

POSTERIOR COMPARTMENT OF THE FOREARM

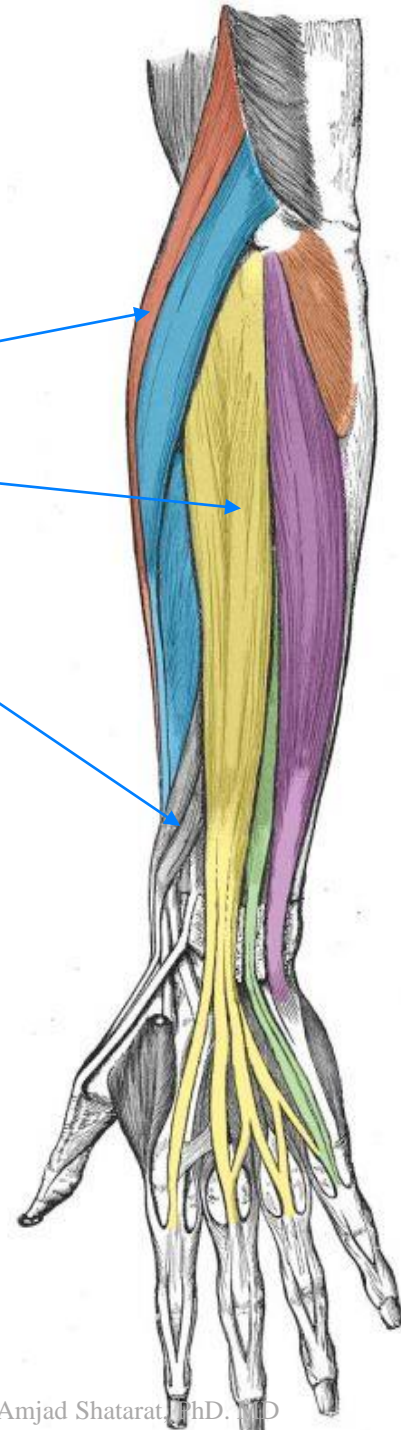
- Most originates from Common extensor origin
LATERAL EPICONDYLE

All supplied by
THE RADIAL NERVE

- Blood Supply
POSTERIOR AND ANTERIOR INTEROSSEOUS ARTERIES
- Most Extend wrist joint

➤ MUSCLES ARE ARRANGED IN
3 GROUPS

1-LATERAL
2-SUPERFICIAL
3-DEEP



-  Brachioradialis
-  Extensor carpi radialis longus and brevis
-  Extensor digitorum
-  Extensor digit minimi
-  Extensor carpi ulnaris
-  Anconeus

Contents of the Lateral Fascial Compartment of the Forearm

*Muscles:

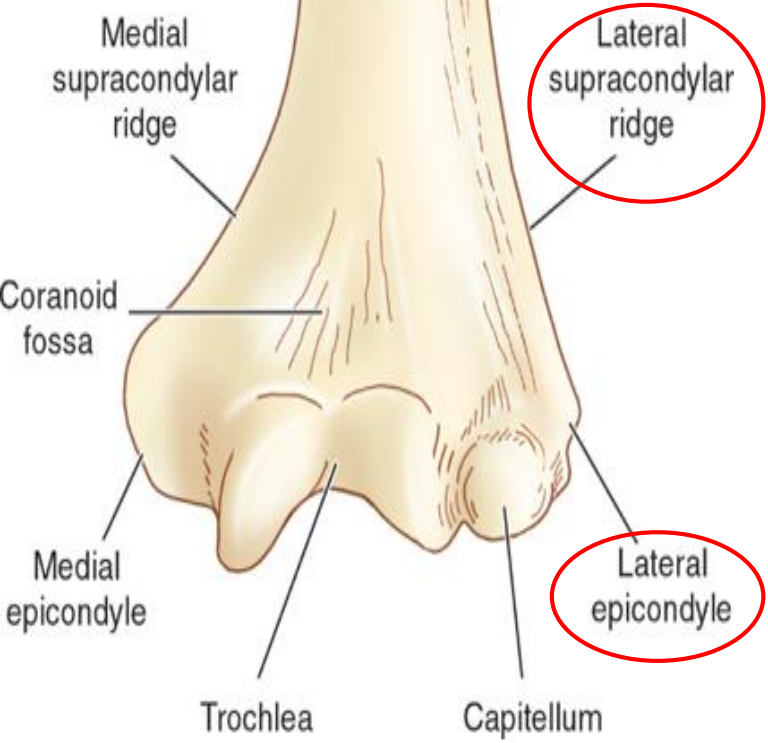
1-BRACHIORADIALIS

2-EXTENSOR CARPI RADIALIS LONGUS

BRACHIORADIALIS →
EXTENSOR CARPI RADIALIS LONGUS →

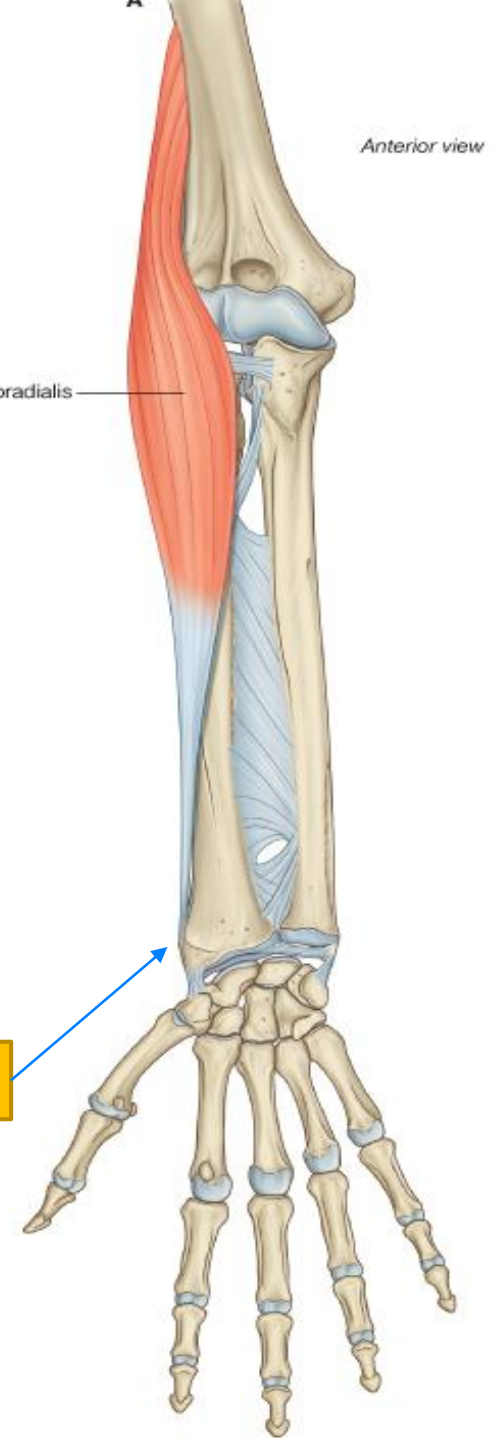


Origin: Lateral supracondylar ridge
lateral epicondyle of the humerus



Source: Scott C. Sherman
Simon's Emergency Orthopedics, Eighth Edition
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Insertion: Base of styloid process of radius



- **Stabilizes the elbow joint during flexion**
- **rotates forearm to the midprone position**

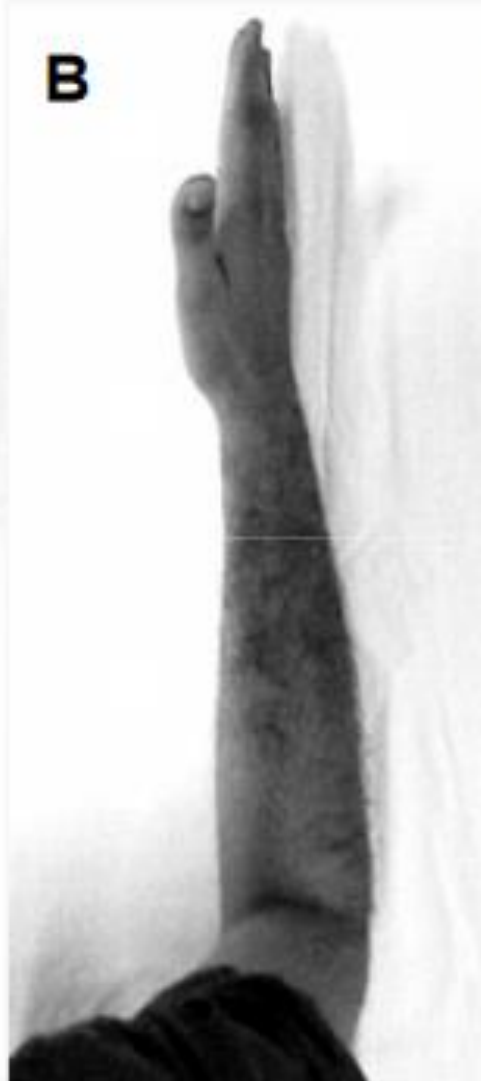
A

سبحان الله



**The forearm is
supinated**

B



**The forearm is in
midprone position**

C



**The forearm is
pronated**

اقسم بالله ان
اكون مخلصا



Origin: Lateral supracondylar ridge of humerus

**Extensor
carpi radialis
longus and
brevis**

Insertion: Posterior surface of base of **second metacarpal** bone

Action: Extends and abducts hand at wrist joint



Nerve supply: Radial Nerve

Both brachioradialis and extensor
carpi radialis longus are supplied
by
The radial nerve
before it divides

What does this mean?

THE SUPERFICIAL GROUP

- 1-Extensor carpi radialis brevis
- 2-Extensor digitorum
- 3-Extensor digiti minimi
- 4-Extensor carpi ulnaris
- 5-Anconeus

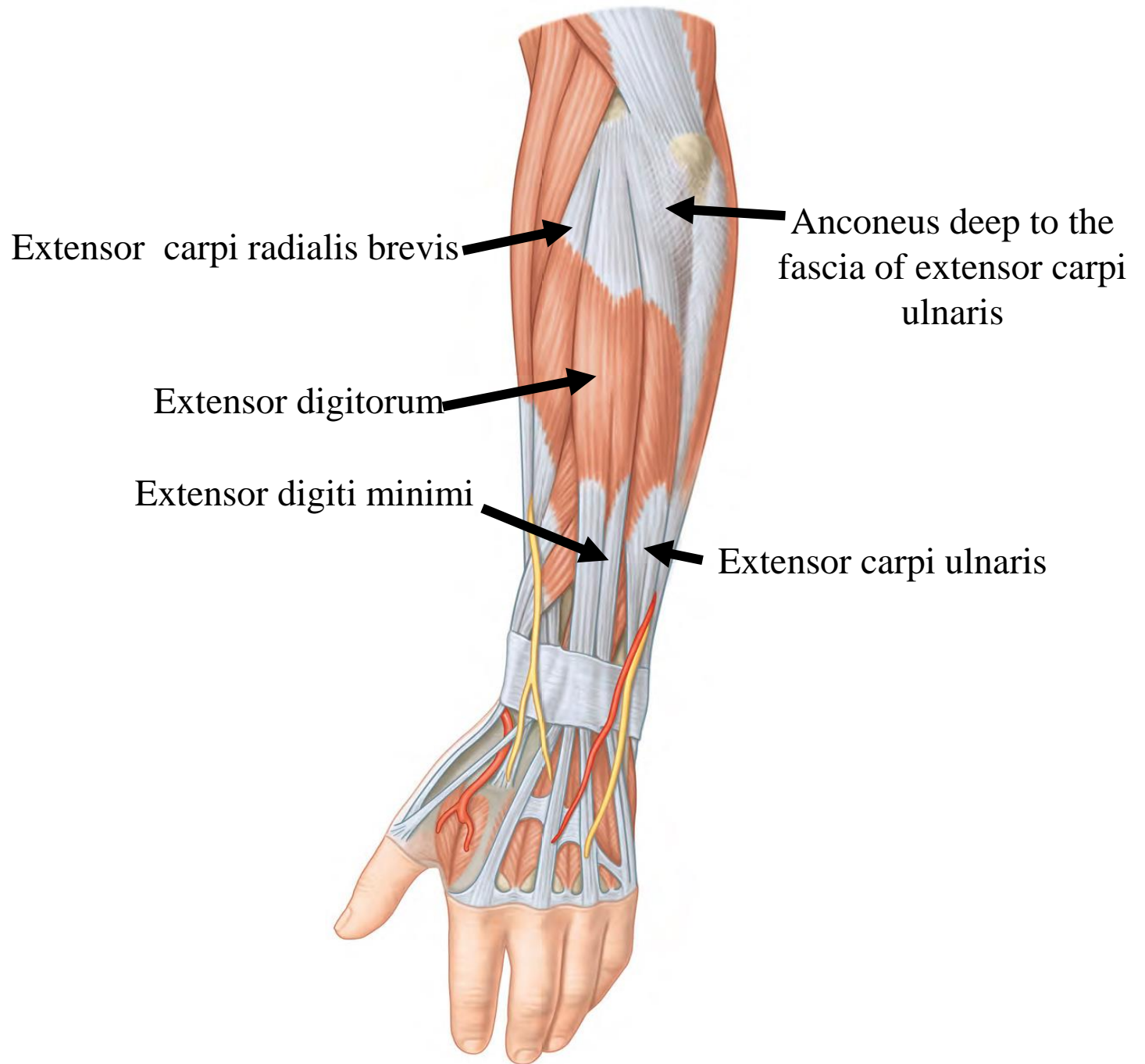
These muscles possess a common tendon of origin, which is attached *to the lateral epicondyle of the humerus*

Because most the muscles of posterior compartment are attached to the lateral epicondyle it may develop *Chronic lateral epicondylitis of the elbow* leading to *pain and tenderness.*

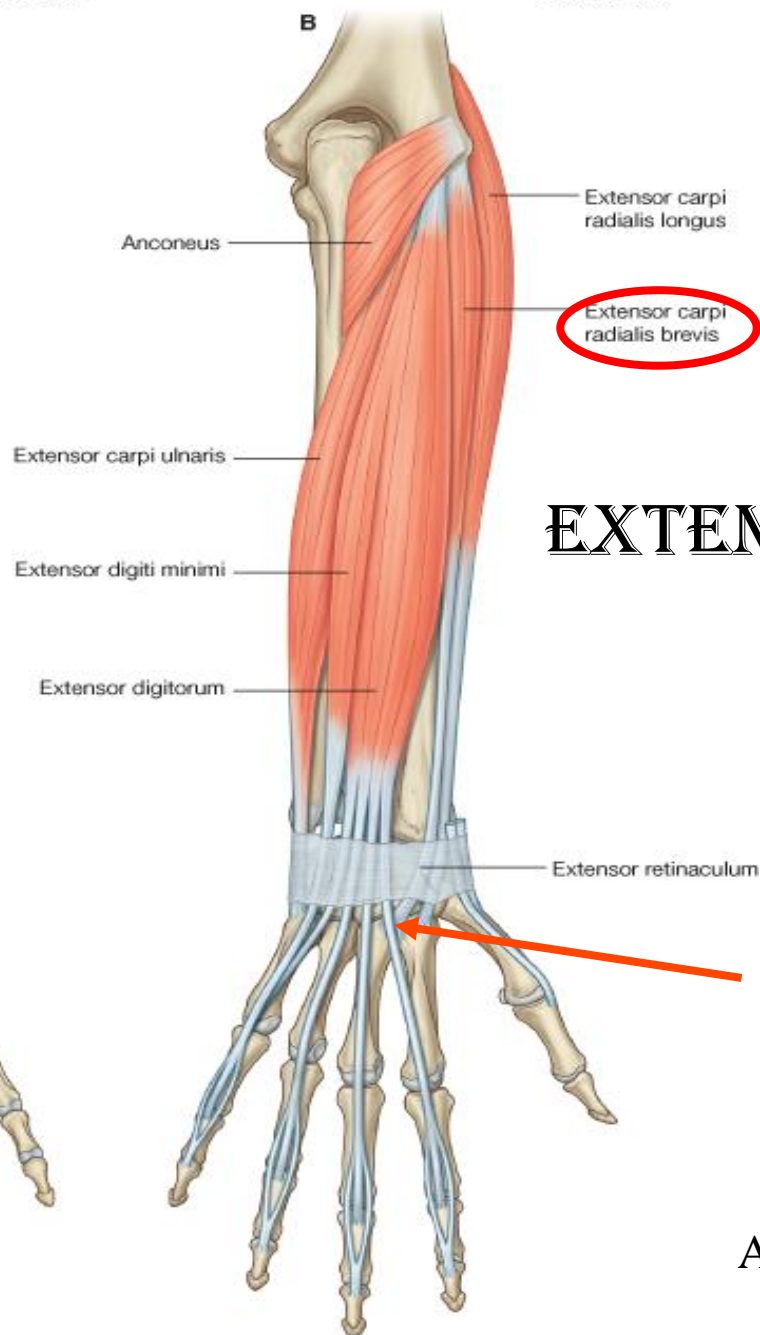
It is a frequent complaint among **TENNIS PLAYERS**

Blood supply: Posterior and anterior interosseous arteries

Nerve supply: Deep branch of the radial nerve



B



EXTENSOR CARPI RADIALIS BREVIS

Origin: the lateral epicondyle of the humerus

Posterior surface of base of **third metacarpal** bone

Nerve supply: **deep branch** of the radial nerve

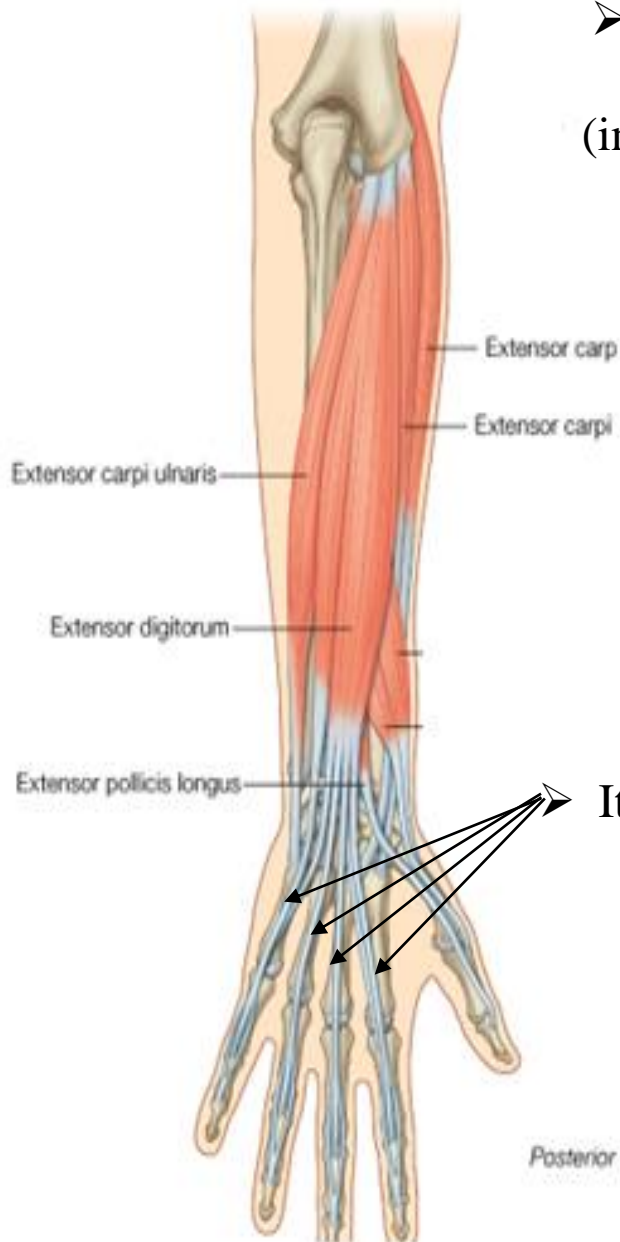
Action: **Extends and abducts** hand at **wrist joint**

EXTENSOR DIGITORUM

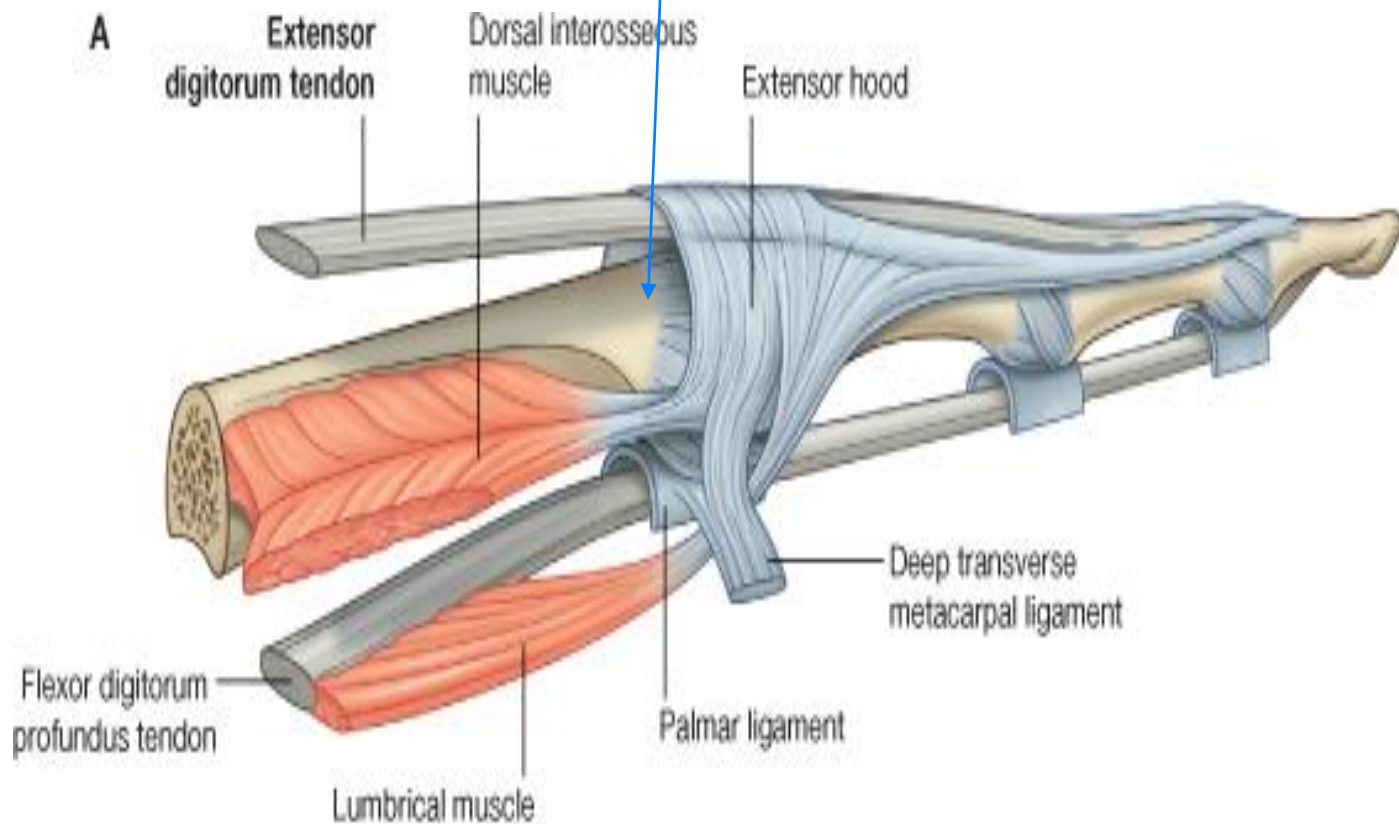
➤ It is the major extensor of the four fingers (index, middle, ring, and little fingers)

➤ It originates from the lateral epicondyle of the humerus

It forms four tendons, each of which passes into a finger



- On the dorsal surface of the hand, adjacent tendons of extensor digitorum are interconnected. In the fingers, each tendon inserts, via a triangular-shaped connective tissue aponeurosis (the **extensor hood**), into the base of **the dorsal surfaces of the middle and distal phalanges**.



Nerve supply: by the posterior interosseous nerve which is the continuation of the deep branch of the radial nerve after it emerges from the supinator muscle

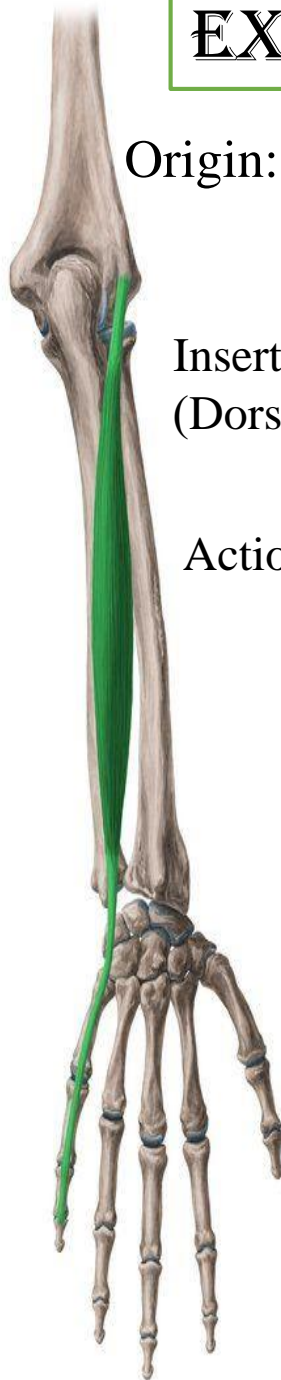
ACTIONS: Extends the index, middle, ring, and little fingers;
can also extend the wrist

EXTENSOR DIGITI MINIMI

Origin: the lateral epicondyle of the humerus

Insertion: Extensor expansion of little finger
(Dorsal hood of the little finger)

Action: Extends the little finger



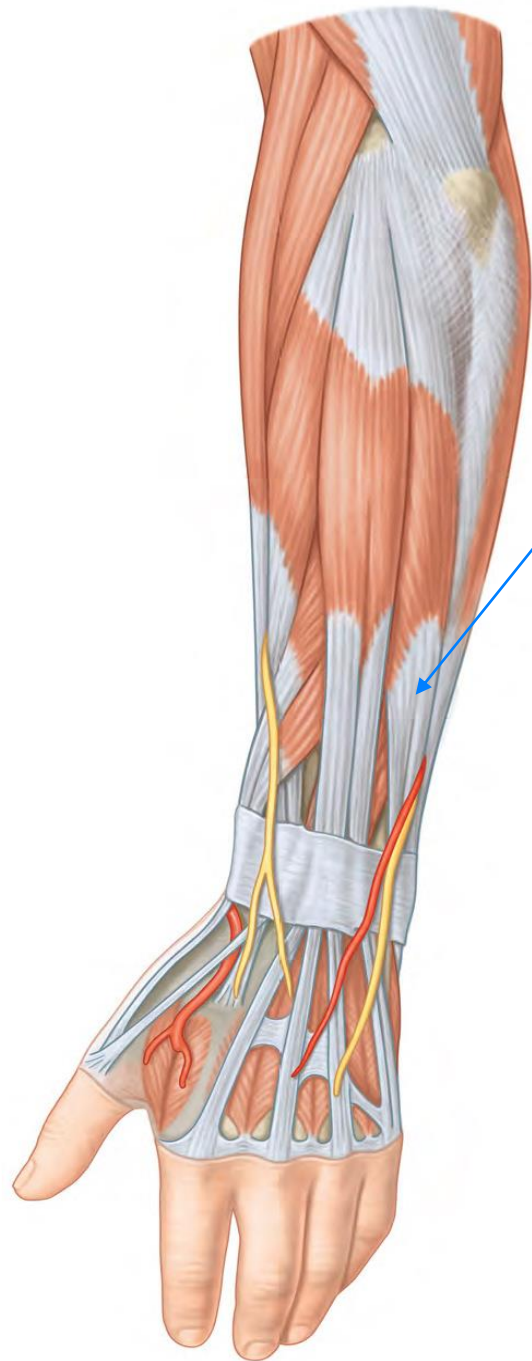
EXTENSOR CARPI ULNARIS

Origin: Lateral epicondyle of humerus

Insertion: Base of fifth metacarpal bone

Nerve supply: *Posterior interosseous nerve*

Actions: Extends and adducts the wrist



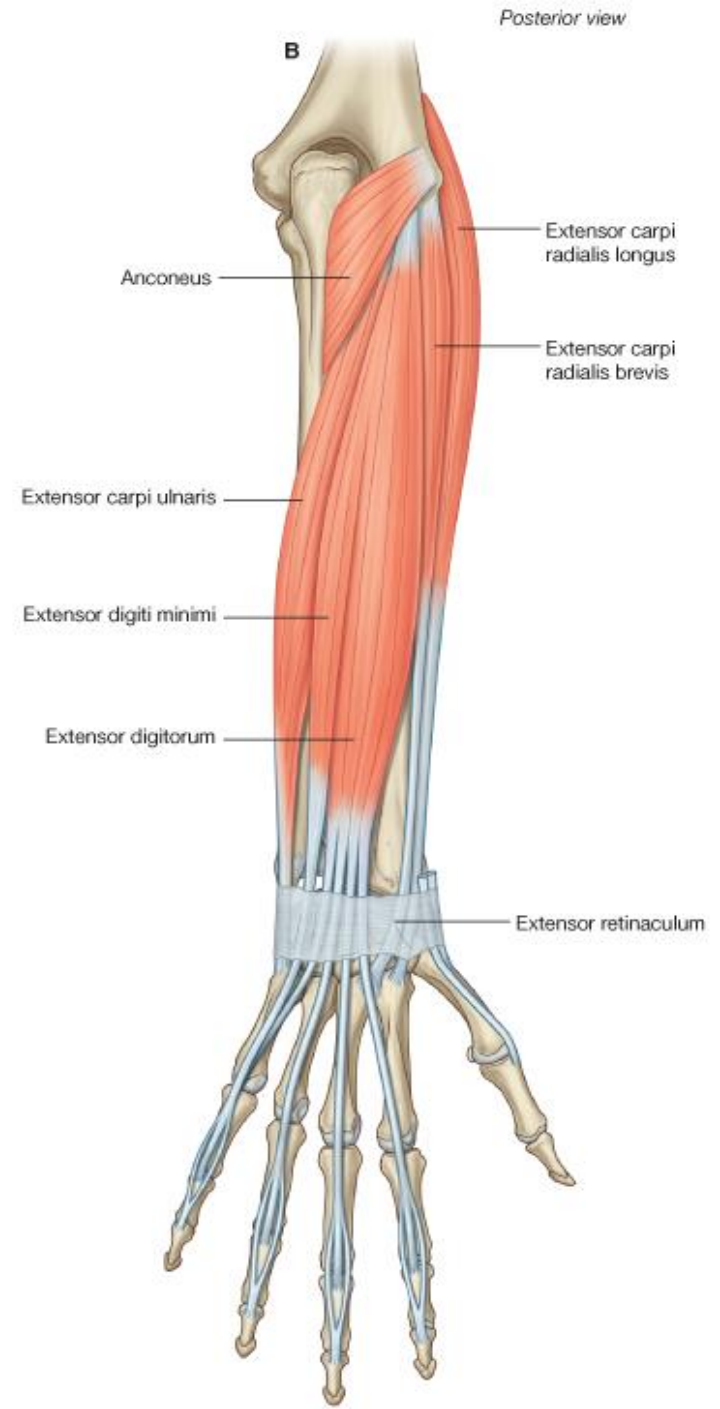
ANCONEUS

Origin: Lateral epicondyle of humerus

Insertion: olecranon process of ulna

Abduction of the ulna in pronation; accessory extensor of the elbow joint

Nerve supply: **Radial nerve**



DEEP GROUP

- 1- Supinator
- 2- Abductor pollicis longus
- 3- Extensor pollicis brevis
- 4- Extensor pollicis longus
- 5- Extensor indicis

Blood supply: Posterior and anterior interosseous arteries

Nerve supply: Deep branch of the radial nerve

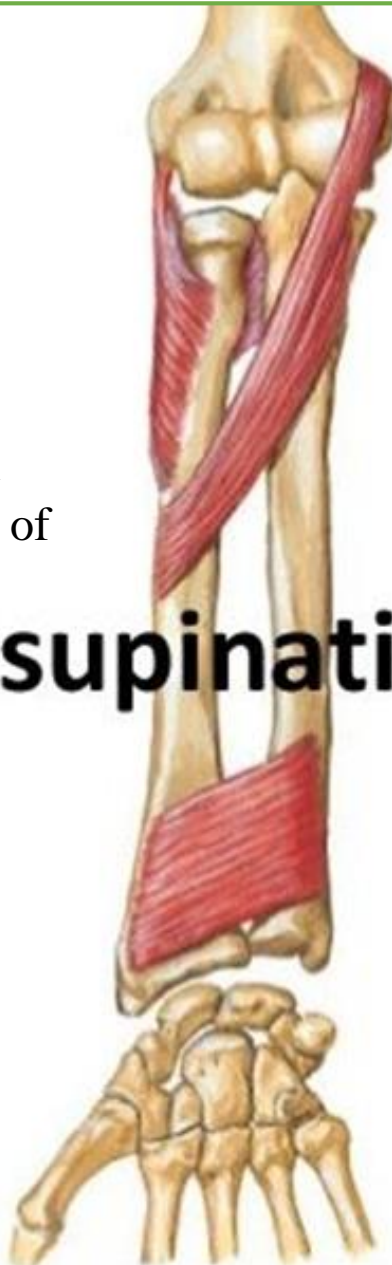
SUPINATOR MUSCLE

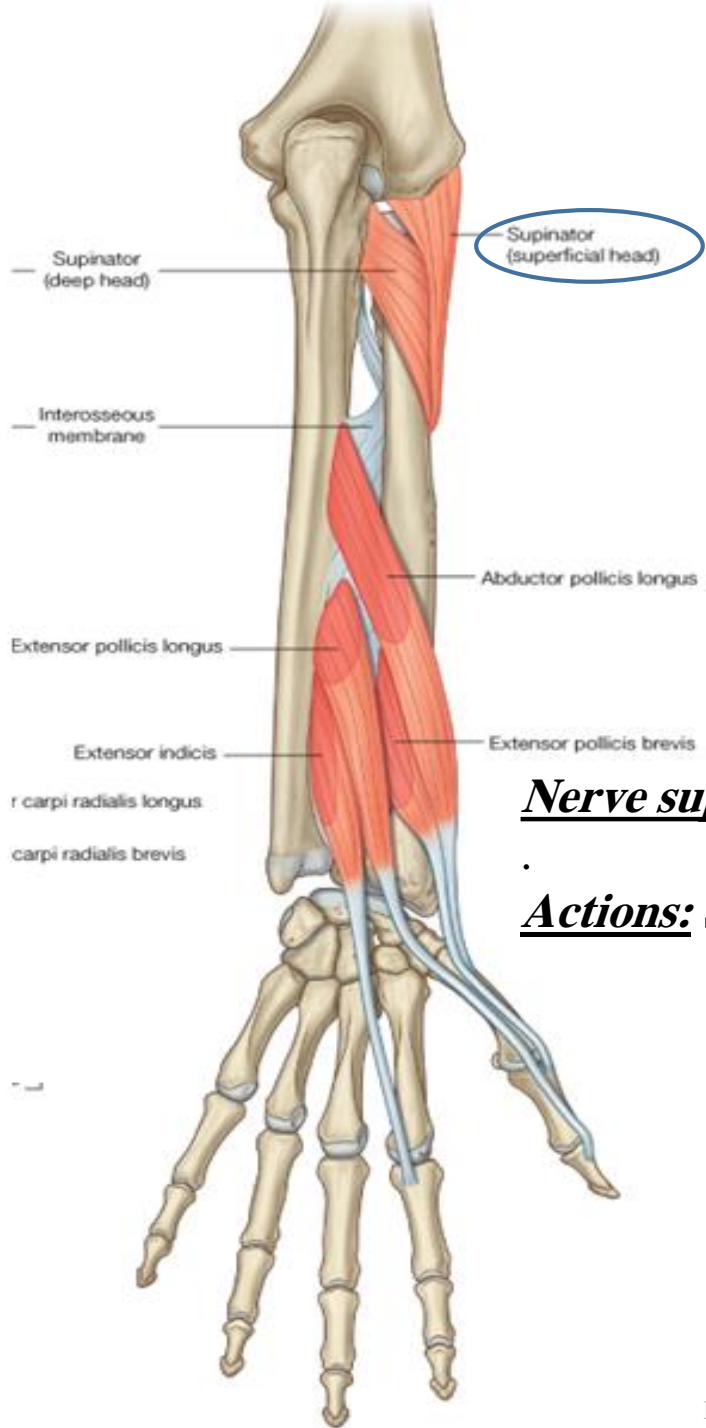
Origin: Superficial part-lateral epicondyle of humerus, radial collateral and anular ligaments; deep part-supinator crest of the ulna

Read only

Insertion: Front and lateral and posterior surfaces of the upper 1/3 of the radius.

supination





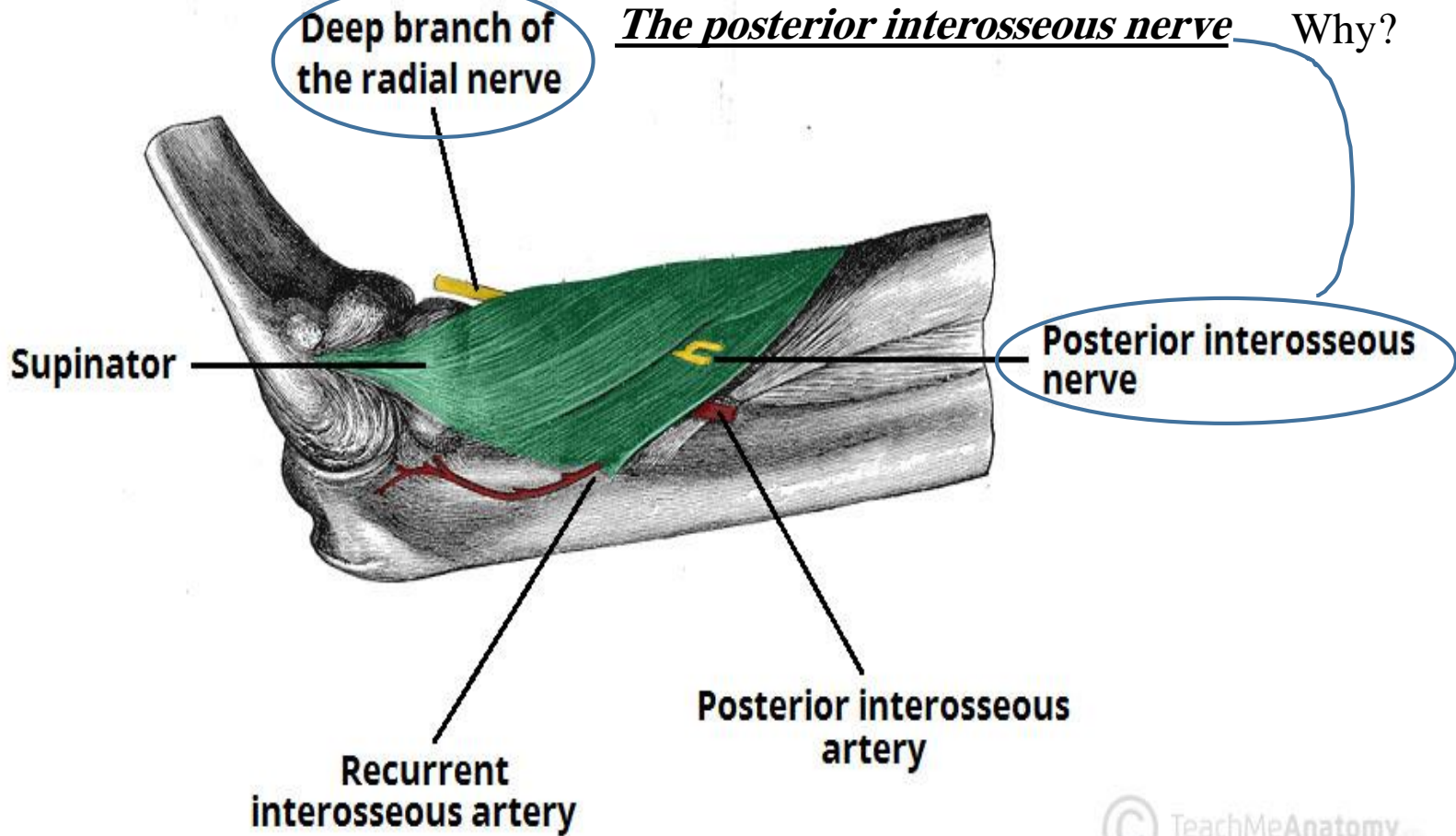
Nerve supply: Deep branch of Radial Nerve

Actions: Supination the forearm



Posterior view

Between the two heads of supinator muscle passes the deep branch of the radial nerve, however, its continuation after it emerges from the supinator muscle has been named **The posterior interosseous nerve** Why?



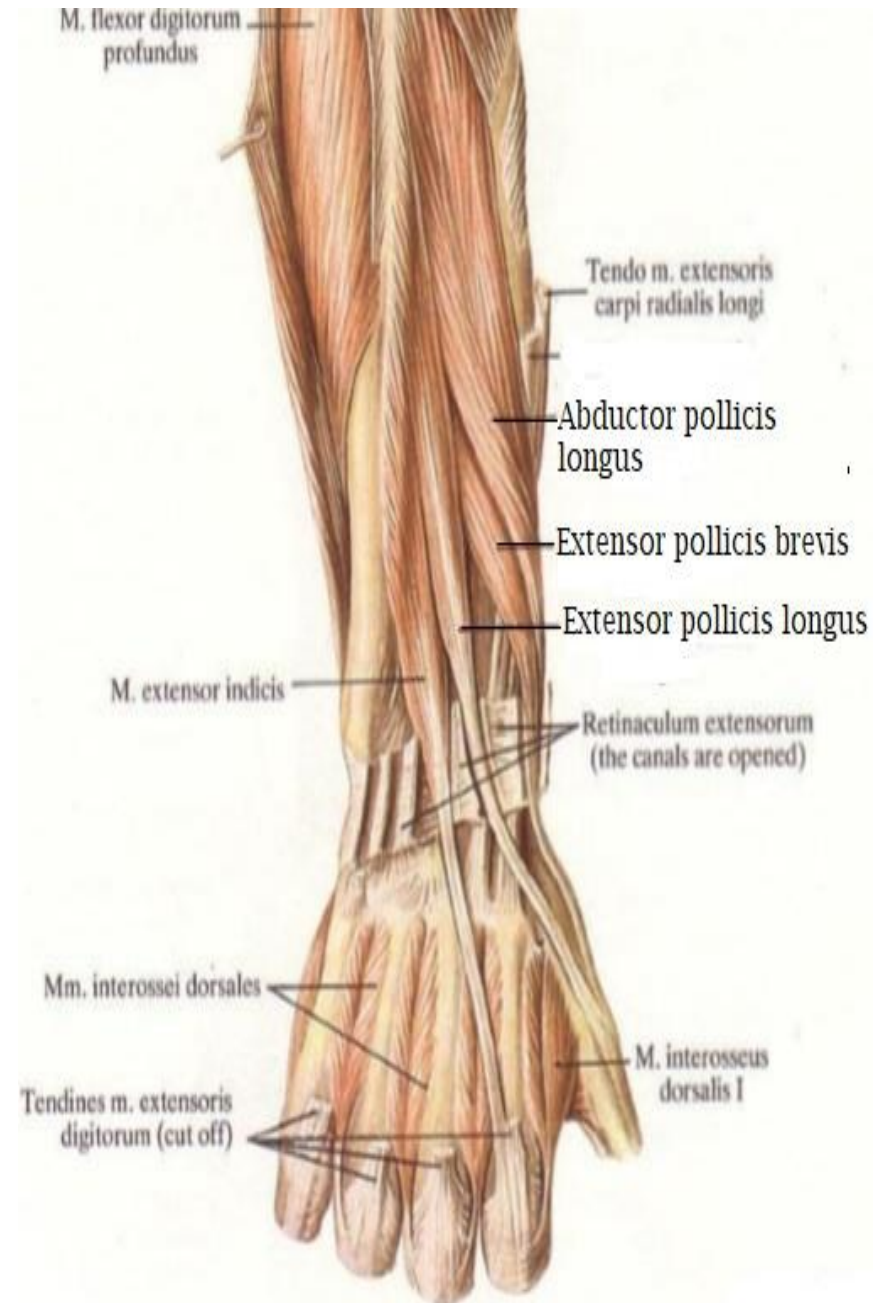
ABDUCTOR POLLICIS LONGUS

Origin:

Insertion: Base of the 1st Metacarpal bone

Nerve supply: **posterior interosseous nerve**

Action: Abducts and extends thumb



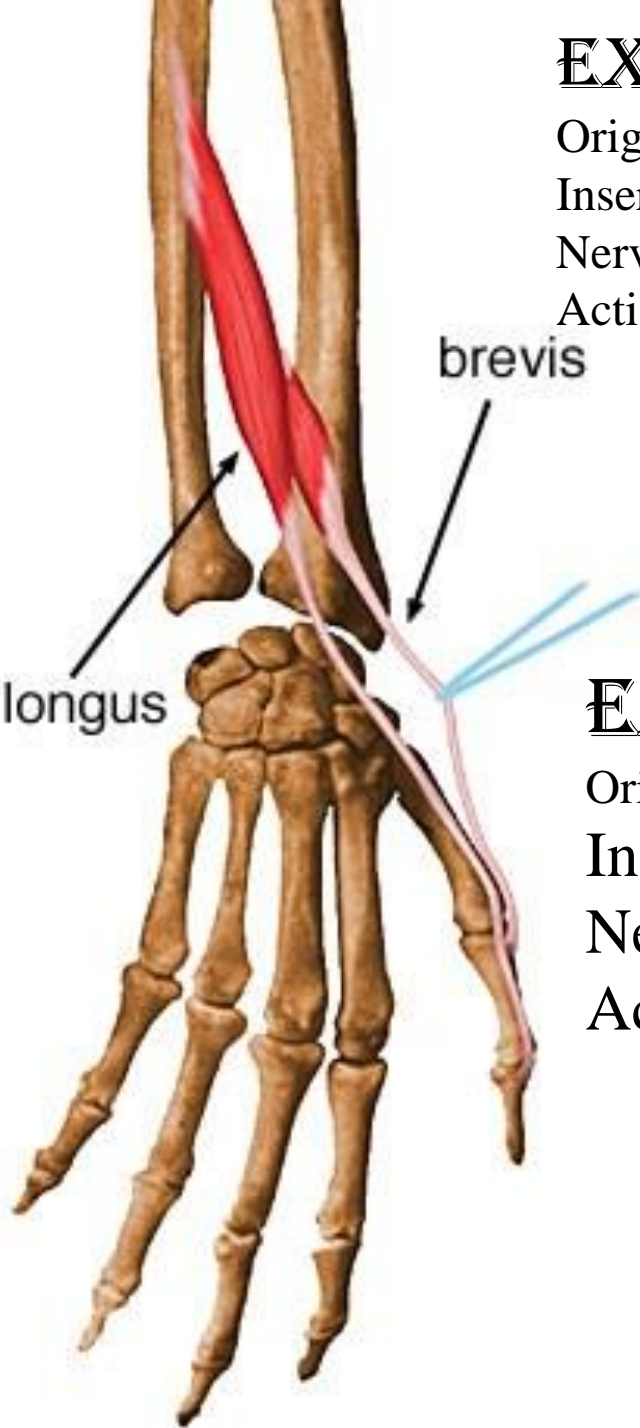
EXTENSOR POLLICIS BREVIS

Origin:

Insertion: Base of the proximal phalanx of the thumb.

Nerve supply: posterior interosseous nerve.

Action: Extends Metacarpophalangeal joint of the thumb.



EXTENSOR POLLICIS LONGUS

Origin:

Insertion: Base of the distal phalanx of the thumb

Nerve supply: posterior interosseous nerve.

Action: Extends the distal phalanx of the thumb

EXTENSOR INDICIS

Insertion: Its tendon joins the extensor expansion of the index finger

Nerve supply: posterior interosseous nerve

Action: Extends all the joints of the index finger

EXTENSOR INDICIS →

