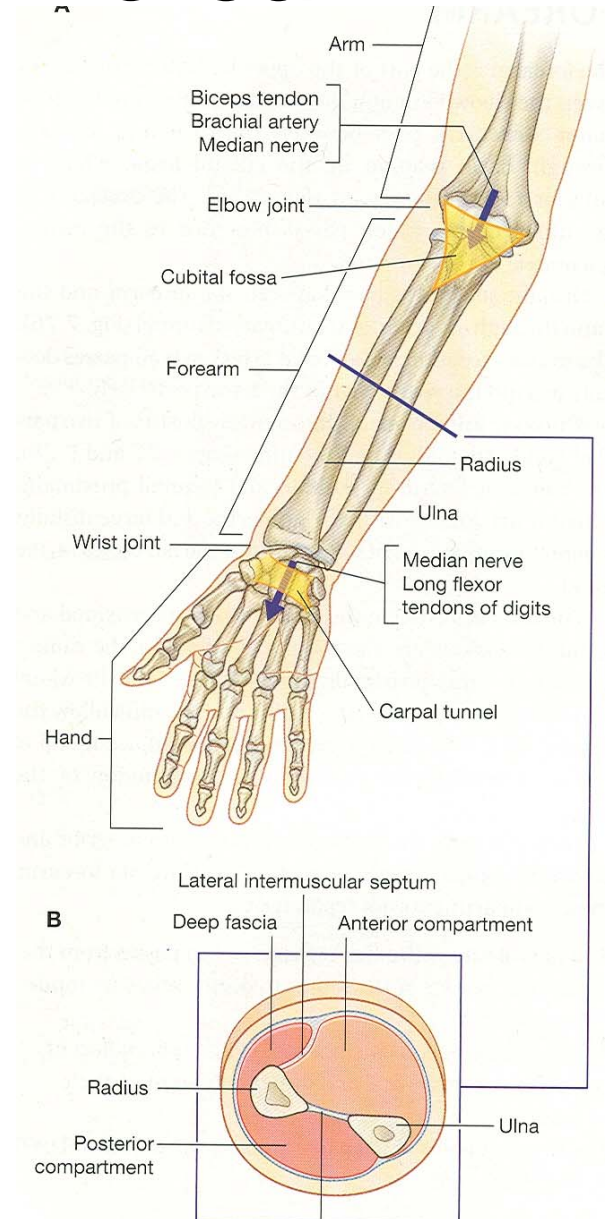


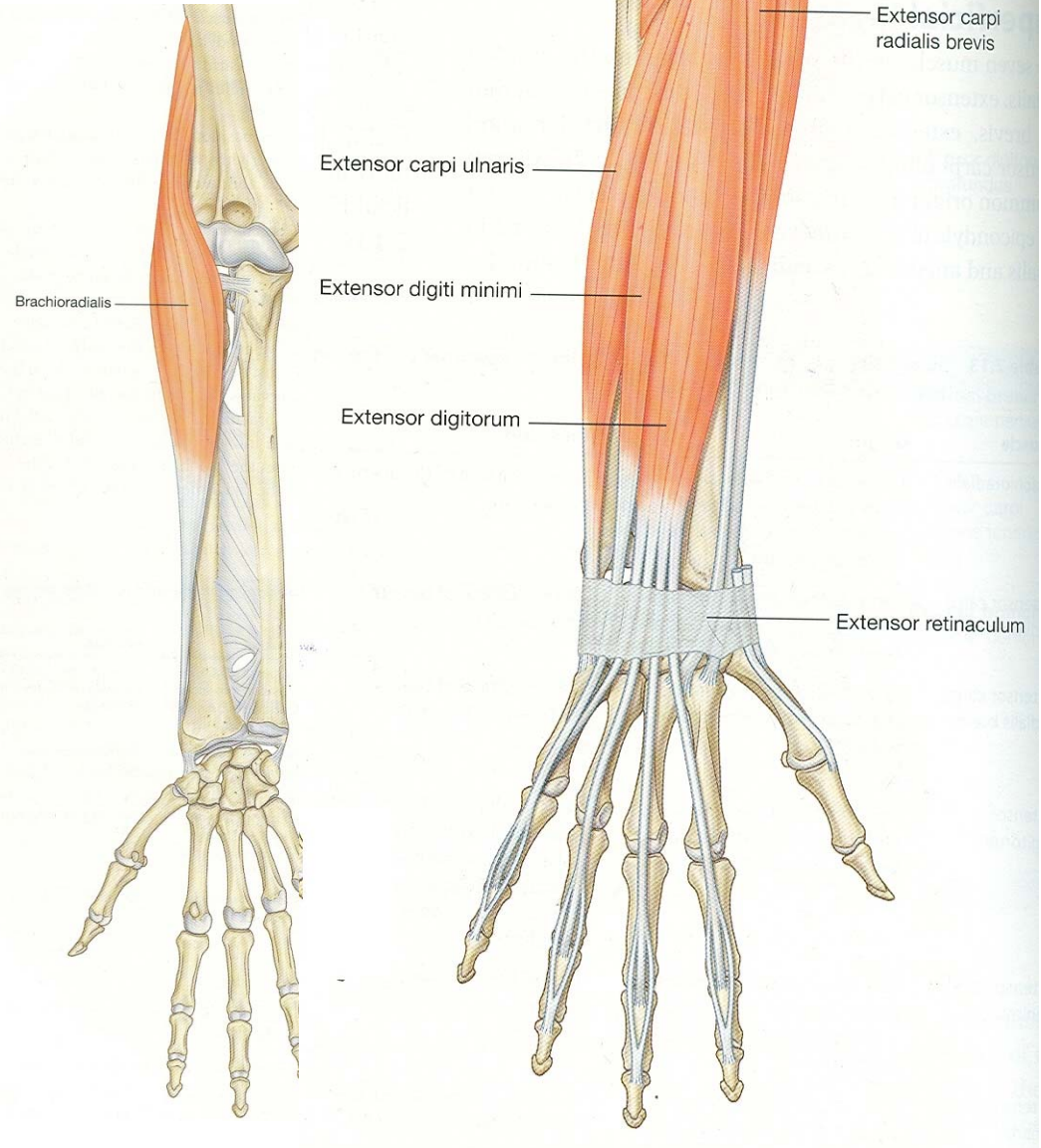
Extensor compartment of forearm

- Muscles- Occur in two layers
- Superficial layer
- Deep layer
- Muscles are associated with movement of wrist, extension of fingers & thumb & supination



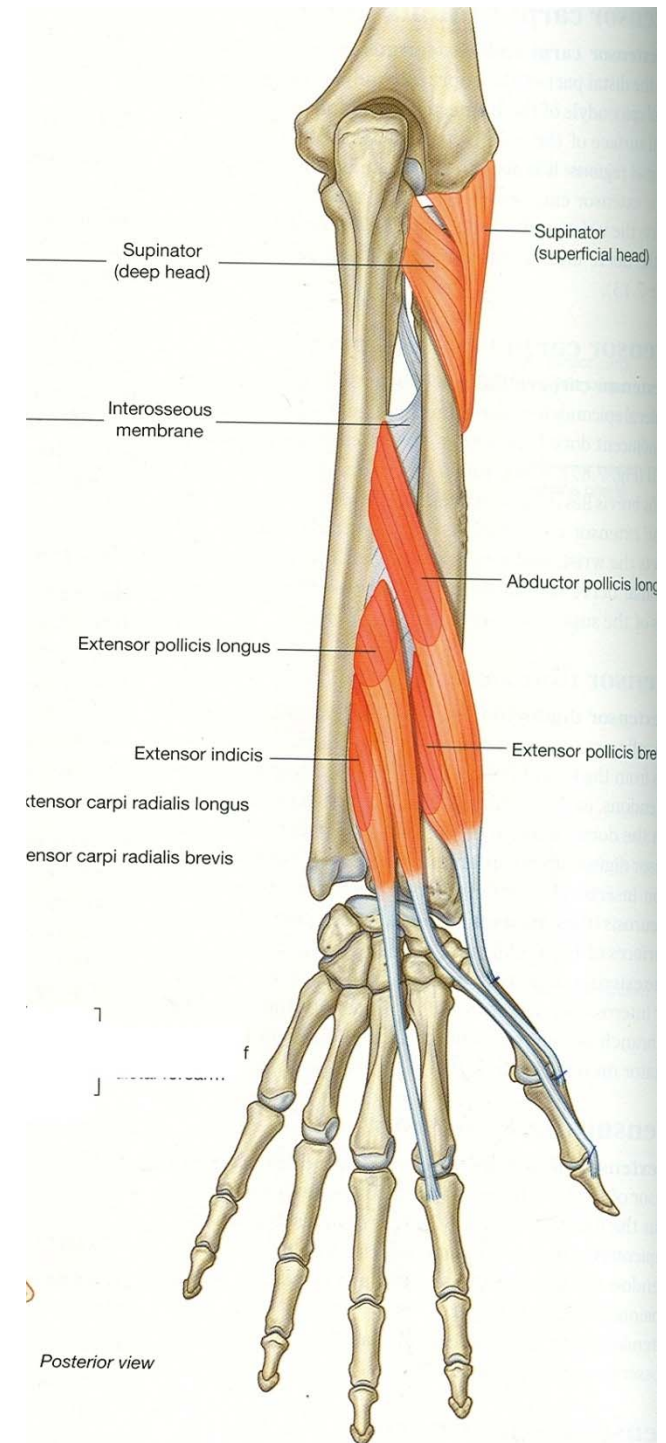
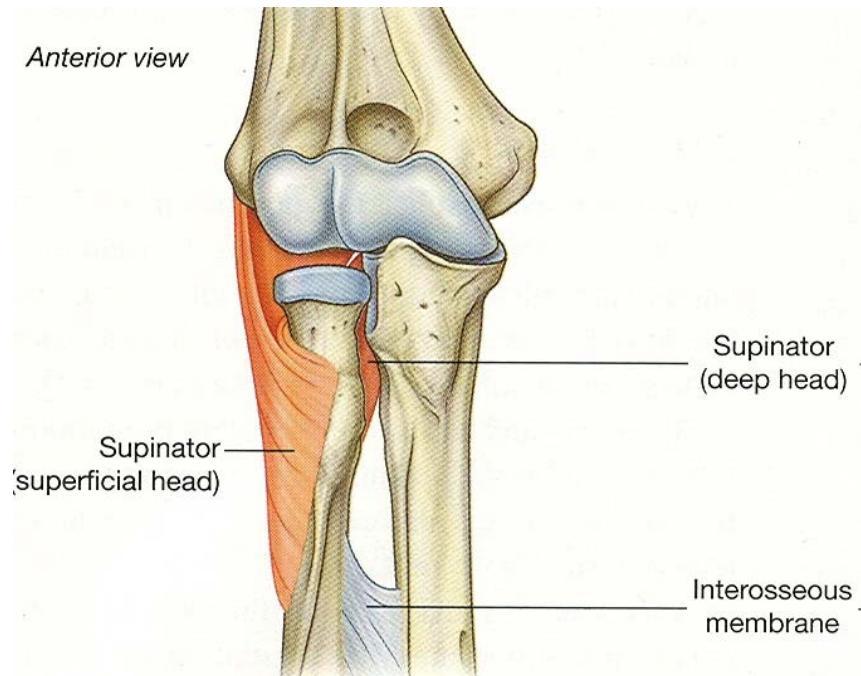
Superficial layer-

- Brachioradialis
- Extensor carpi radialis longus
- Extensor carpi radialis brevis
- Extensor digitorum
- Extensor digiti minimi
- Extensor carpi ulnaris
- Anconeus

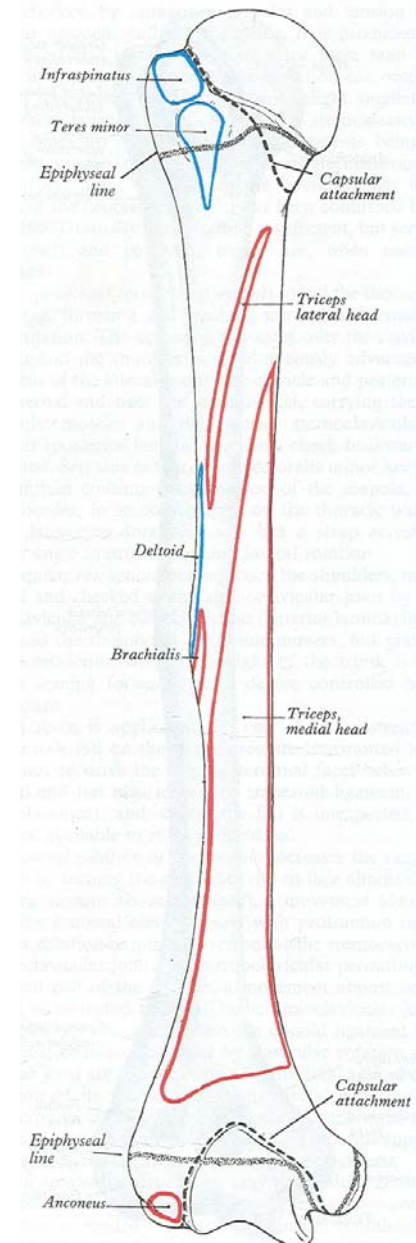
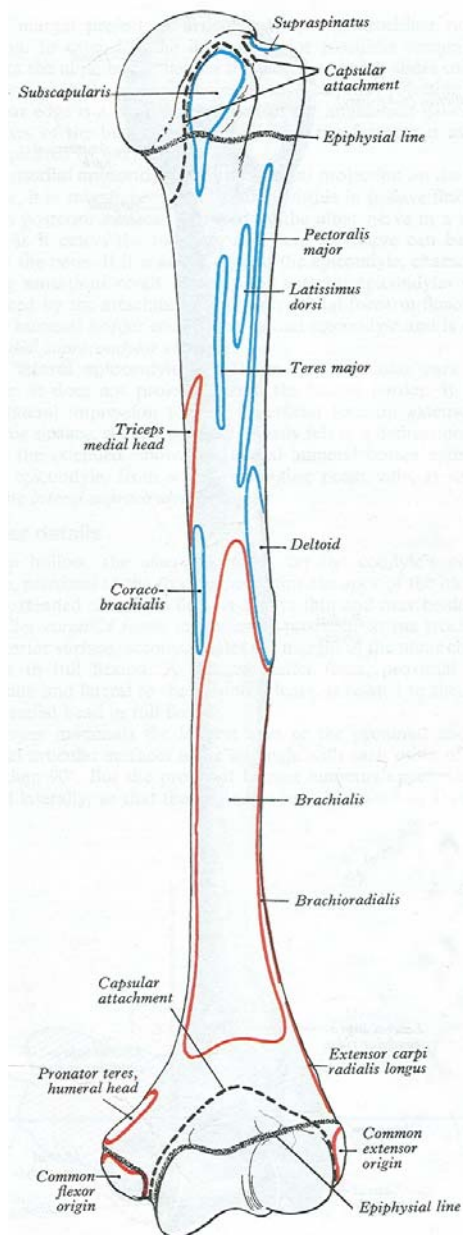


Deep layer-

- Supinator
- Abductor pollicis longus
- Extensor pollicis longus
- Extensor pollicis brevis
- Extensor indicis

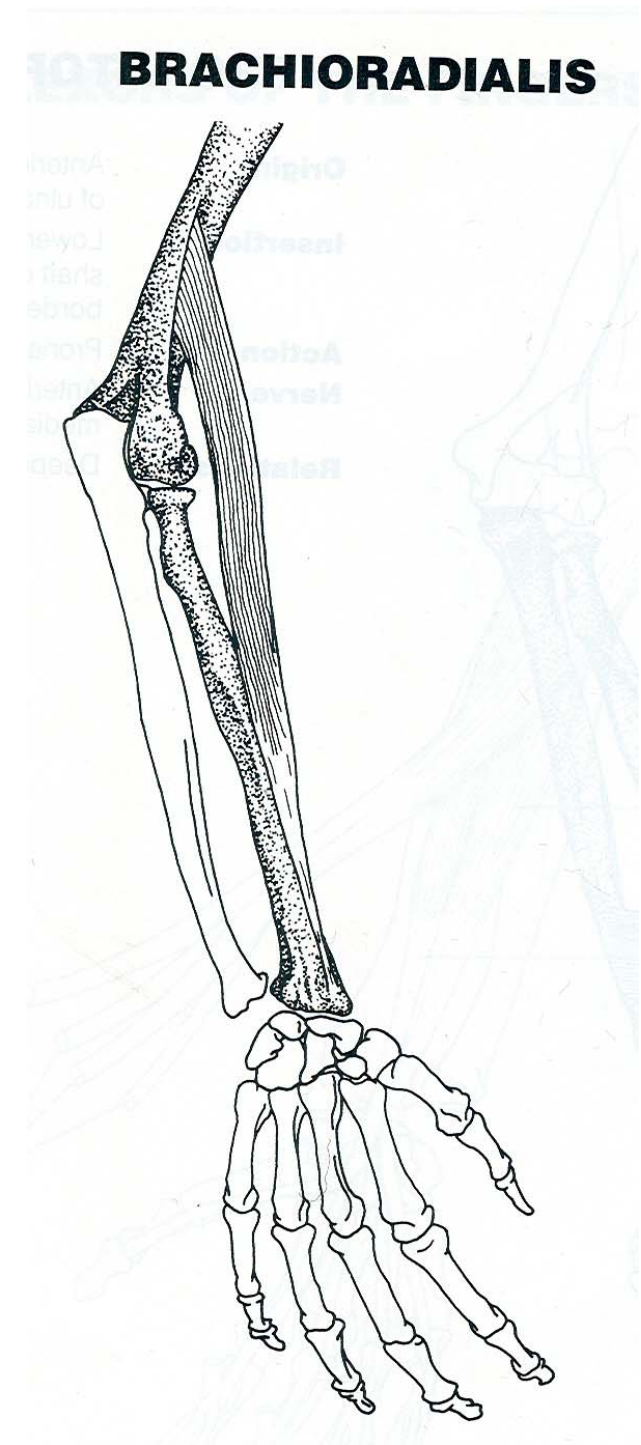


Origin of superficial muscles of back of forearm



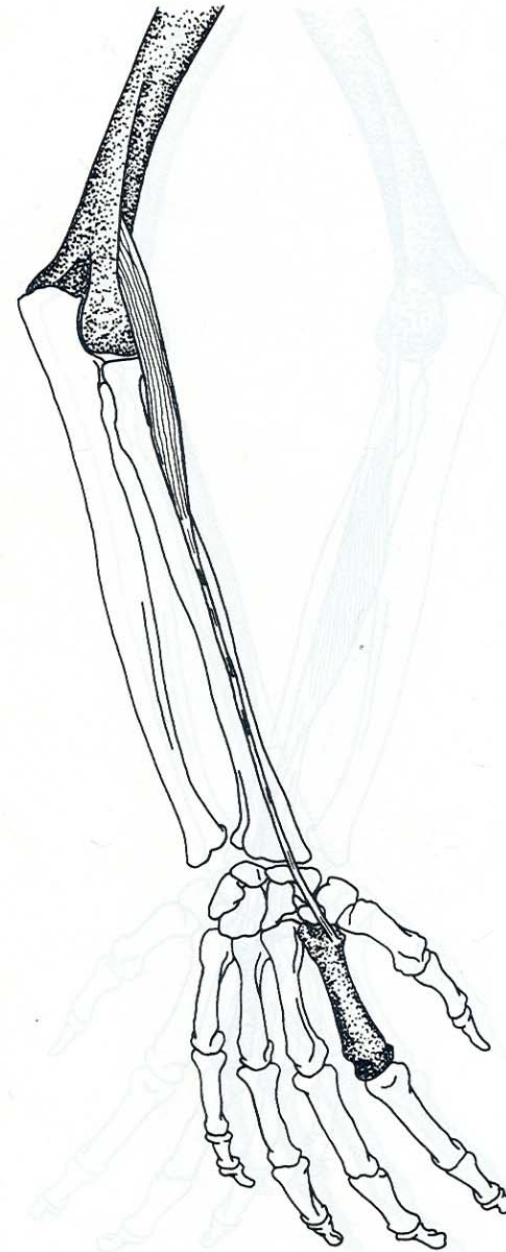
Brachioradialis-

- **Origin-** upper third of lateral supracondylar ridge of humerus & lateral intermuscular septum
- **Insertion-** Base of styloid process & lateral surface of radius
- **Action-** Flexes arm in midprone position
- Supinates the fully pronated forearm & pronates the fully supinated forearm
- **Nerve-** Radial nerve(C_{5,6})



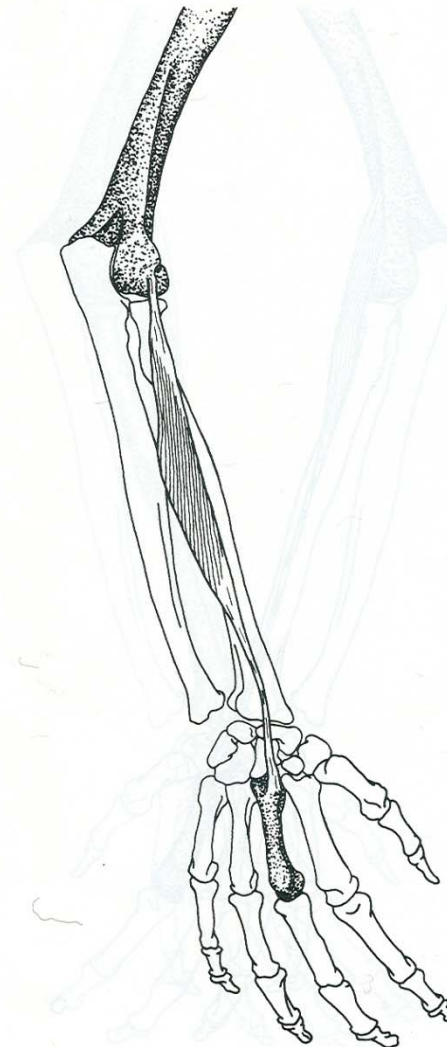
EXTENSOR CARPI RADIALIS LONGUS

- Origin-** Lower third of supracondylar ridge of humerus, common extensor origin & lateral intermuscular septum
- Insertion-** Lateral side of dorsal surface of base of the second metacarpal bone
- Action-** Extends hand, synergist in abduction of hand with flexor carpi radialis
- Nerve-** Radial nerve (C_{6,7})



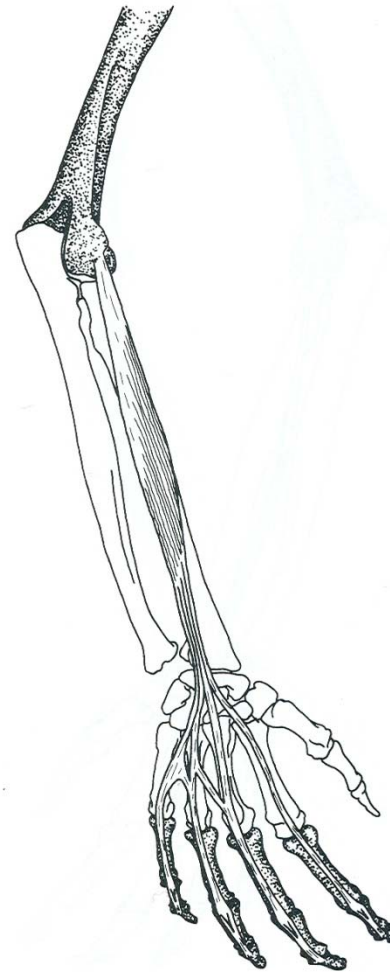
- Origin**-Lateral epicondyle of humerus, radial collateral ligament of elbow joint
- Insertion**- dorsal surface of second & third metacarpal bones
- Action**- Extends hand, synergistic in abduction of hand with flexor carpi radialis
- Nerve**- Radial nerve(C6,7)

EXTENSOR CARPI RADIALIS BREVIS

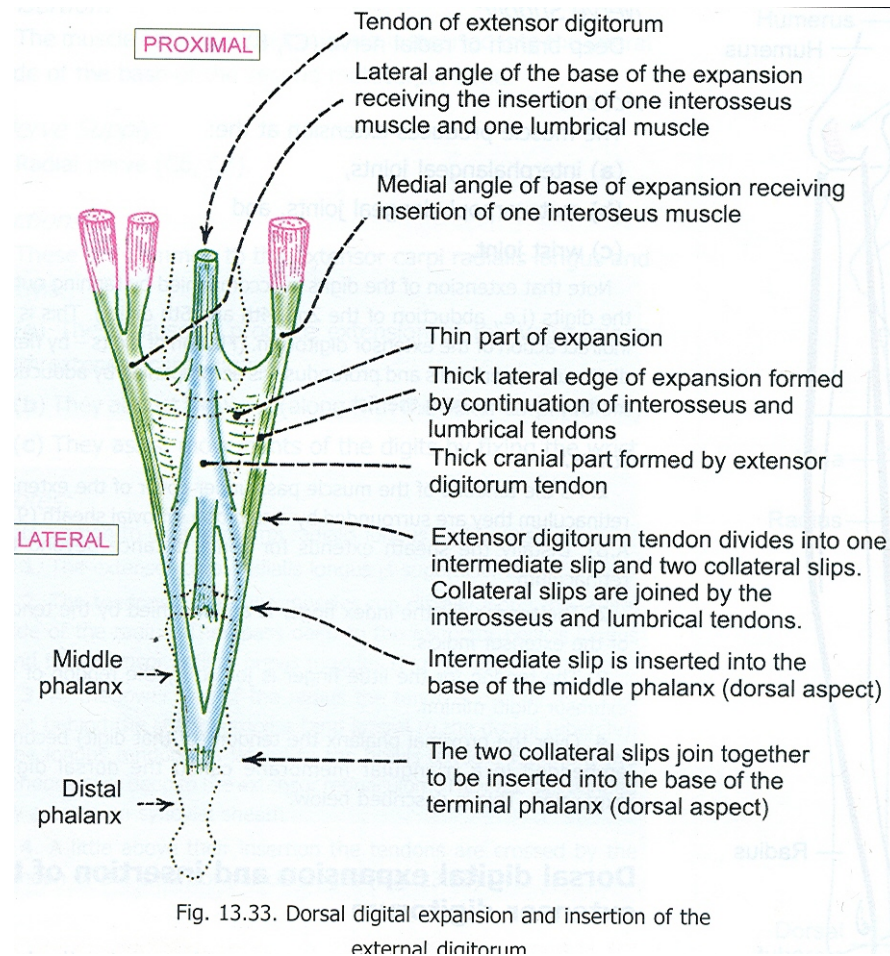
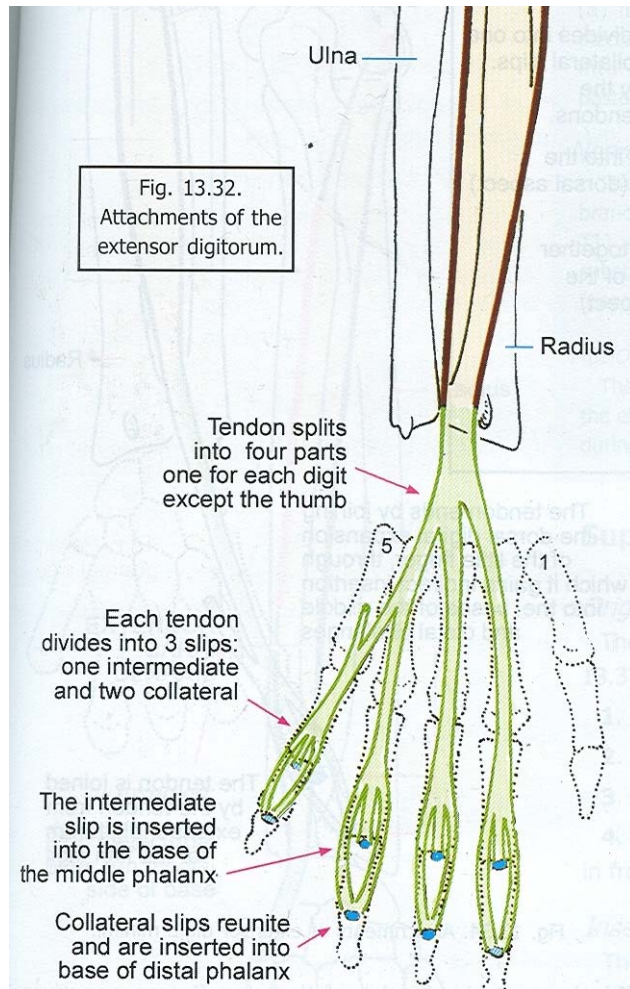


- **Origin**-Lateral epicondyle of humerus
- **Insertion**- Lateral & dorsal surface of all the phalanges of the four fingers
- , forms extensor expansion
- **Action**- Extends the fingers & wrist
- **Nerve**- Deep branch of radial nerve

EXTENSOR DIGITORUM COMMUNIS



Extensor expansion



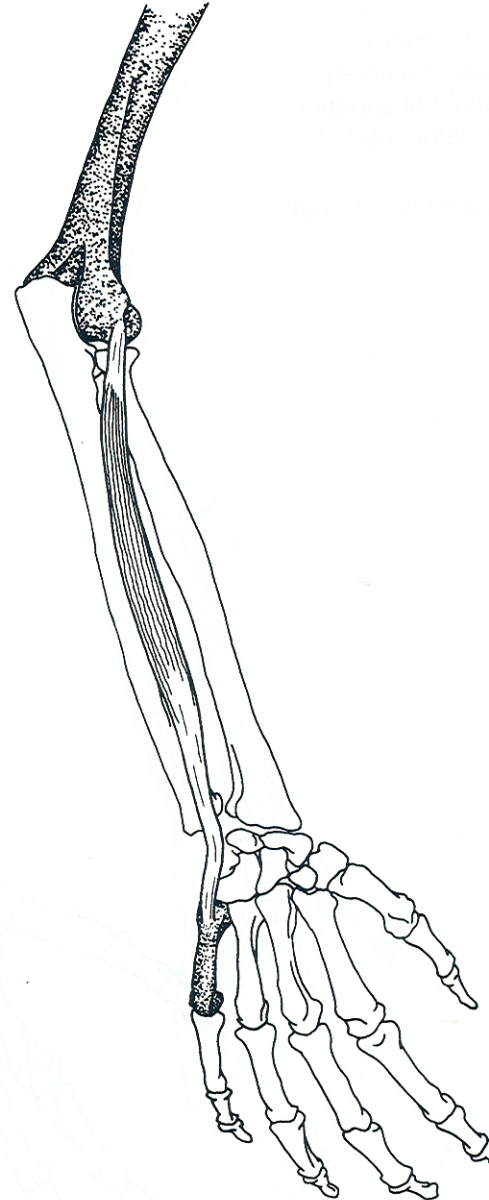
EXTENSOR DIGITI MINIMI

- Origin-Common tendon attached to lateral epicondyle of humerus
- Insertion- Dorsal surface of base of first phalanx of fifth finger
- Action- Extends fifth finger
- Nerve- Deep branch of radial nerve ($C_{5,6}$)

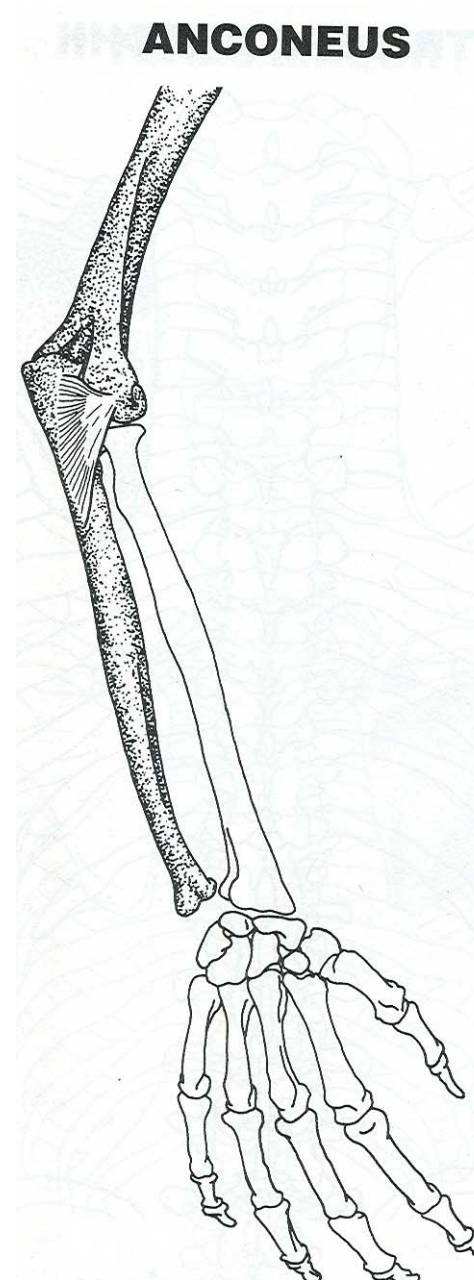


- **Origin-** Common tendon attached to lateral epicondyle of humerus
- Posterior border of ulna
- **Insertion-** Medial side of dorsal surface of base of fifth metacarpal bone
- **Action-** Extends hand, synergist in adduction of hand with flexor carpi ulnaris
- **Nerve-** Deep branch of radial nerve (C5,6)

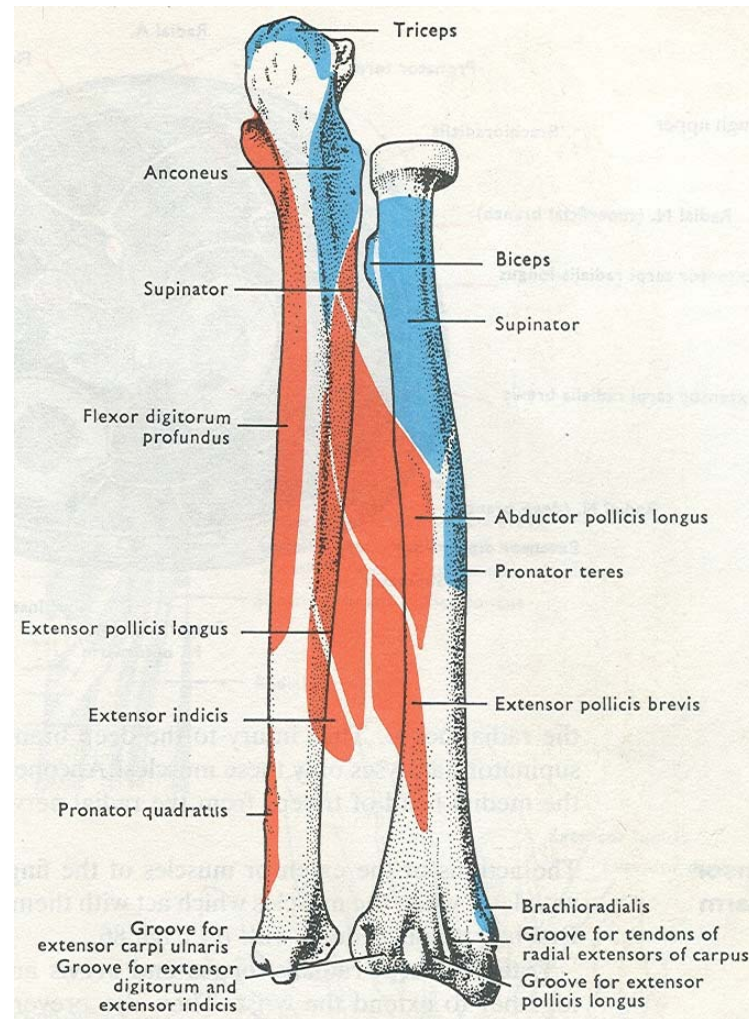
EXTENSOR CARPI ULNARIS



- **Origin-** Posterior part of lateral epicondyle of humerus
- **Insertion-** Lateral surface of the olecranon process & upper 1/4th of posterior surface of ulna
- **Action-** Weak Extensor of elbow, moves ulna laterally during pronation.
- **Nerve-** Radial nerve (C7,8) thru nerve to medial head of triceps



Origin of deep muscles of back of forearm



SUPINATOR

Origin

Lateral epicondyle of humerus, lateral ligament (radial collateral) of elbow, annular ligament of superior radioulnar joint, supinator crest of ulna

Insertion

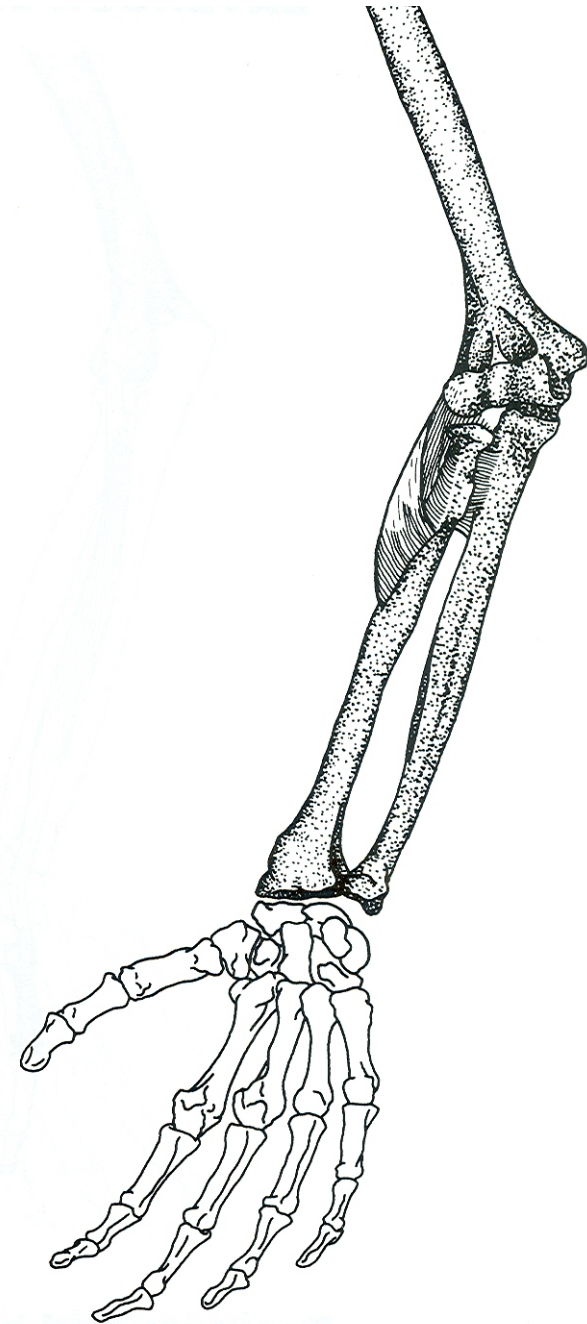
Dorsal and lateral surfaces of upper third of radius

Action

Supinates forearm

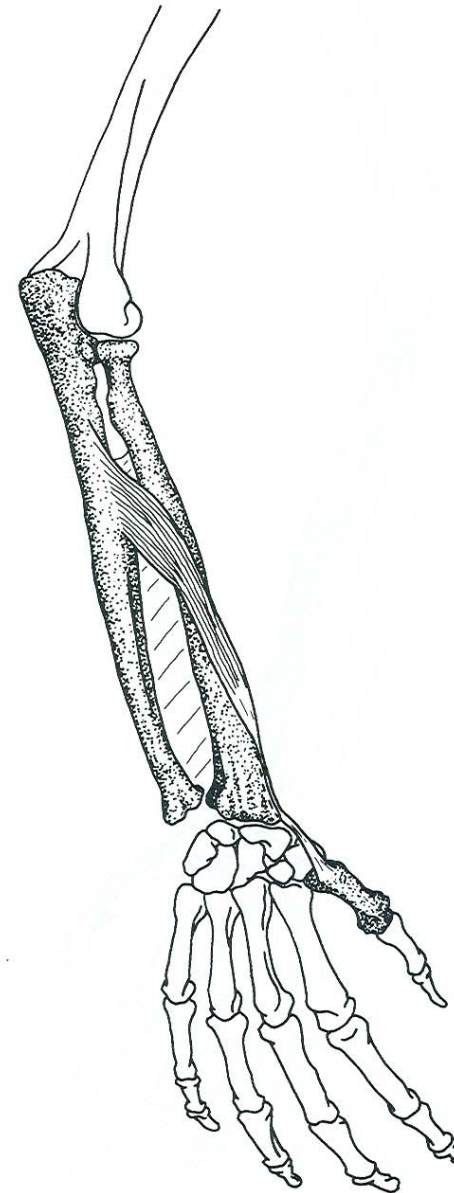
Nerve

Radial nerve (C6)



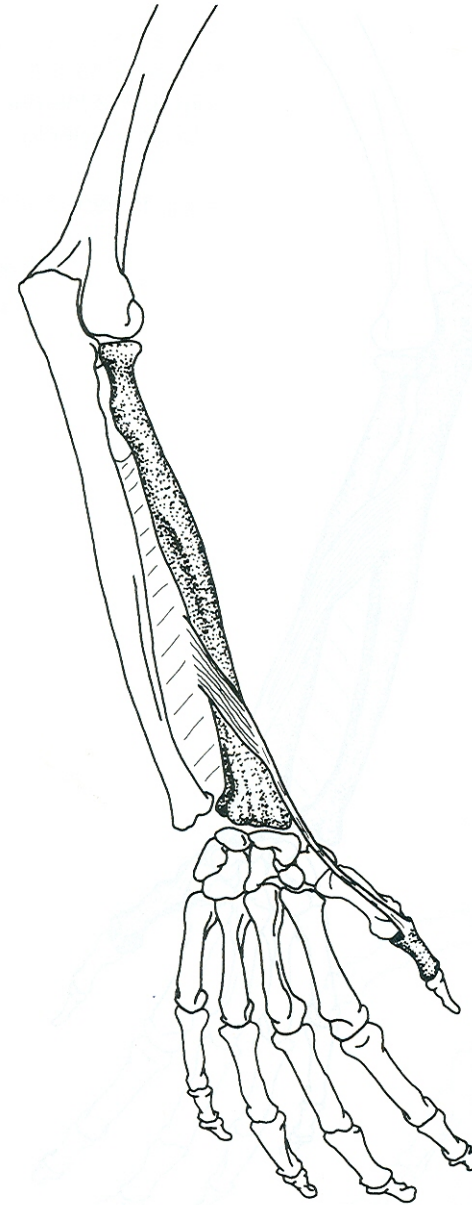
ABDUCTOR POLLICIS LONGUS

- **Origin-** Posterior surface of shaft of radius, Lateral part of posterior surface of ulna & interosseous membrane
- **Insertion-** Dorsal surface of base of first metacarpal bone.
- **Action-** abducts, laterally rotates and extends thumb, abducts wrist
- **Nerve-** radial nerve ($C_{6,7}$)



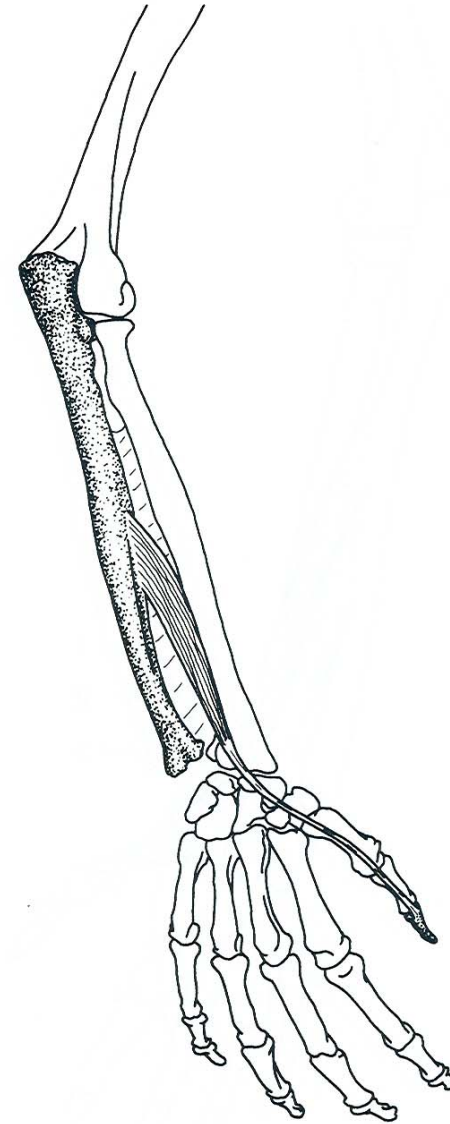
- **Origin-** Dorsal surface of radius, adjacent part of interosseous membrane
- **Insertion-** Base of proximal phalanx of thumb
- **Action-** Extends thumb, abducts hand
- **Nerve-** Deep branch of radial nerve ($C_{6,7}$)

EXTENSOR POLLICIS BREVIS



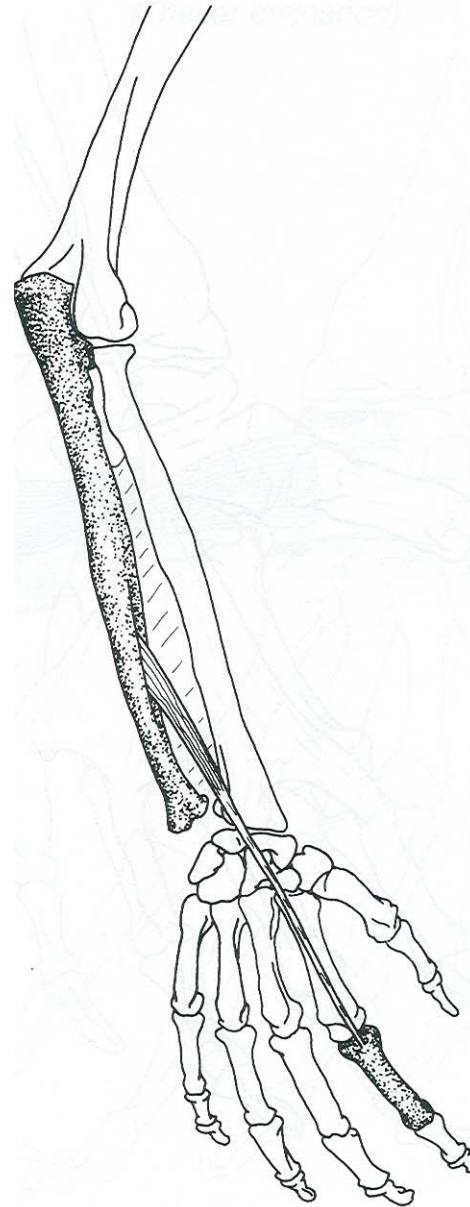
- **Origin-** Middle third of dorsal surface of ulna & interosseous membrane
- **Insertion-** Base of distal phalanx of thumb
- **Action** – Extends thumb
- **Nerve-Deep branch of radial nerve** (C6-C8)

EXTENSOR POLLICIS LONGUS

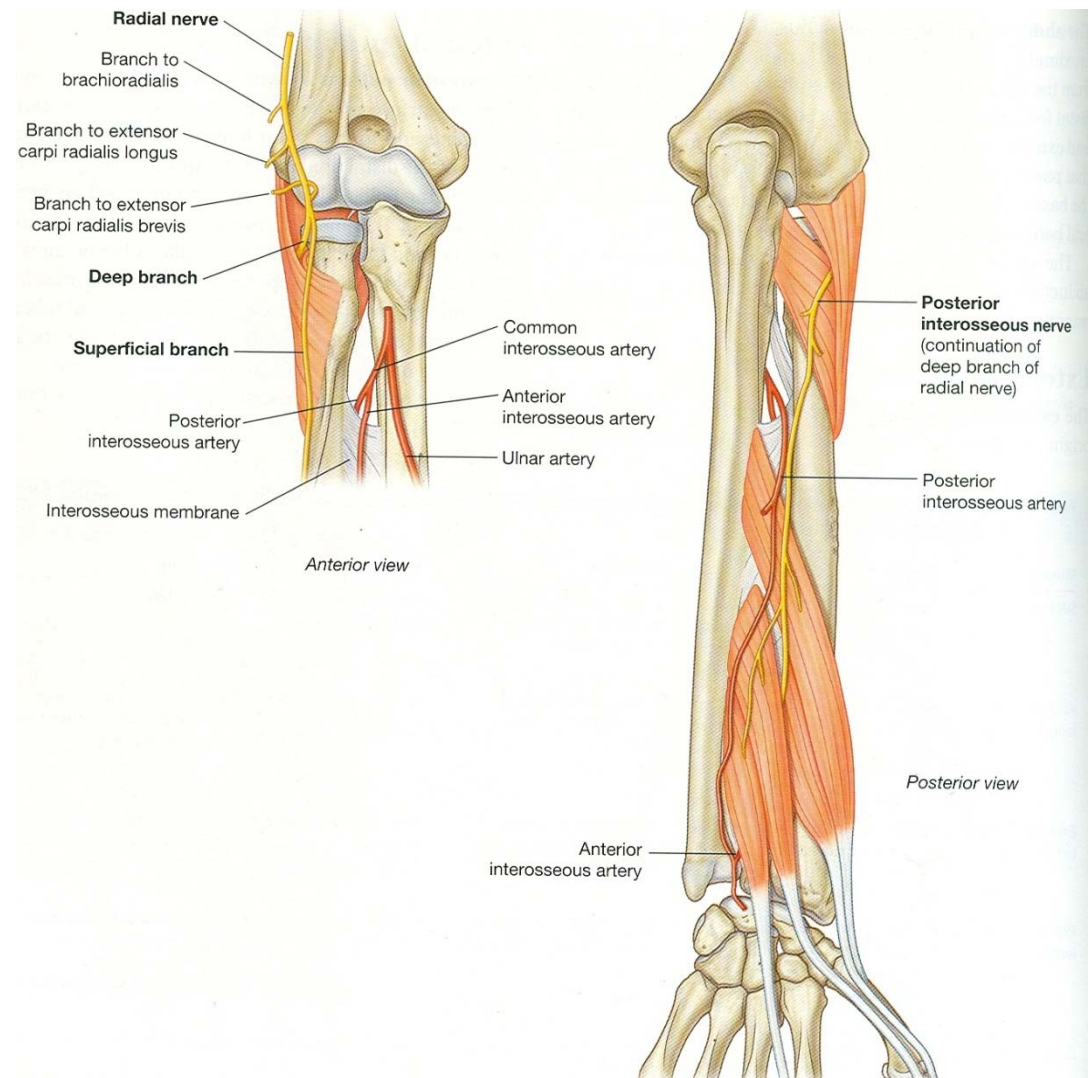


EXTENSOR INDICIS

- **Origin-** Posterior surface of ulna & adjacent part of interosseous membrane
- **Insertion-** Extensor expansion on dorsal surface of proximal phalanx of index finger
- **Action-** Extends index finger
- **Nerve-Deep branch of radial nerve**(C_{5,6})

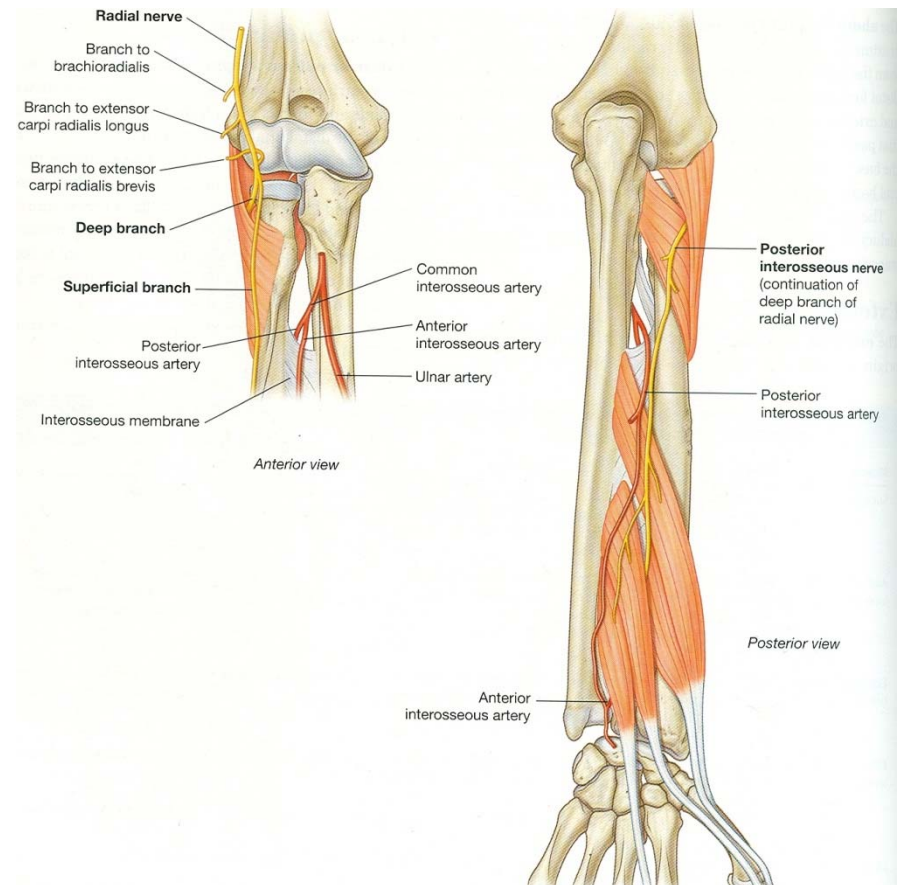


- Arteries & veins-
- Posterior interosseous artery
- Anterior interosseous artery
- Radial artery



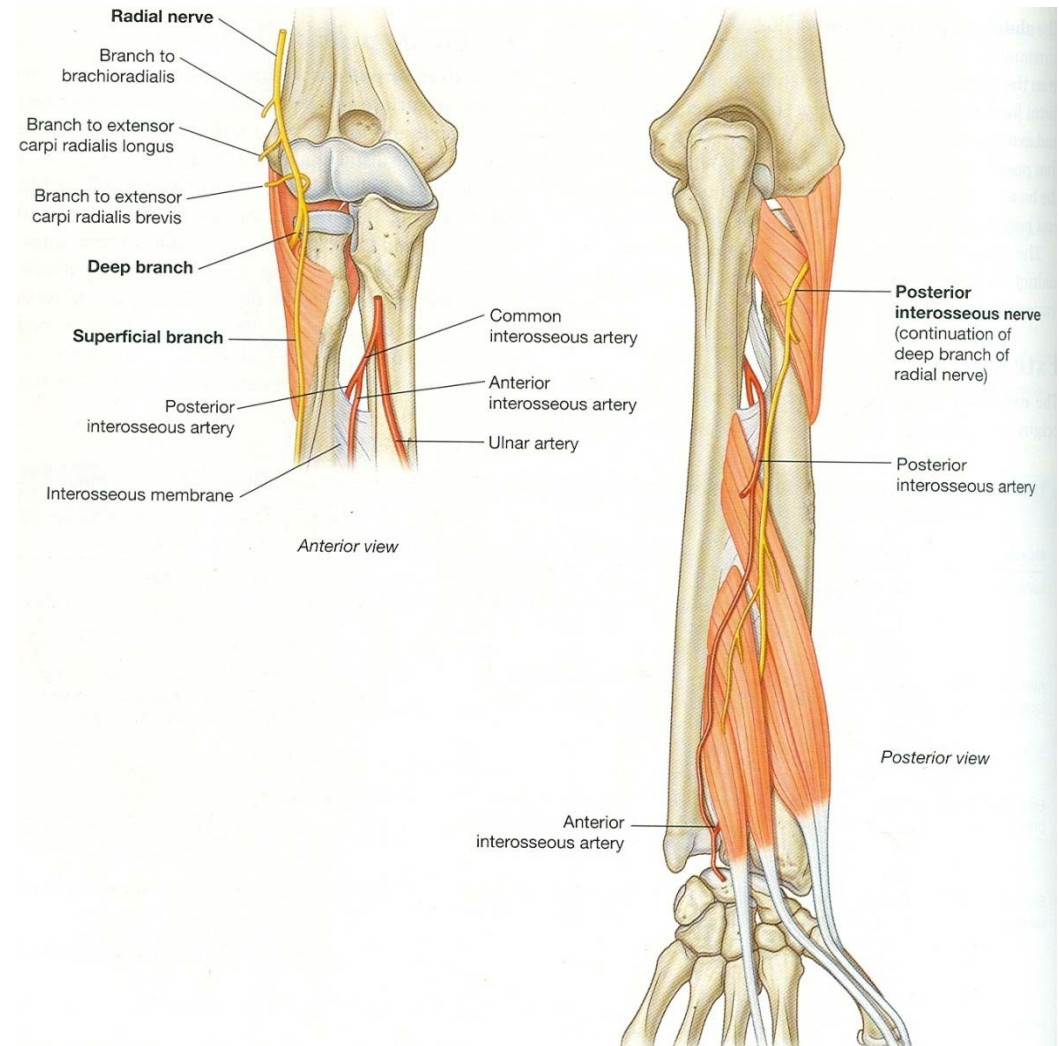
Posterior interosseous artery-

- Originate in anterior compartment from common interosseous artery
- Passes dorsally over the proximal margin of interosseous membrane into posterior compartment
- Gives out recurrent interosseous artery
- Terminates by joining the dorsal carpal arch of wrist



Radial nerve-

- Most of the muscles are supplied by deep branch of radial nerve (posterior interosseous nerve)
- Brachioradialis, anconeus & ECRL are supplied by radial nerve directly in arm



Extensor retinaculum

- Thickened band of fascia
- Runs across the back of wrist

Attachment-

- laterally to lower part of anterior border of radius
- Medially it is attached to triquetral & pisiform

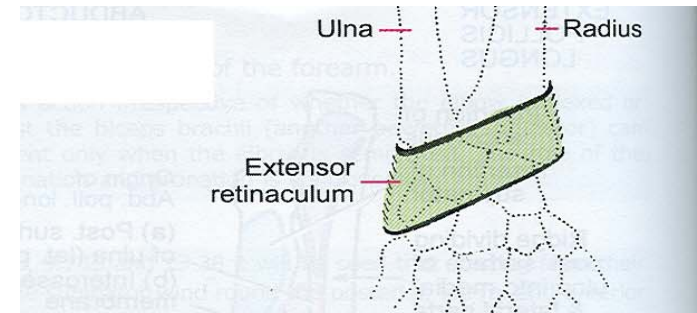


Fig. 13.41. Attachments of the extensor retinaculum.

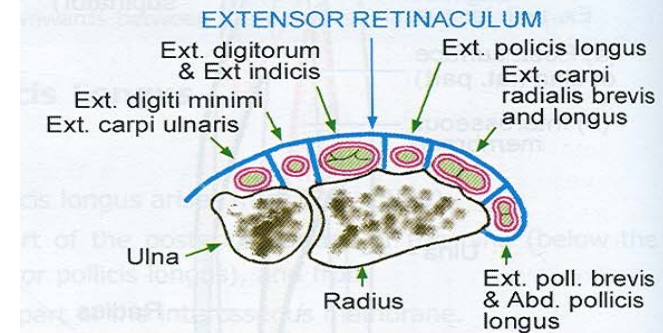
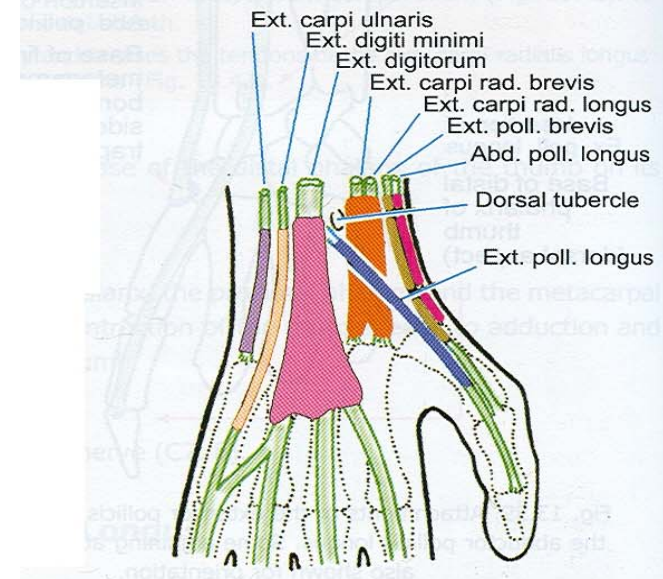


Fig. 13.42. Tendons passing under cover of the extensor retinaculum.



Applied anatomy

- Injury to radial nerve in forearm leads to wrist drop

