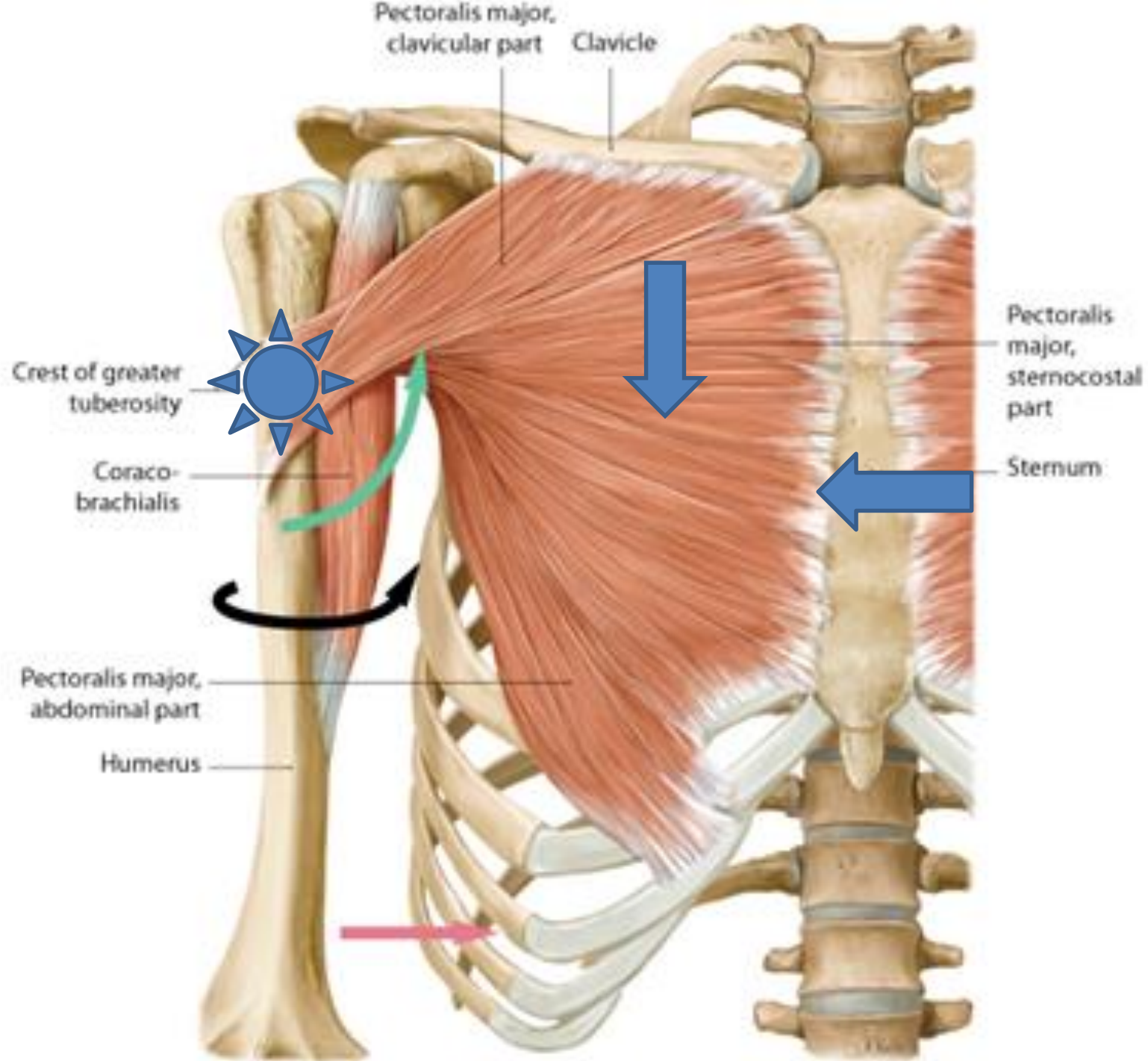
Nerve supply

1. Lateral pectoral nerve, C5, 6, 7
2. Medial pectoral nerve, C8, T1



MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Pectoralis major	<p>Clavicular head: anterior surface of medial half of clavicle .</p> <p>Sternocostal head: anterior surface of sternum, superior six costal cartilages, and aponeurosis of external oblique muscle</p>	Lateral lip of intertubercular groove of humerus	Lateral and medial pectoral nerves; clavicular head (C5 and C6), sternocostal head (C7, C8, and T1)	Adducts and medially rotates humerus; draws scapula anteriorly and inferiorly Acting alone: clavicular head flexes humerus and sternocostal head extends it .







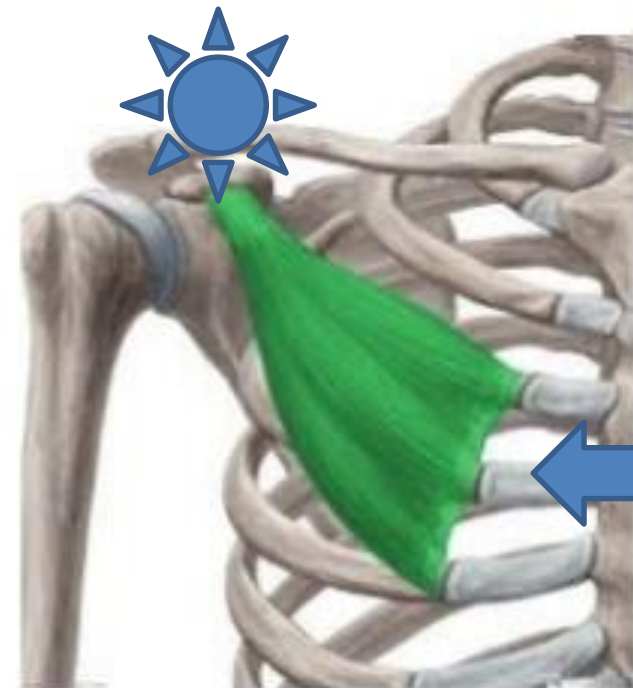
Pectoralis minor. 2

Origin: 3rd, 4th and 5th ribs near their cartilage.

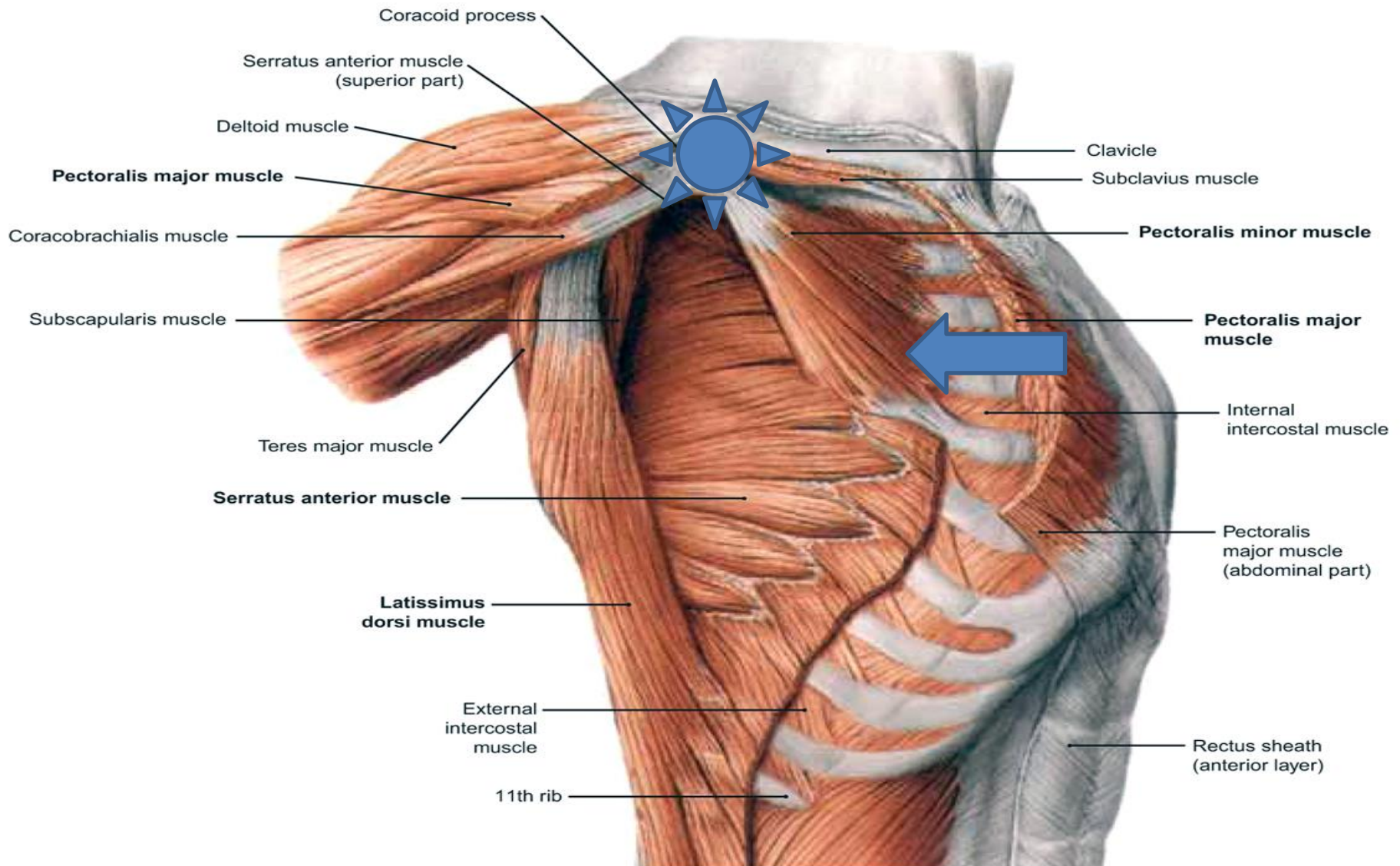
Insertion: Medial aspect of coracoid process of the scapula

Action:

- Depresses point of shoulder; if the scapula is fixed, it elevates the ribs of origin
- **Nerve supply:** medial pectoral nerve, C8, T1



MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Pectoralis minor	3rd to 5th ribs near their costal cartilages	Medial border and superior surface of coracoid process of scapula	Medial pectoral nerve (C8 and T1)	Stabilizes scapula by drawing it inferiorly and anteriorly against thoracic wall



PECTORALIS MINOR, SERRATUS ANTERIOR, AND LATISSIMUS DORSI MUSCLES, LATERAL VIEW (RIGHT)

Subclavius muscle. 3

- **Origin:** First costal cartilage
- **Insertion:** Lower surface of clavicle (subclavius groove)
- **Action:** Depresses the clavicle and steadies this bone during movements of the shoulder girdle
- **Nerve supply:** Nerve to the subclavius, from the roots of brachial plexus C5,6



pulae m.

angle of scapula

Coracoid process

Clavicle

Subclavius m.

Pectoralis major m.

Clavicular head

Sternocostal head

Abdominal head

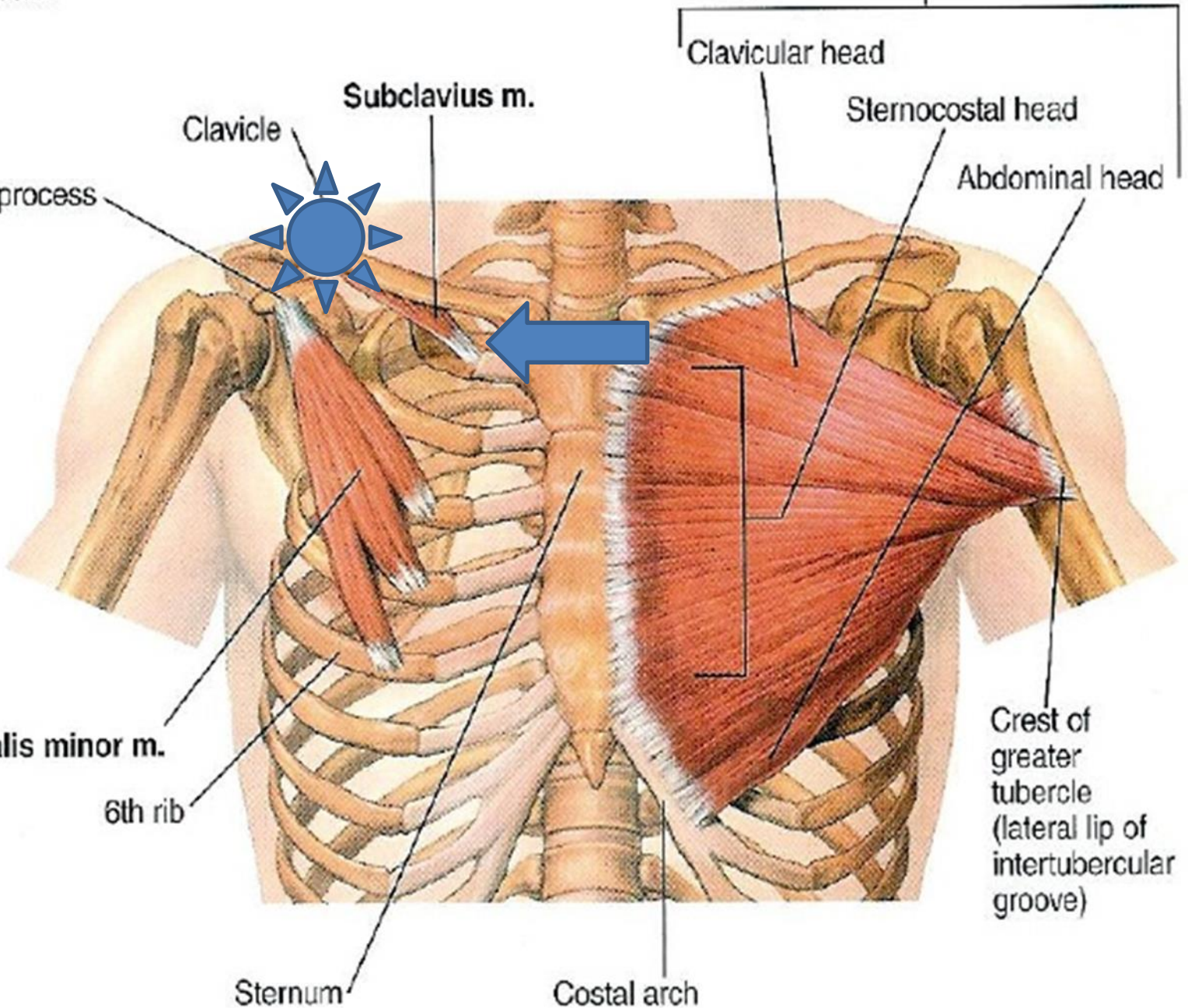
Pectoralis minor m.

6th rib

Sternum

Costal arch

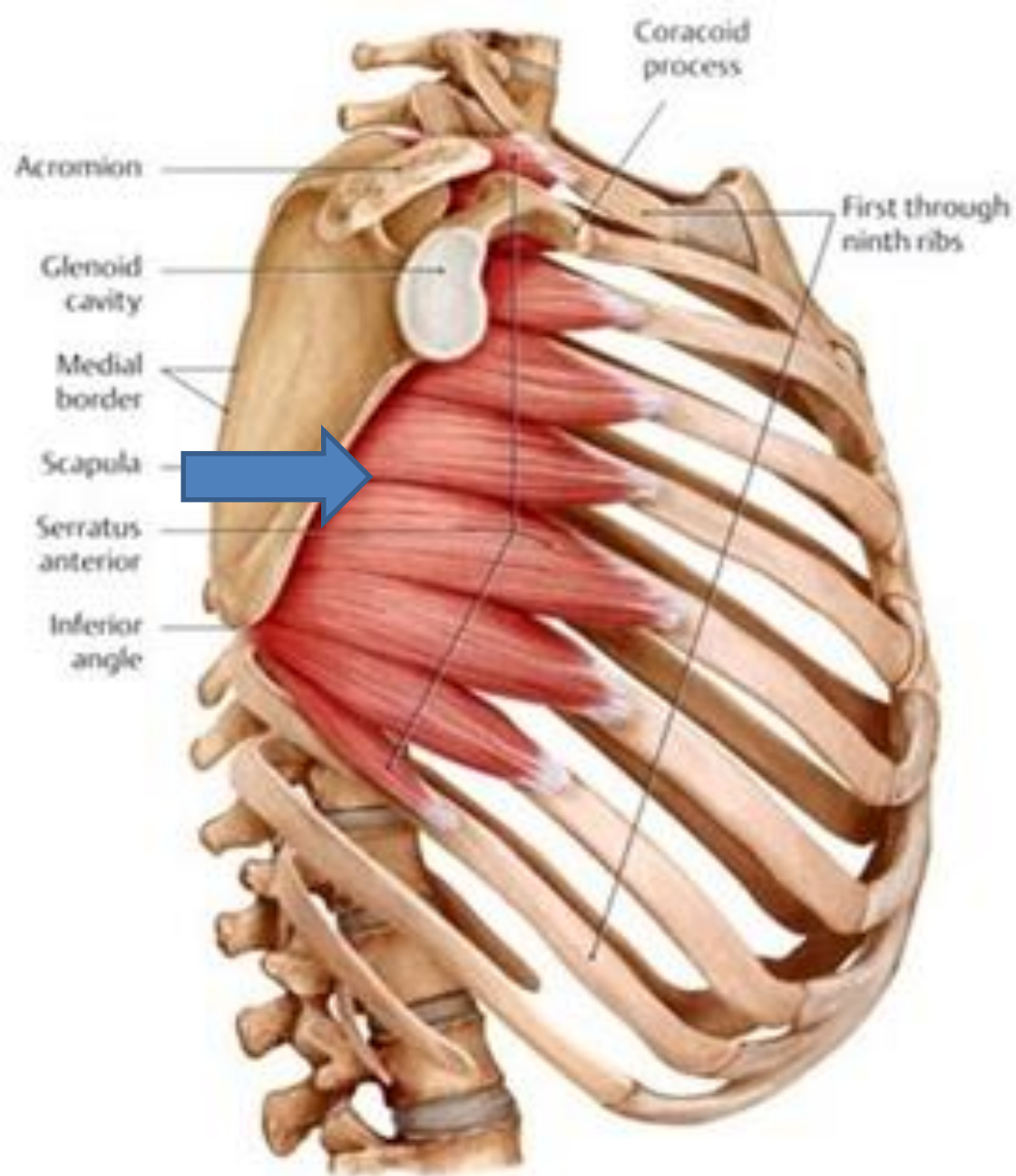
Crest of greater tubercle (lateral lip of intertubercular groove)

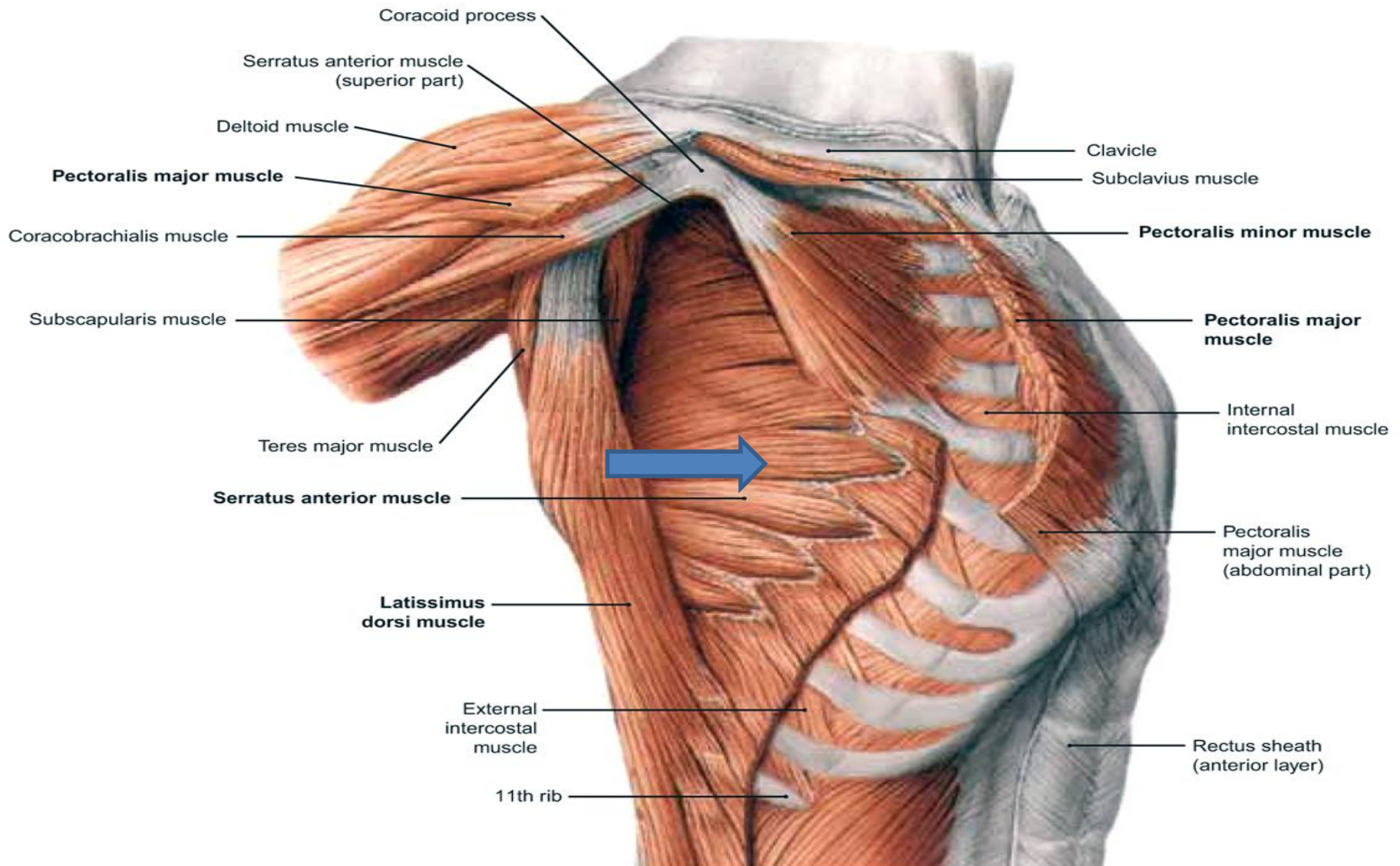


Serratus anterior muscle

- **Origin:** From the outer surface of upper 8 ribs
- **Insertion:** costal aspect of medial border and inferior angle of scapula
- **Action:**
- Draws the scapula forward around the thoracic wall (protrusion); rotates scapula
- **Nerve supply:** long thoracic nerve, C5,6,7



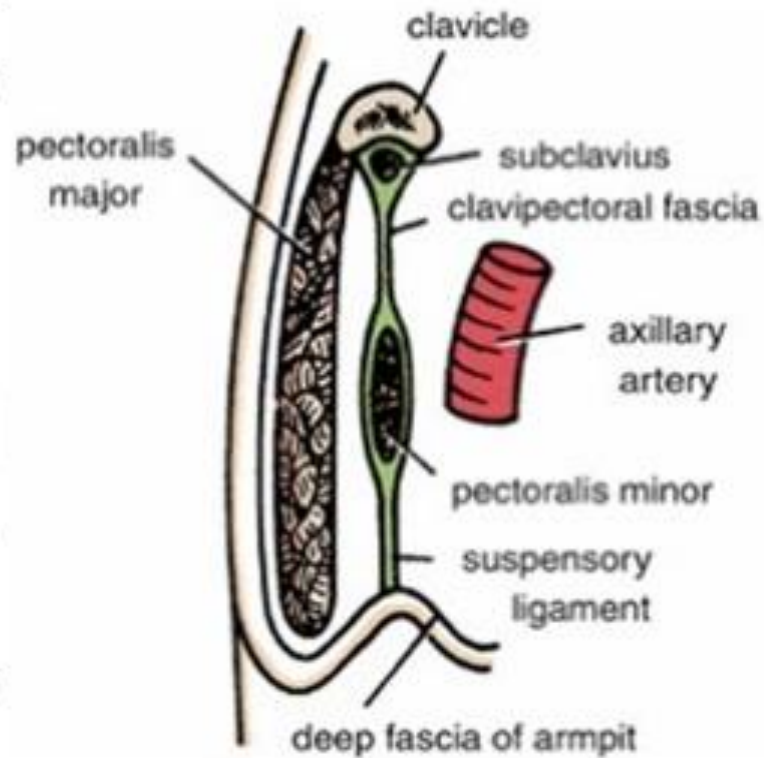




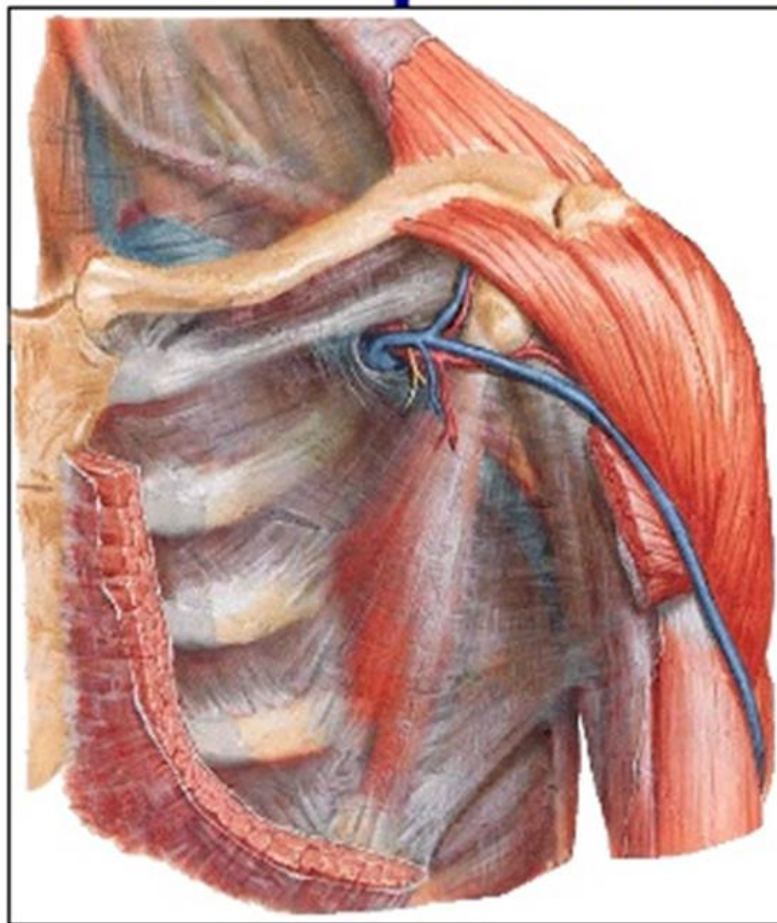
PECTORALIS MINOR, SERRATUS ANTERIOR, AND LATISSIMUS DORSI MUSCLES, LATERAL VIEW (RIGHT)

Clavipectoral Fascia

- **The clavipectoral fascia** is a strong sheet of connective tissue that is attached above to the clavicle.
- Below, it splits to enclose the pectoralis minor muscle and then continues downward as the suspensory ligament of the axilla and joins the fascial floor of the armpit.



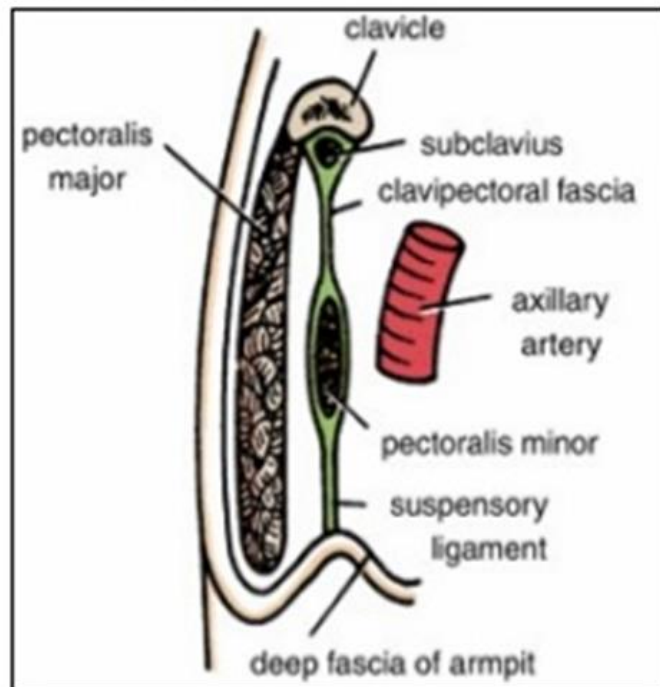
Clavipectoral fascia



Encloses subclavius and Pectoralis Minor.

It is pierced by :

- **Lateral pectoral nerve.**
- **Thoraco- acromial artery**
- **Cephalic vein.**
- **Lymph nodes** from pectoral region to apical group of axillary lymph nodes



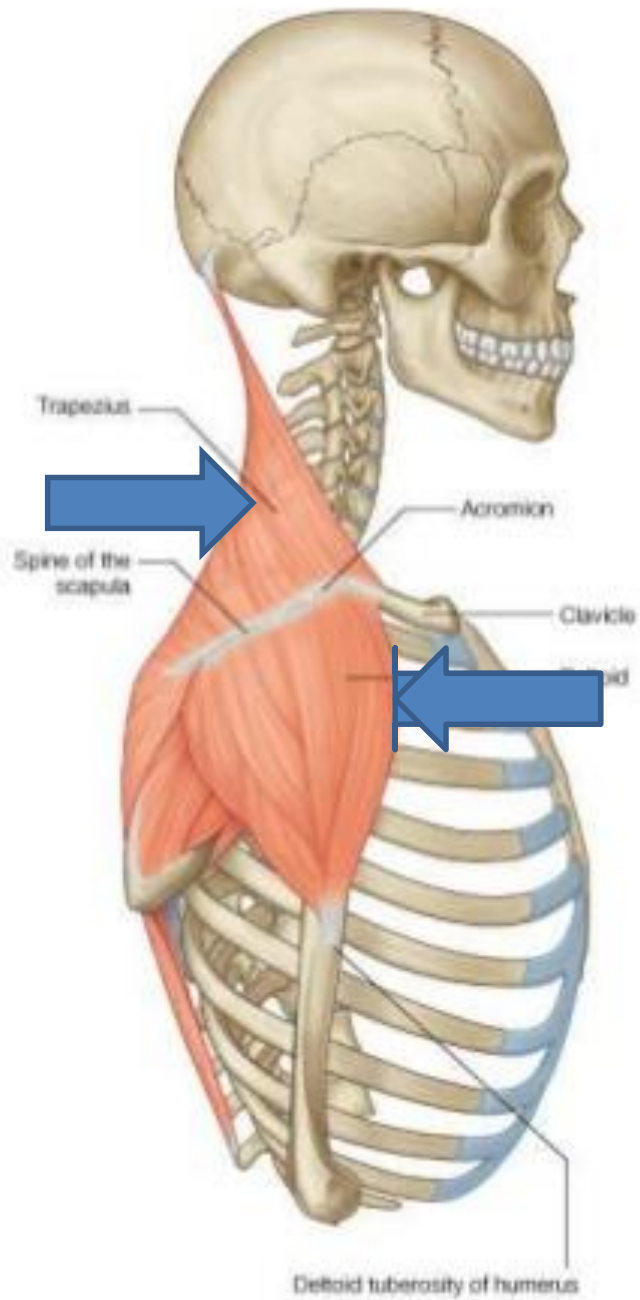
POSTERIOR PECTORAL MUSCLES

POSTERIOR PECTORAL MUSCLES

- SUPERFICIAL MUSCLES
 - Trapezius
 - Deltoid

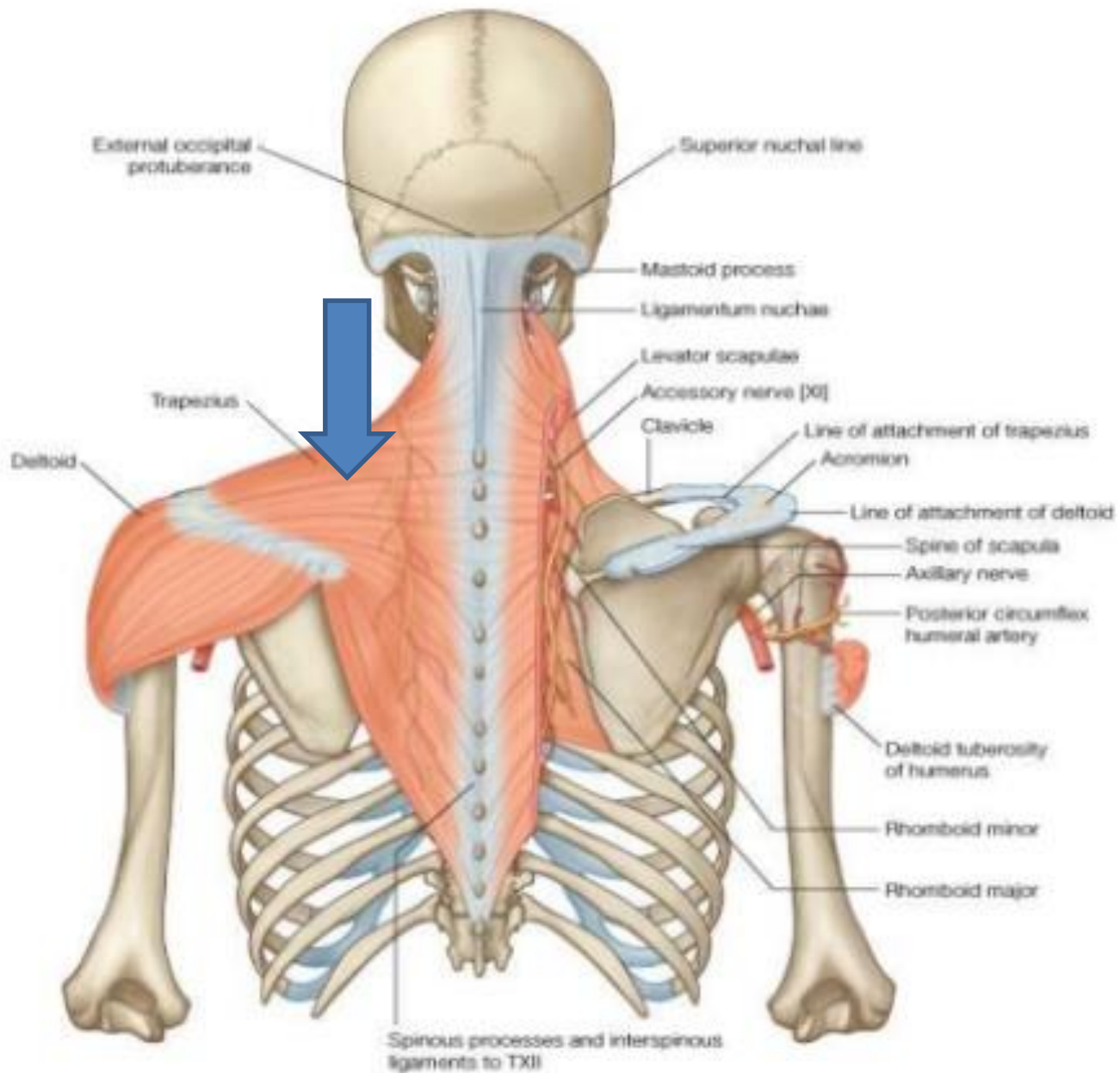
- DEEPER MUSCLES
 - Levator scapulae
 - Rhomboid minor
 - Rhomboid major

- The two most superficial muscles of the shoulder are the trapezius and deltoid muscles.
- Together, they provide the characteristic contour of the shoulder:
 - ❑ trapezius attaches the scapula and clavicle to the trunk;
 - ❑ deltoid attaches the scapula and clavicle to the humerus.



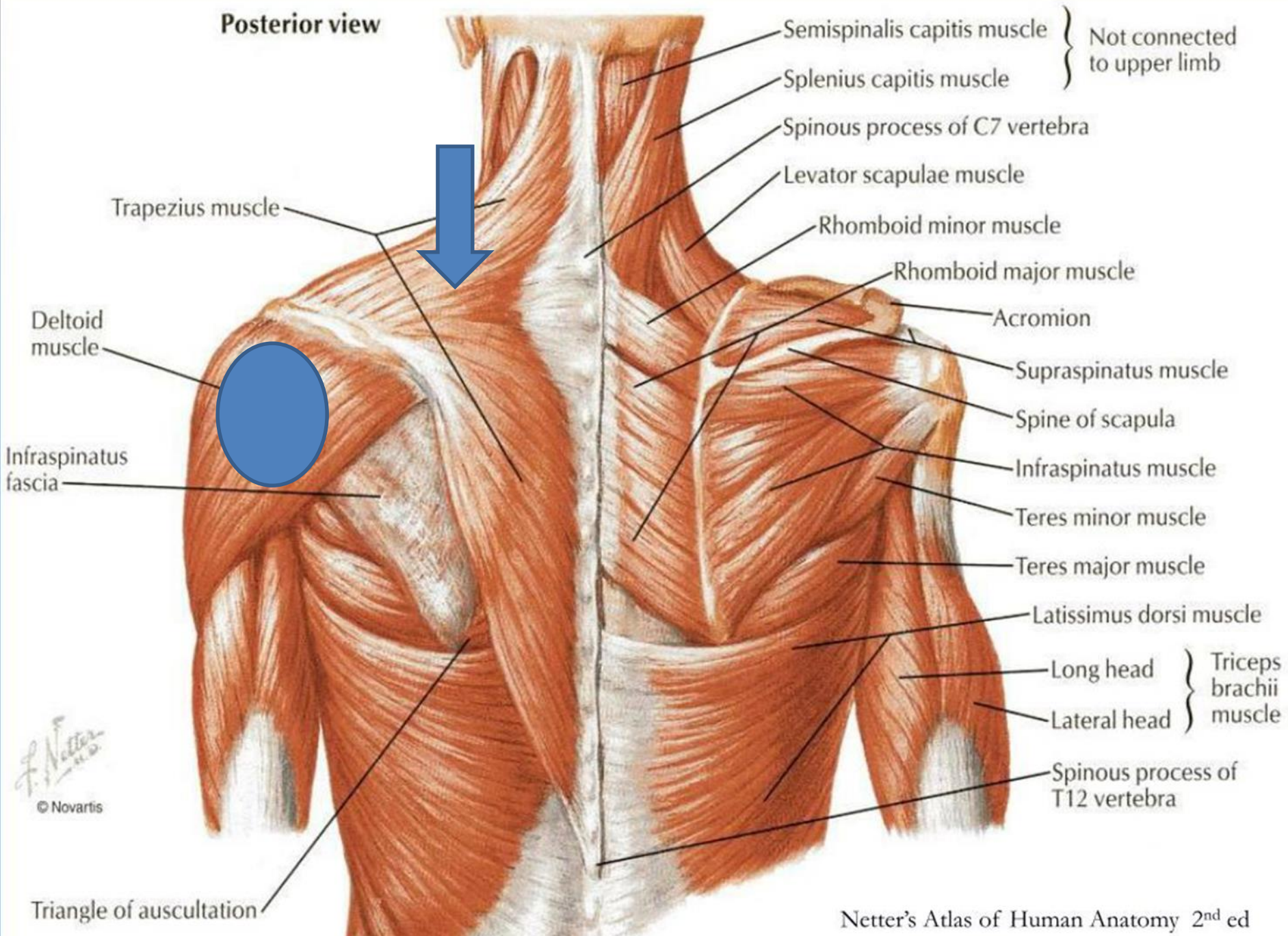
- Both trapezius and deltoid are attached to opposing surfaces and margins of the spine of the scapula, acromion, and clavicle.
- *The scapula, acromion, and clavicle can be palpated between the attachments of trapezius and deltoid.*

MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Trapezius	<ol style="list-style-type: none"> 1. Superior nuchal line, 2. external occipital protuberance, 3. medial margin of the ligamentum nuchae, 4. spinous processes of CVII to TXII and 5. the related supraspinous ligaments 	<ol style="list-style-type: none"> 1. Superior edge of the crest of the spine of the scapula, 2. acromion, 3. posterior border of lateral one-third of clavicle 	<p>Motor spinal part of accessory nerve (CN XI). Sensory (proprioception) anterior rami of C3 and C4</p>	<ol style="list-style-type: none"> 1. Powerful elevator of the scapula; 2. rotates the scapula during abduction of humerus above horizontal; 3. middle fibers retract scapula; 4. lower fibers depress scapula



MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Deltoid	1. Inferior edge of the crest of the spine of the scapula, 2. lateral margin of the acromion, 3. anterior border of lateral one-third of clavicle	Deltoid tuberosity of humerus	Axillary nerve [C5,C6]	Major abductor of arm (abducts arm beyond initial 15° done by supraspinatus); clavicular fibers assist in flexing the arm; posterior fibers assist in extending the arm

Posterior view



Not connected to upper limb

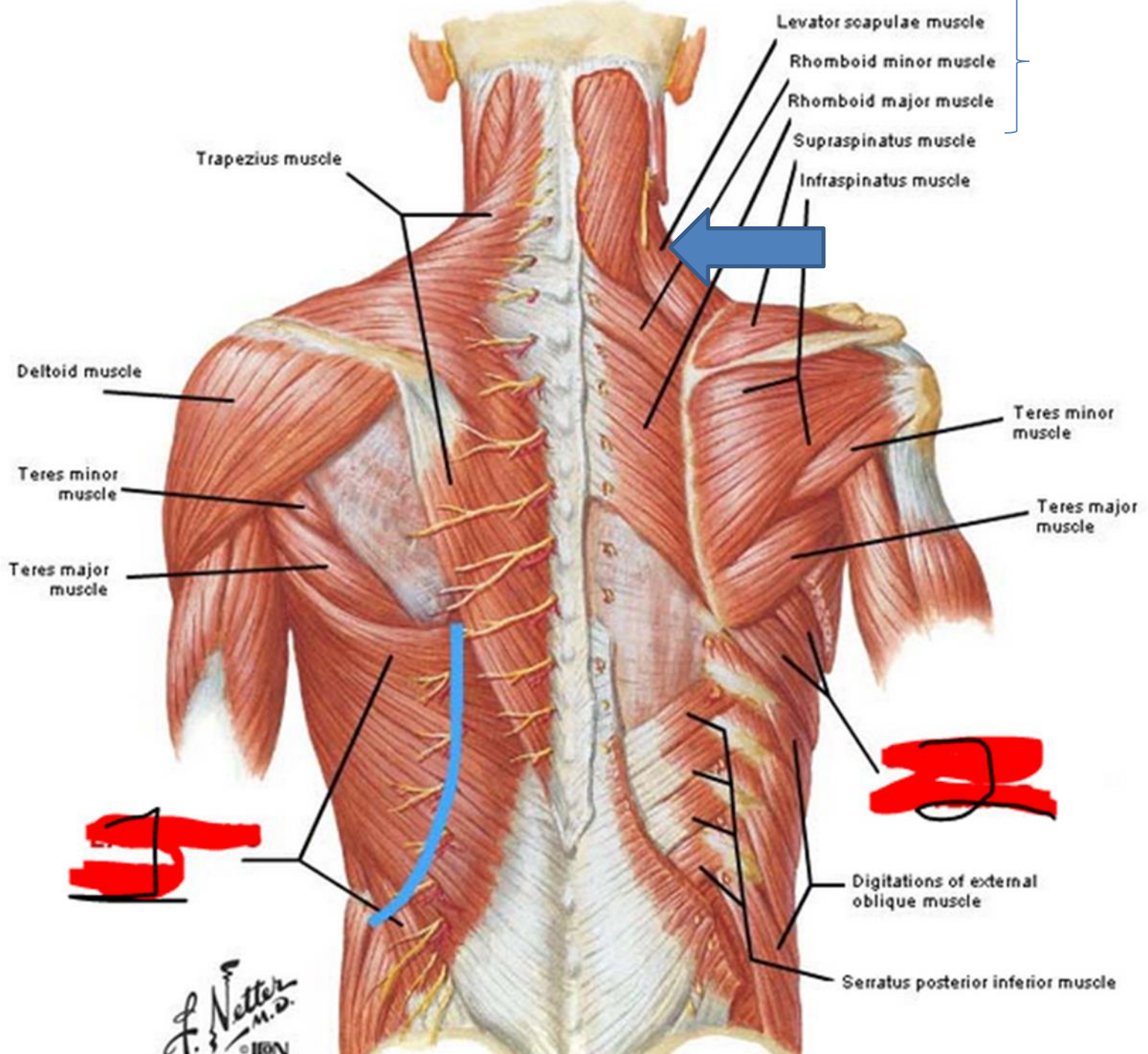
Triceps brachii muscle

F. Netter M.D.
© Novartis

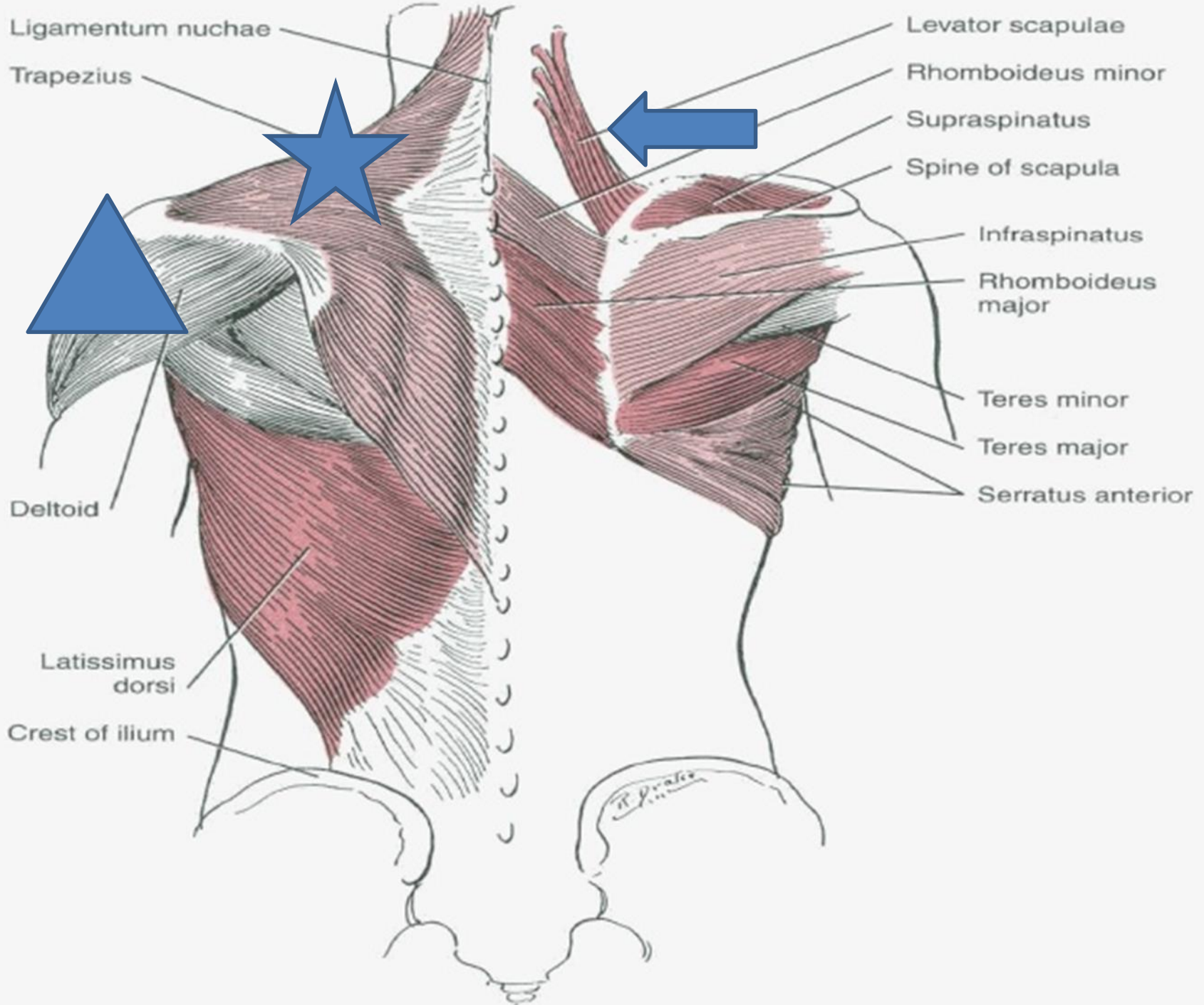
- Deep to trapezius the scapula is attached to the vertebral column by three muscles-levator scapulae, rhomboid minor and rhomboid major.
- These three muscles work with trapezius (and with muscles found anteriorly) to position the scapula on the trunk.

LEVATOR SCAPULAE MUSCLE

- Origin Posterior tubercles of transverse processes of C1 - C4 vertebrae
- Insertion Superior part of medial border of scapula
- Artery dorsal scapular artery
- Nerve cervical nerve (C3, C4) and dorsal scapular nerve (C5)
- Actions Elevates scapula and tilts its glenoid cavity inferiorly by downwardly rotating the scapula

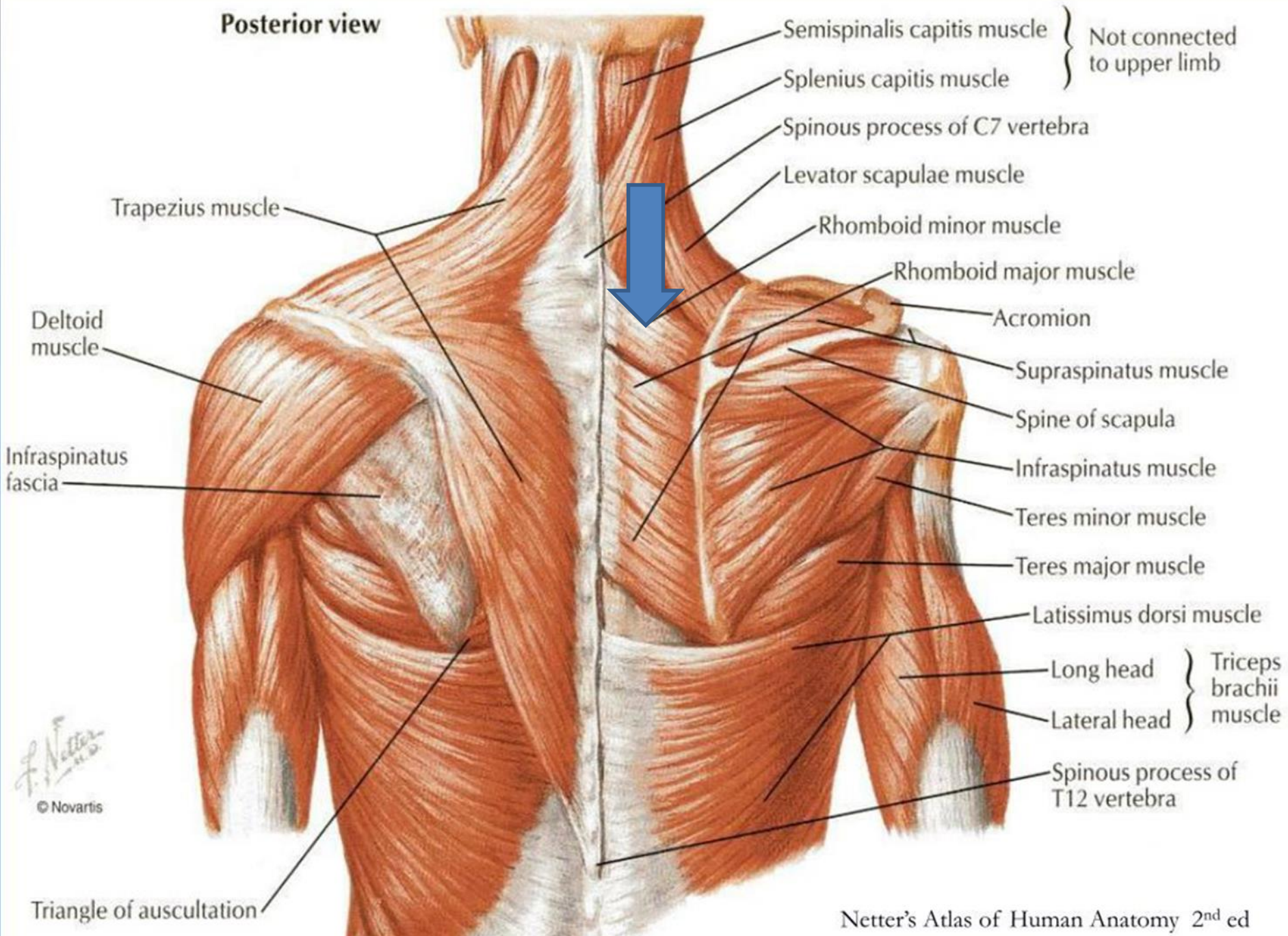


F. Netter M.D.
© 1984



MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Rhomboid minor	Lower end of ligamentum nuchae and spinous processes of CVII and T1 vertebrae	Posterior surface of medial border of scapula at the root of the spine of the scapula	Dorsal scapular nerve [C4,C5]	Elevates and retracts the scapula

Posterior view



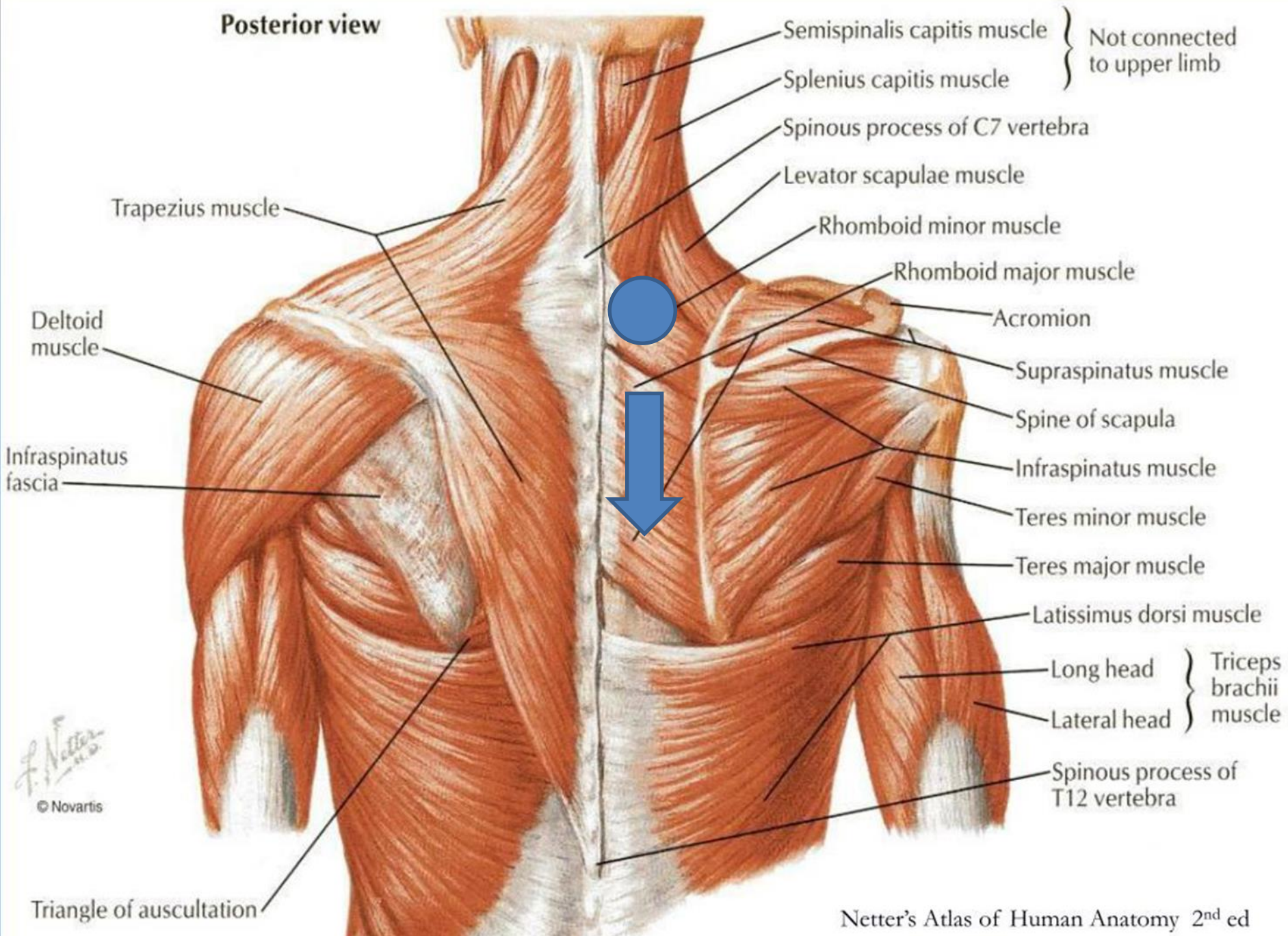
Not connected to upper limb

Triceps brachii muscle

F. Netter M.D.
© Novartis

MUSCLE	ORIGIN	INSERTION	INNERVATION	ACTION
Rhomboid major	Spinous processes of TII-TV vertebrae and intervening supraspinous ligaments	Posterior surface of medial border of scapula from the root of the spine of the scapula to the inferior angle	Dorsal scapular nerve [C4,C5]	Elevates and retracts the scapula

Posterior view



Not connected to upper limb

Triceps brachii muscle

F. Netter M.D.
© Novartis

THANK YOU