

* Pectoral region :

in part upper part of the chest.

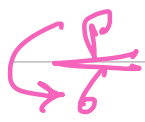
⇒ Connecting the chest wall to the arm

muscles → ✓ Pectoralis major

→ ✓ Pectoralis minor

→ ✓ Serratus anterior

→ ✓ subclavius



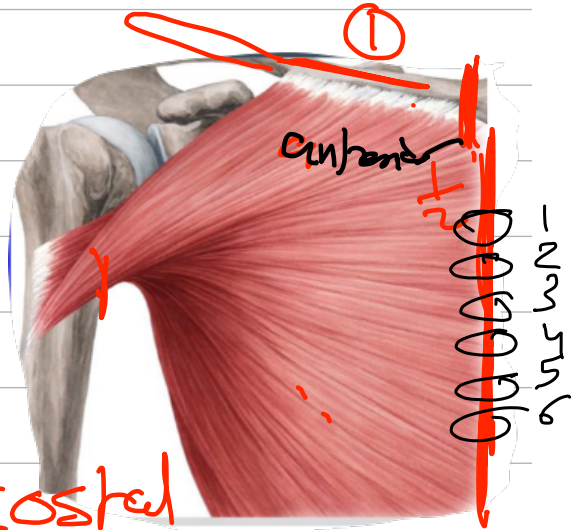
Pectoralis Major muscle

origin

2 heads

①
Clavicular
head

②
sternocostal
head



anterior surface
medial $\frac{1}{2}$ clavicle

- anterior the sternum.
- upper 6 costal cartilages
- External abdominal oblique aponeurosis.

nerve supply (double)

pectoral nerve \rightarrow lateral (C5, 6, 7)
 \rightarrow medial (C8, T1)

* the only muscle from brachial plexus
from the upper limb supplied by 5 segments

Action

Adduction + medial rotation for arm.

Flexion of the arm
(by clavicular head)

Elevates the ribs during deep inspiration.

sternocostal part act with ① latissimus dorsi

② teres major

③ deltoid



to draw trunk up

insertion

pectoralis Major = lateral lip of

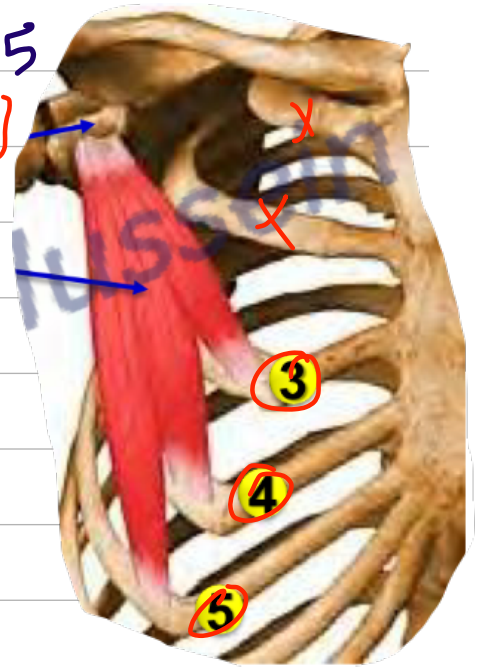
the bicipital groove



pectoralis minor

P
345

[A]



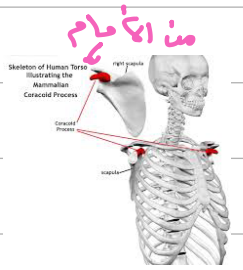
Origin

3, 4, 5 ribs

Insertion

superior surface of coracoid process
[A]

Nerve supply



pectoralis minor = medical pectoral nerve

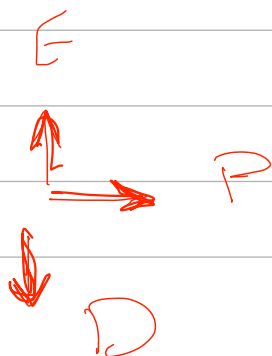
Action

→ protraction the scapula.

→ Depression the shoulder.

↓
Elevates the ribs during deep

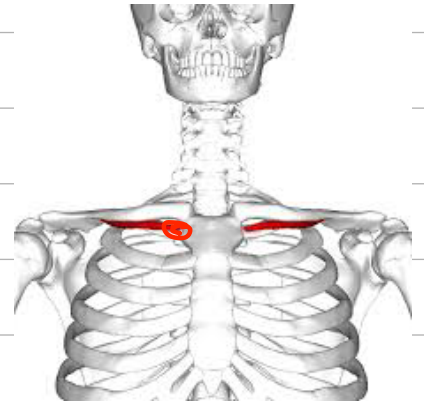
inspiration.



subclavius

* origin

first rib + first costal cartilage.



* insertion

subclavian groove on the lower surface of the clavicle.

Nerve supply:

nerve in subclavius from → ① upper trunk of brachial plexus (C_{5/6})

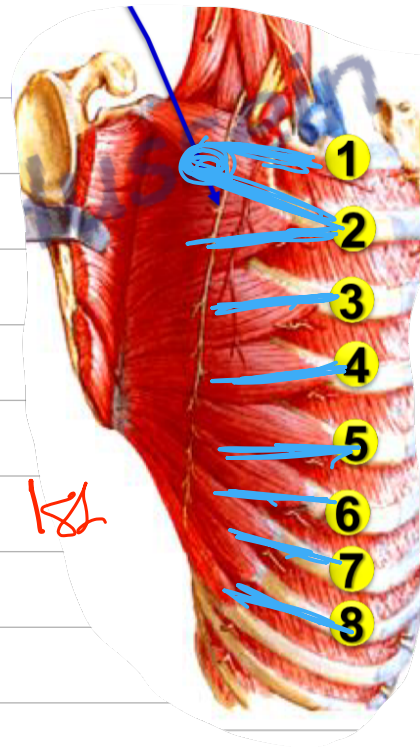
Action → fixation of the clavicle during movements of the shoulder girdle.

1-8

Serratus anterior

Origin: upper 8 ribs

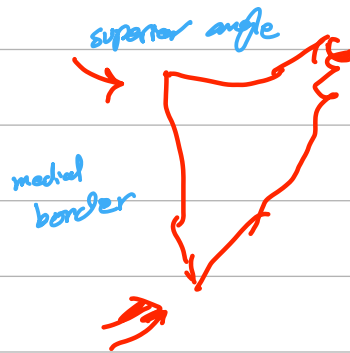
1st digitation takes origine 1st and 2nd ribs



Insertion

anterior surface of the medial border of the scapula.

1st \Rightarrow anterior surfaces of the superior angle,



2nd, 3rd \Rightarrow anterior surface of medial border.

lower 5 \Rightarrow anterior surface of inferior angle.

nerve supply

Long thoracic nerve (nerve b. $C5, 6, 7$)

passes superficial to the muscle

Action

→ Protraction of the scapula (with pectoralis minor)

→ lower 5 digits, Abduction of the arm above 90 degree
acting with Trapezius muscle.

Fixation of the scapula during movement of the upper limb.



* Serratus anterior muscle :

: ٤٥٠ ٤٥٠

⇒ Fixation of the scapula during movement of the upper limb.

* Subclavius muscle :

⇒ Fixation of the clavicle during movement of the shoulder girdle.

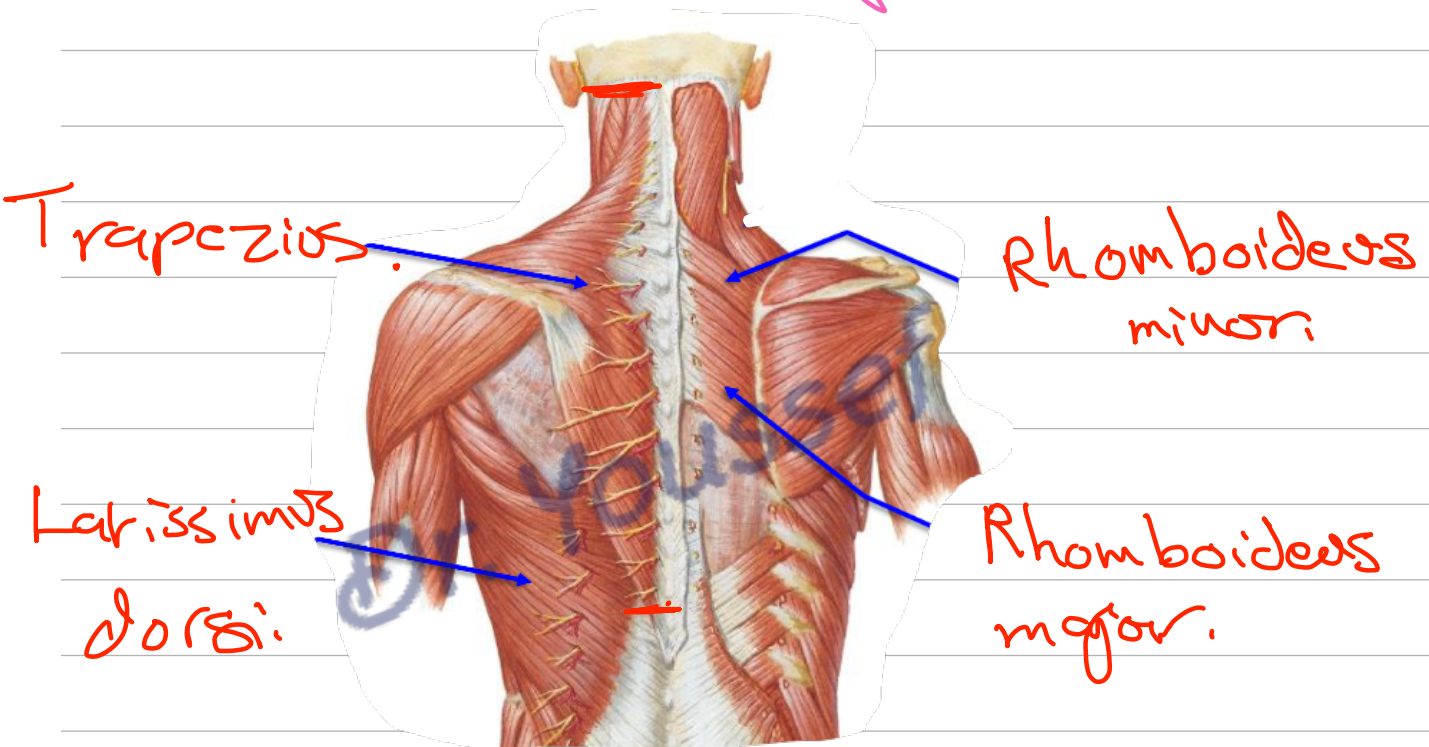
muscle of the back.

✓ Trapezius

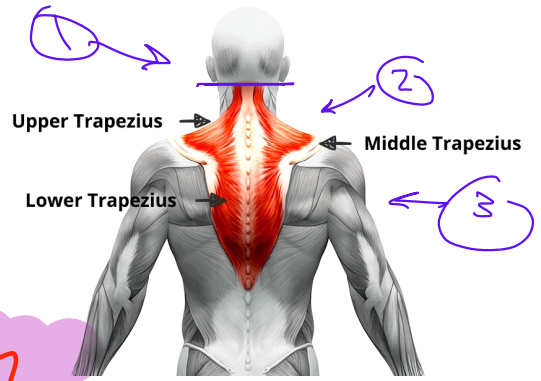
✓ Latissimus dorsi

• Rhomboideus minor

• Rhomboideus major



Trapezius



Origin



① Back of the skull.

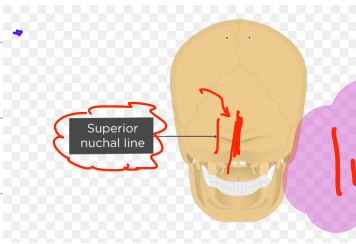
- external occipital protuberance.
- medial 1/3 of superior nuchal line.

② Back of the neck.

- ligamentum nuchae
- spine of the 7th Cervical.

③ Back of the thorax.

- all thoracic spines. (12)



Insertion



Upper fibers

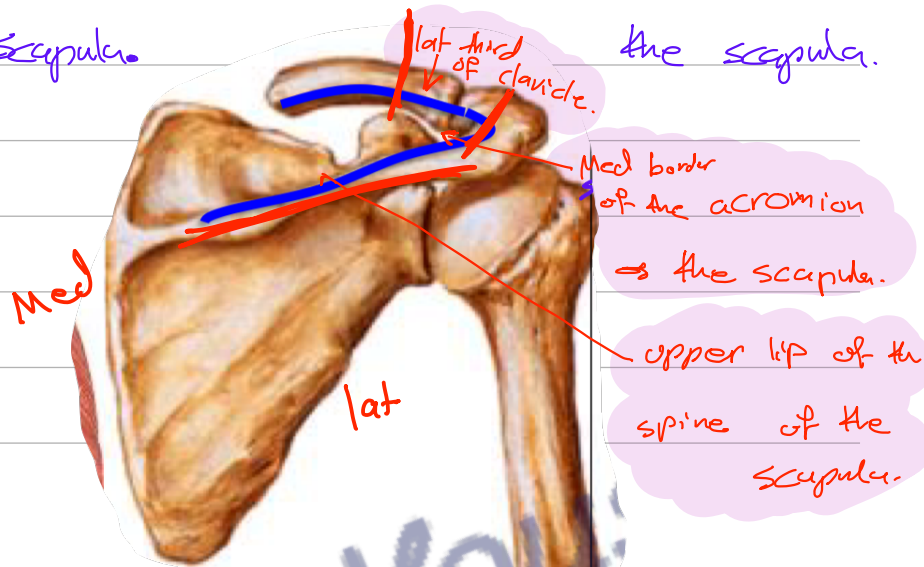
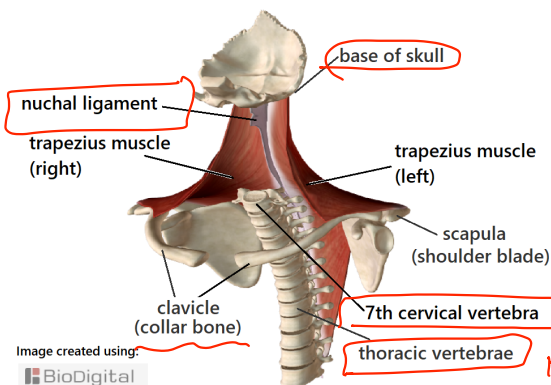
- posterior border of the lateral third of the clavicle.

Middle fibers

- Medial border of the acromion of the scapula.

Lower fibers

- upper lip of the spine of the scapula.



Nerve supply : double

↳ Motor : spinal part of accessory nerve.

sensory : proprioceptive sensation, from cervical plexus

Action → Upper fibers : ↑ elevate the scapula.

↳ Middle fibers : retract the scapula.

↳ Lower fibers : Depress the scapula.

↳ Middle + lower fibers : Abduction of the arm more than 90° degree, with lower 5 digitations of the serratus anterior.

It's the only muscle

① Arises from the skull.

② Not supplied by the brachial plexus.



Latissimus Dorsi.

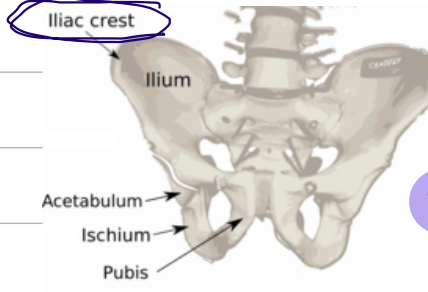
Origin

- From lower 6 thoracic
spines under cover of
the trapezius.

Lumbar fascia

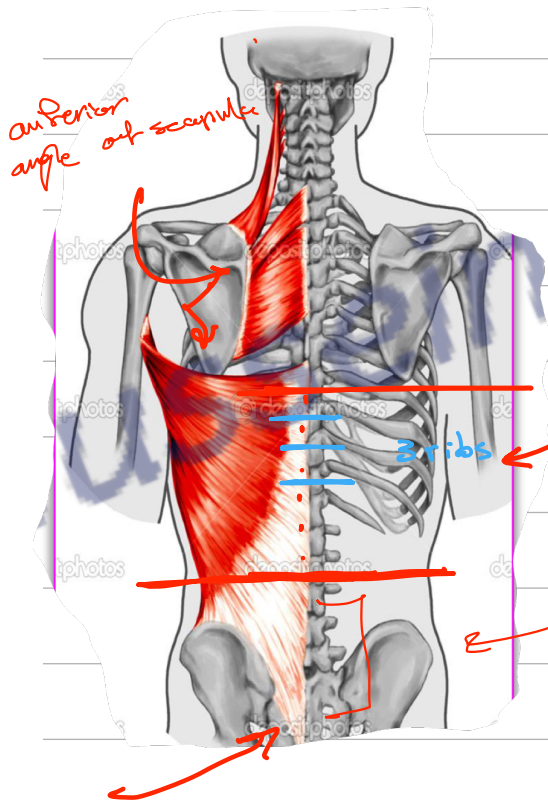
posterior part of
the outer lip of the
iliac crest.

the back of
the inferior angle
of the scapula.



the lower

3 ribs.



lower 6 T spines

lumbar fascia

Insertion : the floor of the
bicipital groove of the humerus.

nerve supply:

nerve to latissimus dorsi (thoracodorsal nerve)
from posterior cord and
brachial plexus.

Action: - Adduction ✓
- extension ✓

✓ - ~~medial rotation~~ for arm as teres major
used in swimming.

- pulls the trunk towards the arm
used in climbing and gymnastics with pectoralis major

- when you cough / deep expiration.

the only muscle of the upper
limb has pelvic attachment

↳ (posterior part of the
outer lip of the iliac
crest.)

Deep muscle of the back

③ = ① Levator Scapulae,

② Rhomboides Minor

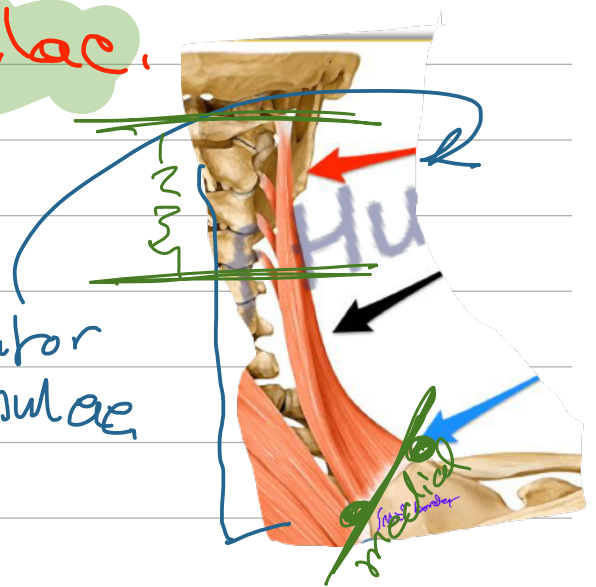
③ Rhomboides Major.

* Levator scapulae.

Origin:

transverse processes scapulae

of C1 → C4



Insertion:

dorsal surface of the medial border
of scapula from superior angle to the root
of spine.

Nerve supply: Double.

- a. Dorsal scapular nerve
 - nerve to rhomboids C5
- b. Nerve to levator scapulae
 - from cervical plexus C3 and 4.

Action

- Elevates the scapula.
- Tilts the neck to the same side when shoulder is fixed.



Rhomboides Minor

origin

- lower part of the ligamentum nuchae.
spines of C7-T1

Insertion

dorsal aspect of medial border of scapula
opposite root of spine

Rhomboides Major

origin

- Thoracic spines T1, 2, 3, 4, 5

Insertion

dorsal aspect of medial border of scapula
from spine to inferior angle

Nerve supply:

- * Dorsal scapular nerve / nerve to rhomboides C5

Action:

← Retraction of the scapula
itself

Elevation: → upper fibers of **trapezius**
↳ levator scapulae.

Depression: → lower fibers of trapezius
↳ pectoralis minor
↳ **gravity**

protraction: → pectoralis minor,
↳ serratus anterior.

Retraction: → Middle fibers of trapezius
↳ rhomboides minor + major.

Lateral rotation: → middle and lower fibers
of trapezius,
↳ lower 5 digitalians at
the serratus anterior

Medial rotation: → gravity
→ Levator scapula
→ rhomboides muscles.

Shoulder region. (S.R)

* muscle of S.R : 1. Deltoid ✓

2. supraspinatus,

3. Infraspinatus,

muscle :

4. subscapularis,

✓ الي فوق 5. Teres minor

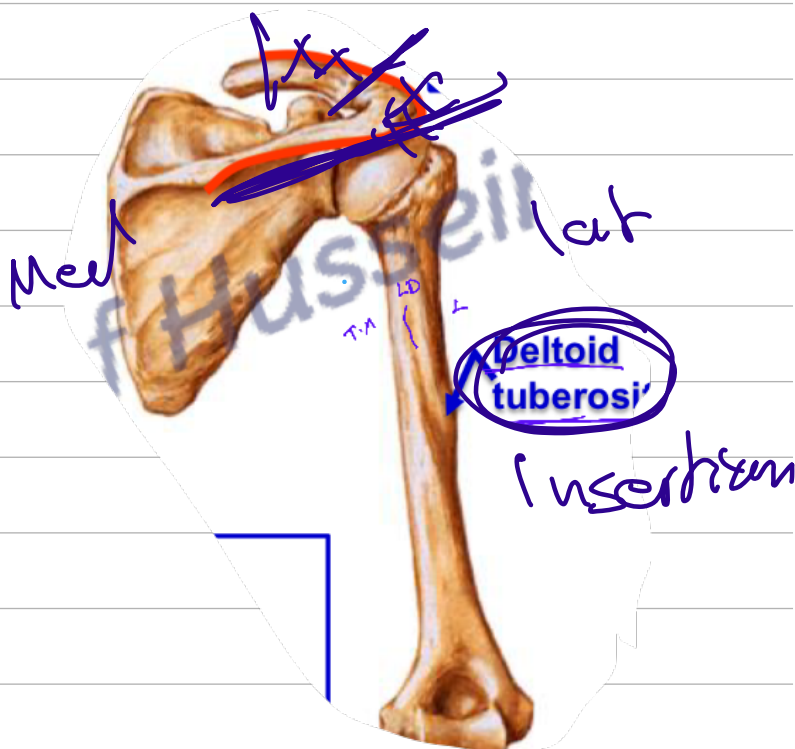
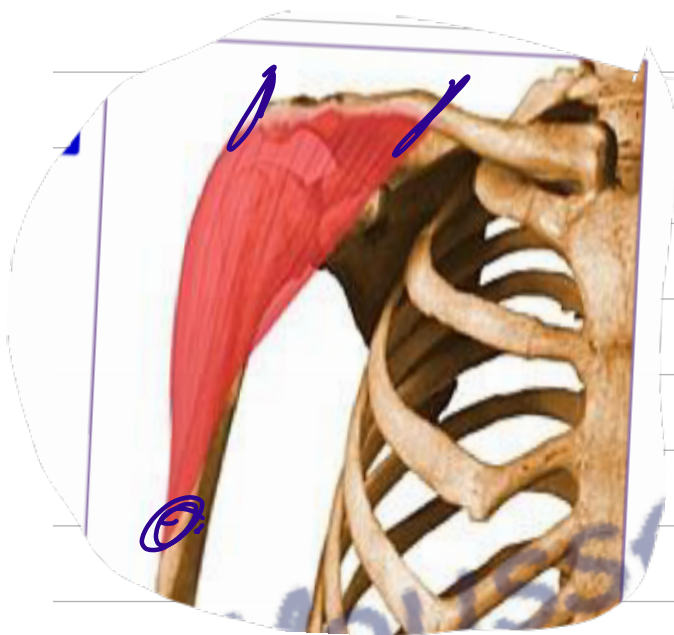
x تحت 6. Teres major

→ Stability of the S. joint.

* During movement of S. joint

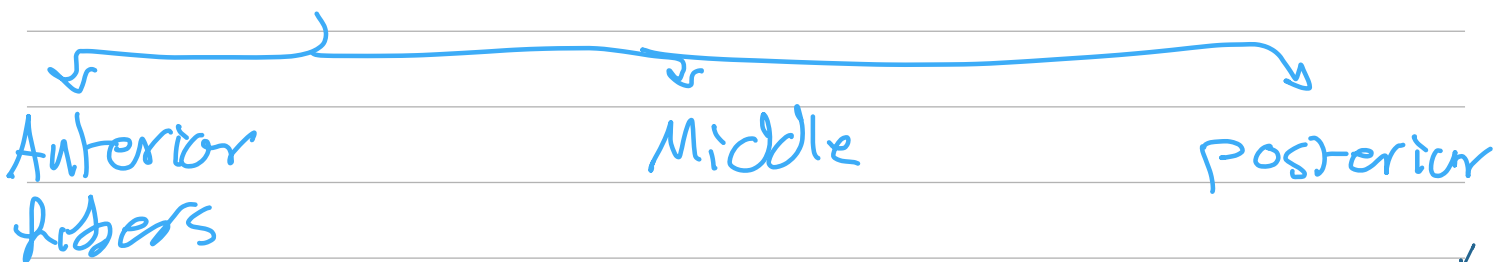
keep the humerus in contact with glenoid cavity.

Deltoid muscle



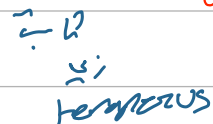
Origin

= Insertion
 carpazus



From anterior
 border of lateral

1/3 art. device.



lateral border
 of the acromion

From the lower
 lip of the spine
 of the scapula.

LLL deltoid muscle

Insertion: Deltoid tuberosity

of the humerus.

axilla

* Nerve supply: axillary nerve.
(C5,6)

* Action: → Anterior F. Flexion + M. rotation (arm)

→ Posterior F. extension + L. rotation (arm)

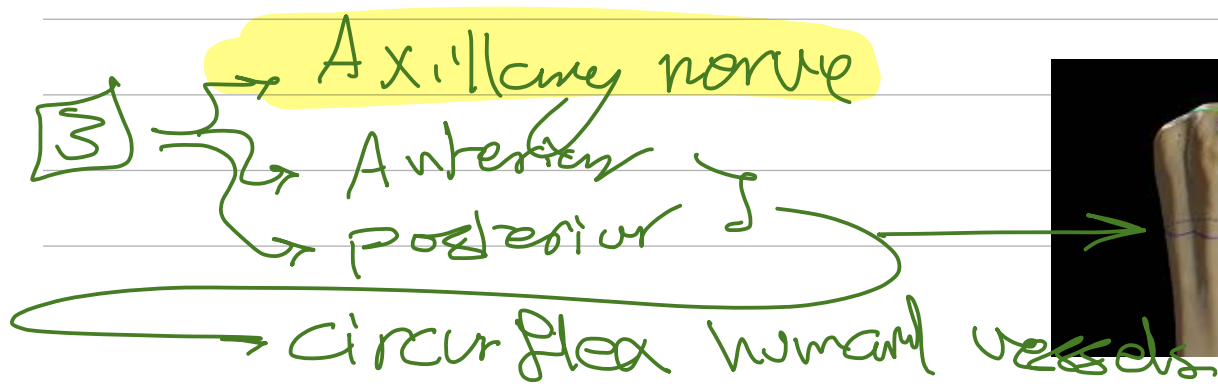
Middle F. abduct the arm 15 → 90°

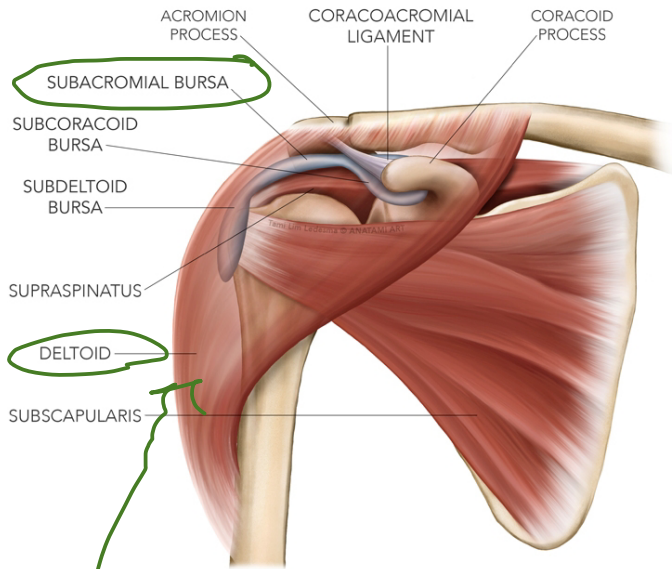
→ Round contour of the shoulder.

* paralysis of deltoid muscle:

(A) Flat shoulder.

(B) loss of abduction.





- subdeltoid burse
- subacromial

injection → } < 2ml 4-5 cm below acromion.

Abd:




0 → 15° : supraspinatus.



15 → 90° : Deltoid - Middle fibers.

- 90° } serratus anterior.
Trapezius (M + lower)

M = Medical
L = Lateral

M. Rotation
M. R
L. R

muscle (M)	origin	insertion	Nerve Supply	Action
subscapularis M 	M. $\frac{3}{4}$ of subscapular fossa.	lesser tuberosity	(double) □ upper □ lower subscapular nerves. (C5,6)	• Adduction • M. R of arm. • Fixation of the sh. joint. (In front)
supraspinatus 	M. $\frac{3}{4}$ of supraspinatus fossa.	top of the greater tuberosity.	supra scapular nerve (C5,6)	• Abduction 0 - 15° • Fixation of the sh. joint. (above)
Infraspinatus 	M. $\frac{3}{4}$ of infraspinatus fossa.	middle impression of the greater tuberosity.	subscapular nerve (C5,6)	• Adduction • L.R of arm • Fixation sh. joint (behind)

muscle (M)	origin	insertion	nerve supply	Action
<p>Teres minor</p> 	<p>Upper 2/3 of dorsal aspect of lateral border of scapula</p>	<p>Lower impression of the greater tuberosity.</p>	<p>Axillary nerve (C5,6)</p>	<p>Adduction - IR of arm - Fixation of the sh. joint (behind)</p>
<p>Teres major</p> 	<p>lower 1/3 of dorsal border of lateral angle of scapula</p>	<p>Medial lip of bicipital groove.</p>	<p>lower subscapular nerve (C5,6)</p>	<p>Adduction - M.R of arm</p>

* supra spinatus tendons:

pass deep to coracoacromial arch
separated from it by subacromial bursa.

Tendinitis

Acute rupture

تفترق



sever pain in shoulder
during abduction.

chronic degeneration



leading to gradual
↑ stiffness of shoulder
جناز
joint.

powder like deposits
+
can be seen by x-ray