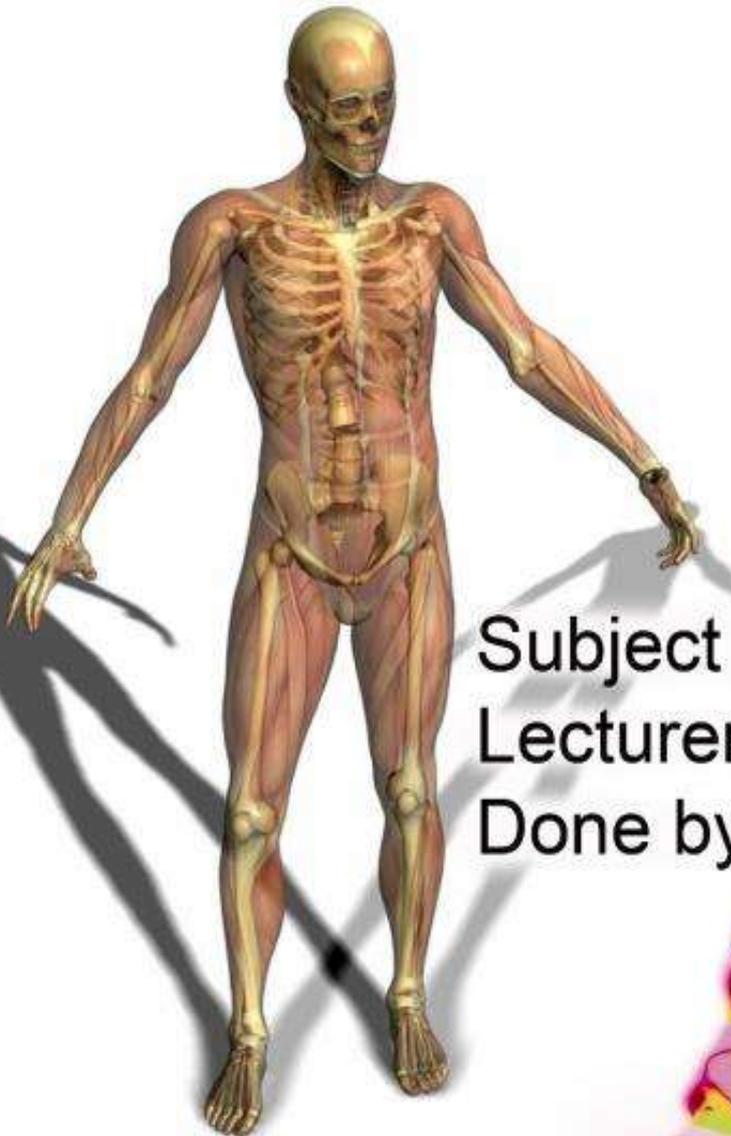




ANATOMY

Sheet



Subject : *Introduction to Anatomy*

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Posterior compartment of the forearm

Introduction:

1- Muscles in this compartment are arranged in 3 layers (according to Snell) :

- Lateral group contains 2 muscles.
- Superficial group contains 5 muscles.
- Deep group contains 5 muscles.

2-All muscles of the posterior compartment are supplied by the radial nerve or its branches (Deep Branch and Posterior Interosseous membrane)

3- Most muscles of the forearm originated from the lateral epicondyle of humerus which called common extensor origin (CEO).

4- Extensor Expansion divides into:

A- Central part (slip): inserted into the base of the middle phalanx.

B- Two lateral parts (slip): inserted into the base of the distal phalanx.

Muscles of the forearm:

A. Lateral group of the posterior compartment of the forearm :

This group contains 2 muscles:

Muscle	Origin	Insertion	N.S	Action	Note
Brachioradialis	Humerus	Base of styloid process of radius	Radial nerve	1-Restore midprone position (shaking hand) .	1-Restore midprone position also called supinate position 2- Form the lateral border of the cubital fossa .
Extensor carpi radialis longus	Humerus	Second metacarpal bone (2MC).	Radial nerve	Extension of wrist joint	1-Extensor from the function. 2-Carpi from insertion. 3-Radialis from the location. 4-Longus mean: far away from carpal bones.

B. Superficial group of the posterior compartment of the forearm :
This group contains 5 muscles:

Muscle	Origin	Insertion	N.S	Action	Note
Extensor carpi radialis brevis	CEO	Third metacarpal bone (3MC)	Radial nerve	Extend wrist joint	Brevis means: Short.
Extensor digitorum	CEO	Middle and distal phalanges of medial 4 fingers	Radial nerve	Extend the 4 medial fingers and the wrist.	1- This muscle divides into 4 tendons to the 4 medial fingers. 2- Each tendon when reach the proximal phalanx of the medial 4 fingers, flattens to form Extensor Expansion. 3- The most important extensor in the forearm acting as longus and brevis.
Extensor digiti minimi	CEO	The Extensor Expansion (from ext. digitorum) of little finger	Radial nerve	Extend MCPJ (metacarpophalangeal joint) of little finger	1-Digiti means: Finger. 2- Minimi means: Small. 3- This muscle passes below the ER. 4- the little finger has two tendons: one from extensor digitorum and the other tendon from ext digiti minimi; which makes its action more free .
Extensor carpi ulnaris	CEO	Fifth metacarpal bone (5MC)	Radial nerve	Extend wrist joint	No note.
Anconeus	CEO	The lateral side of Olecranon process	Radial nerve	Extend elbow joint	The doctors mention for this muscle and say it absent in 80% of people.

C. Deep group of the posterior compartment of the forearm: This group contains 5 muscles:

Note: This group also called deep layer outgrowing muscle (Deep and Between).

Muscle	Origin	Insertion	N.S	Action	Note
Supinator	CEO	Wrap around the proximal quarter of radius	Deep branch of radial nerve	Supinate the forearm	1-The Radial nerve divides within the cubital fossa into two branches: Superficial branch which is cutaneous (skin) branch and Deep branch which is a muscular branch. 2- the Deep branch of Radial nerve emerges the Supinator muscle and supplies it then it continues as posterior interosseous nerve.
Abductor pollicis longus	1-Radius 2-Ulna. 3- Interosseous membrane	Base of first metacarpal bone (1MC)	Posterior interos. Nerve	Abduct & Extend the thumb	1-As doctor say We can't make abduct without extension. 2- All five metacarpal bones have muscles that are inserted into them except the 4MC.
Extensor Pollicis brevis	1- Radius. 2- Interosseous membrane	Base of proximal phalanx of thumb	Post. Interos. Nerve	Extend MCP joint of thumb	1-All muscles of the deep layer are originated from either Radius or Ulna or Interosseous membrane except the supinator.
Ext. Pollicis longus	1-Ulna 2- Interos. membrane	Base of Distal phalanx of thumb	Post. Interos. Nerve	Extend distal phalanx	Flexor pollicis longus neutralizes Extensor Pollicis longus in Action .
Ext.indicis	1-Ulna 2- Interosseous membrane.	Extensor expansion of index	Post. Interos. Nerve	Extend MCPJ of index	Indicis means : index

Snuffbox:

1-DEF: Triangular depression at the lateral side of the dorsal side of the wrist.

2- The Snuffbox has 2 borders and floor:

A- Border: 1- Medial border: Ext. Pollicis longus.

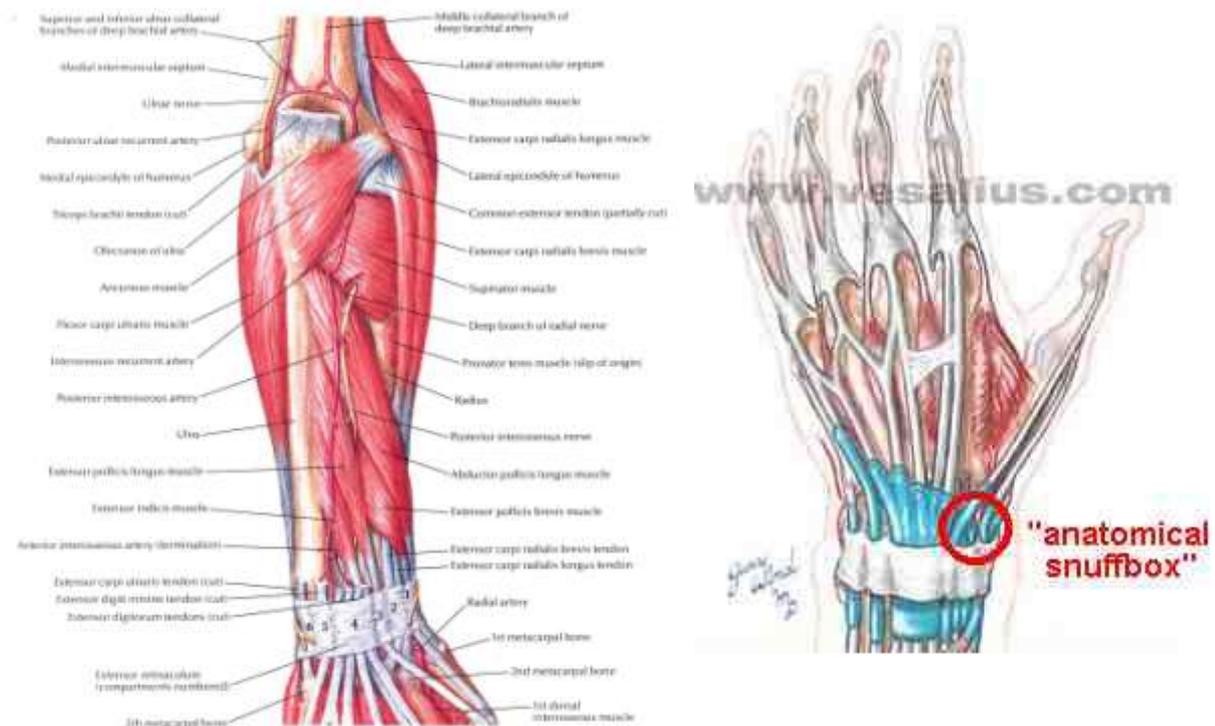
2- Lateral border: Ext. Pollicis brevis & Abd. Pollicis longus.

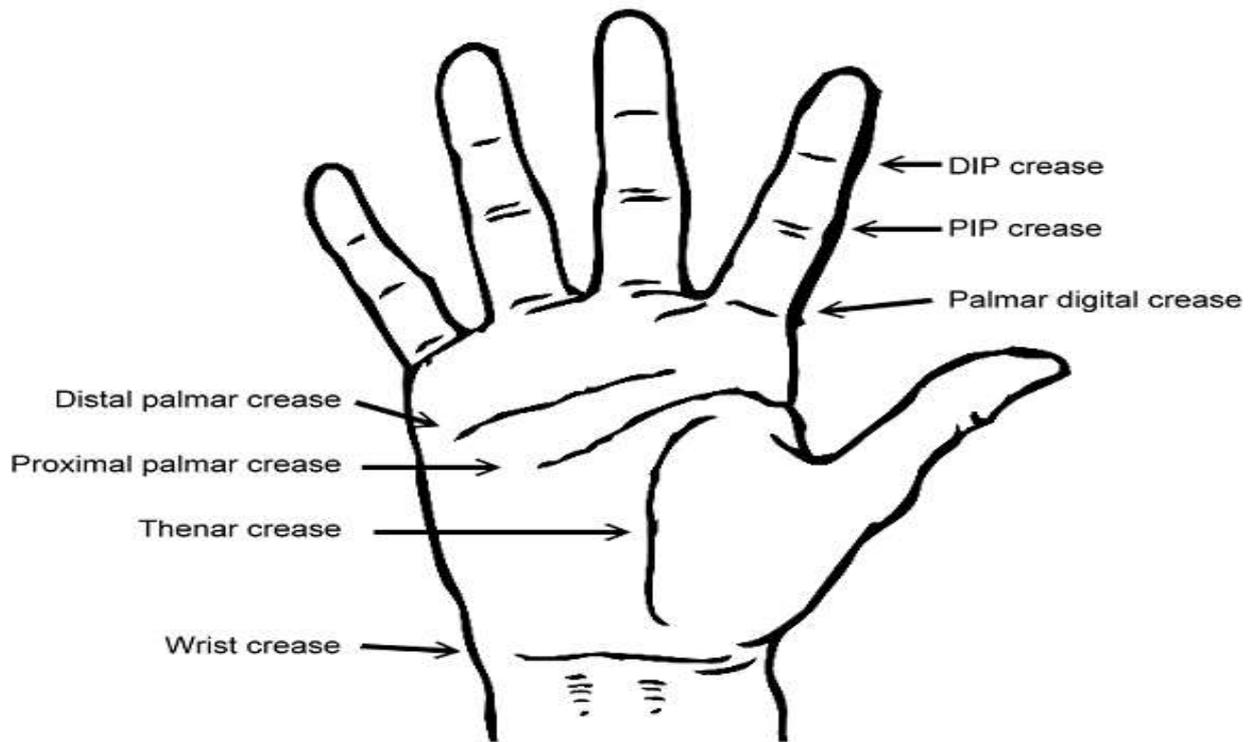
B- Floor: Scaphoid bone at the base of Snuffbox.

3- Content: Radial artery (from this site we can sense the pulse)

4- Roof: The skin above the Snuffbox is supplied by Superficial branch of radial nerve and lateral cutaneous nerve branched from musculocutaneous nerve.

5- If the patient has a casted arm and the doctor wants to know if there is a blood supply to the hand he only has the snuffbox to sense the pulse by the Radial artery.





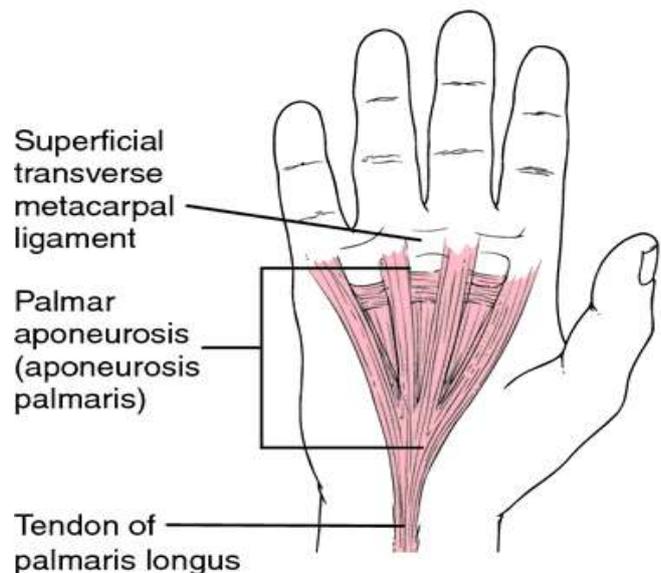
In the skin of our palms we have Folds; we call them creases.

The Distal Palmar crease and Proximal Palmar crease are important clinically; if there's pus in the hand, we can't open it by a needle because they are compartments like Honeycomb structure so we open it from these creases!

they are also important for the firm grip.

Palmar Aponeurosis

- Thickened Deep Fascia .
- Triangular in shape: Apex (Flexor Retinaculum) and base (Middle four fingers)
- Protect the under lying structures.



مقولة اليوم : تصدر دعاية الحرب والصراخ والكذب والكراهية عن لا يحاربون.