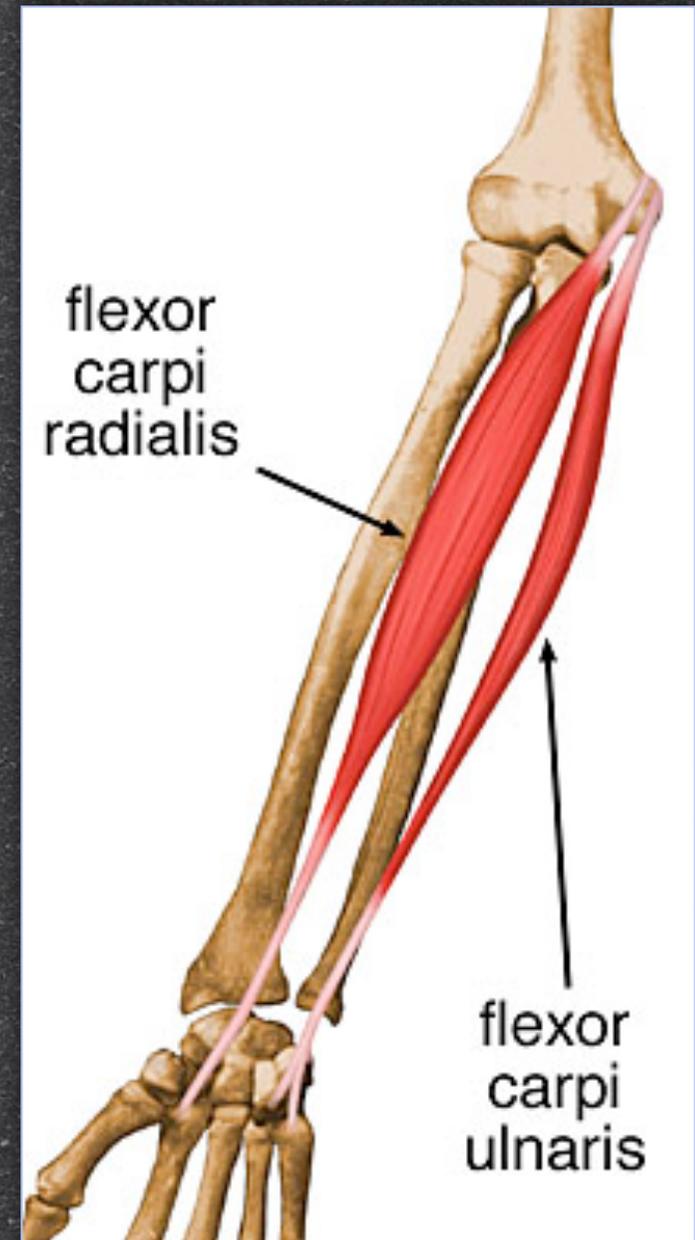


Muscles of the Wrist and Hand

Chapter 7

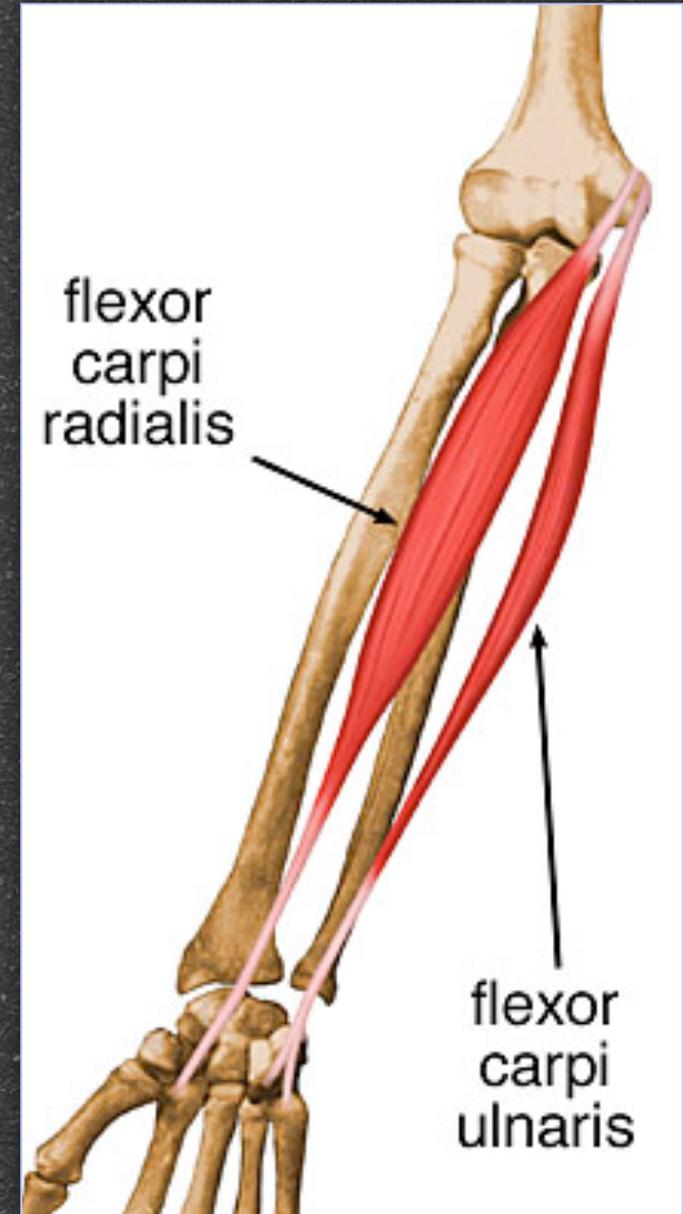
Flexor carpi radialis

- Location: Palmar
- Origin:
 - which epicondyle?
- Insertion:
 - radius side
- Actions:
 - flexion of the wrist
 - abduction of the wrist



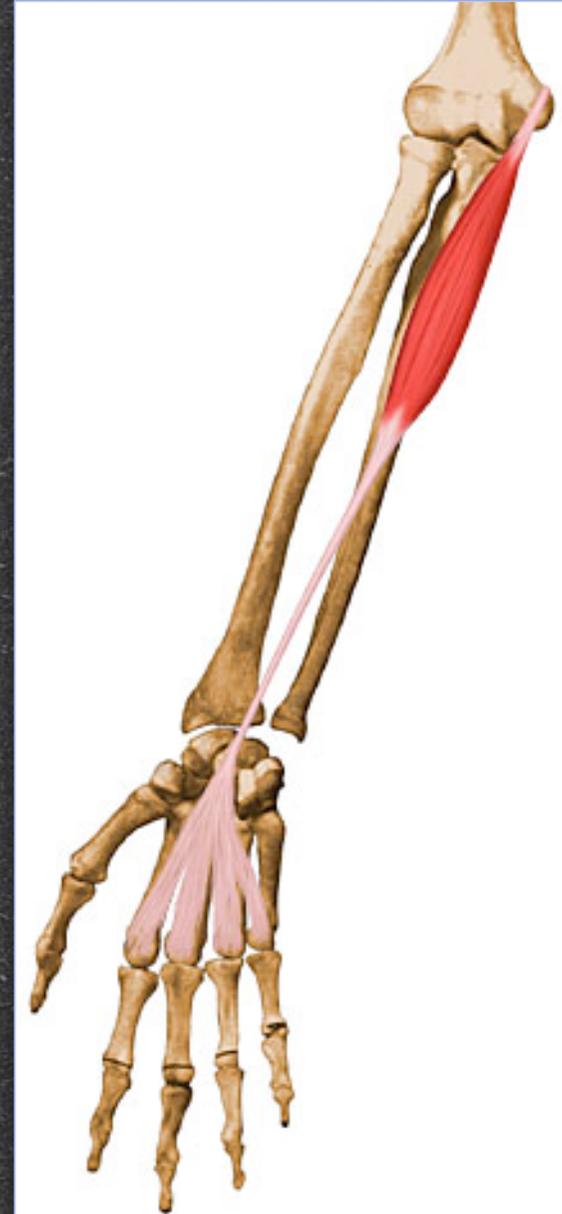
Flexor carpi ulnaris

- Location: Palmar
- Origin:
 - which epicondyle?
- Insertion:
 - ulna side
- Actions:
 - flexion of the wrist
 - adduction of the wrist



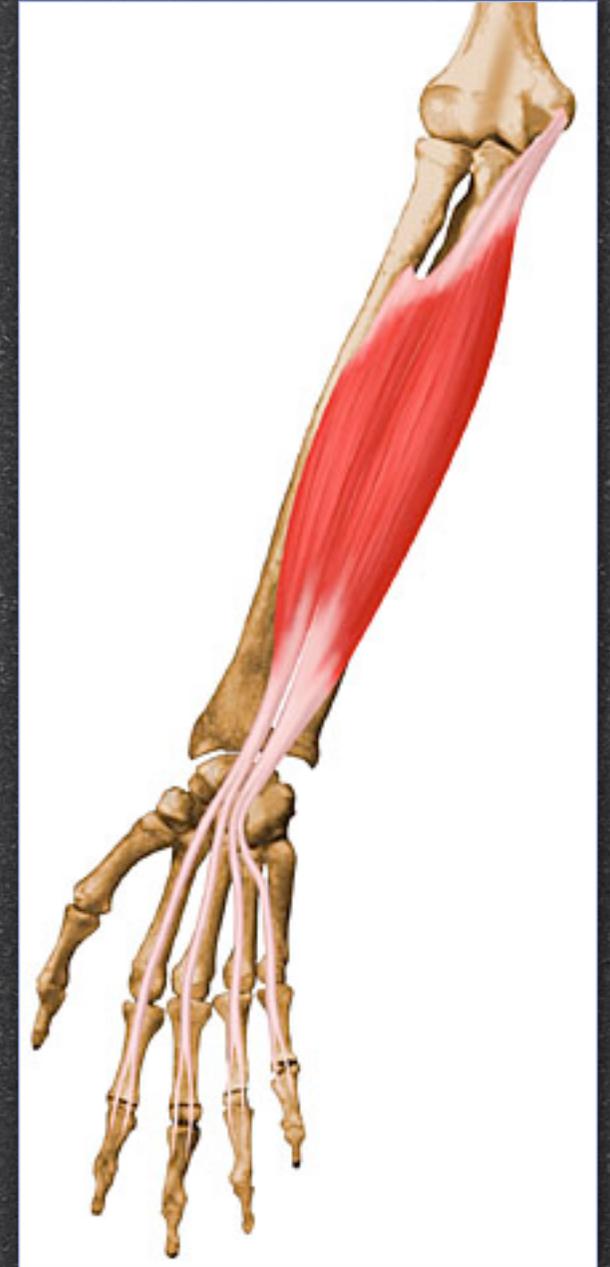
Palmaris Longus

- Location: Palmar
- Origin:
- Insertion:
 - to neither side
- Action:
 - flexion of the wrist
- Why only flexion?



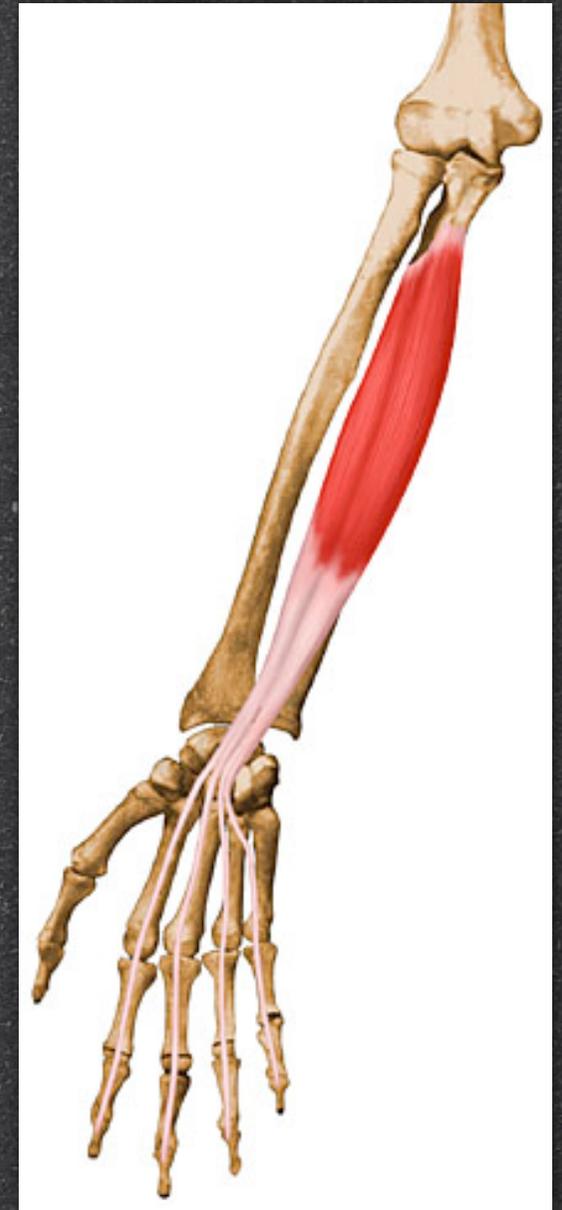
Flexor digitorum superficialis

- Location: Palmar
- Origin:
- Insertion:
 - split tendons attach to the sides of the middle phalanx of the four fingers
- Actions:
 - flexion of fingers and wrist
- Why fingers AND wrist?



Flexor digitorum profundus

- Location: Palmar
- Origin:
- Insertion:
 - split tendons attach to distal phalanx of the four fingers
- Actions:
 - flexion of fingers AND wrist



Flexor pollicis longus

- Location: Palmar
- Origin:
- Insertion:
 - base of the distal phalanx of the thumb (palmar surface)
- Actions:
 - flexion of wrist AND thumb
 - abduction of the wrist



Review

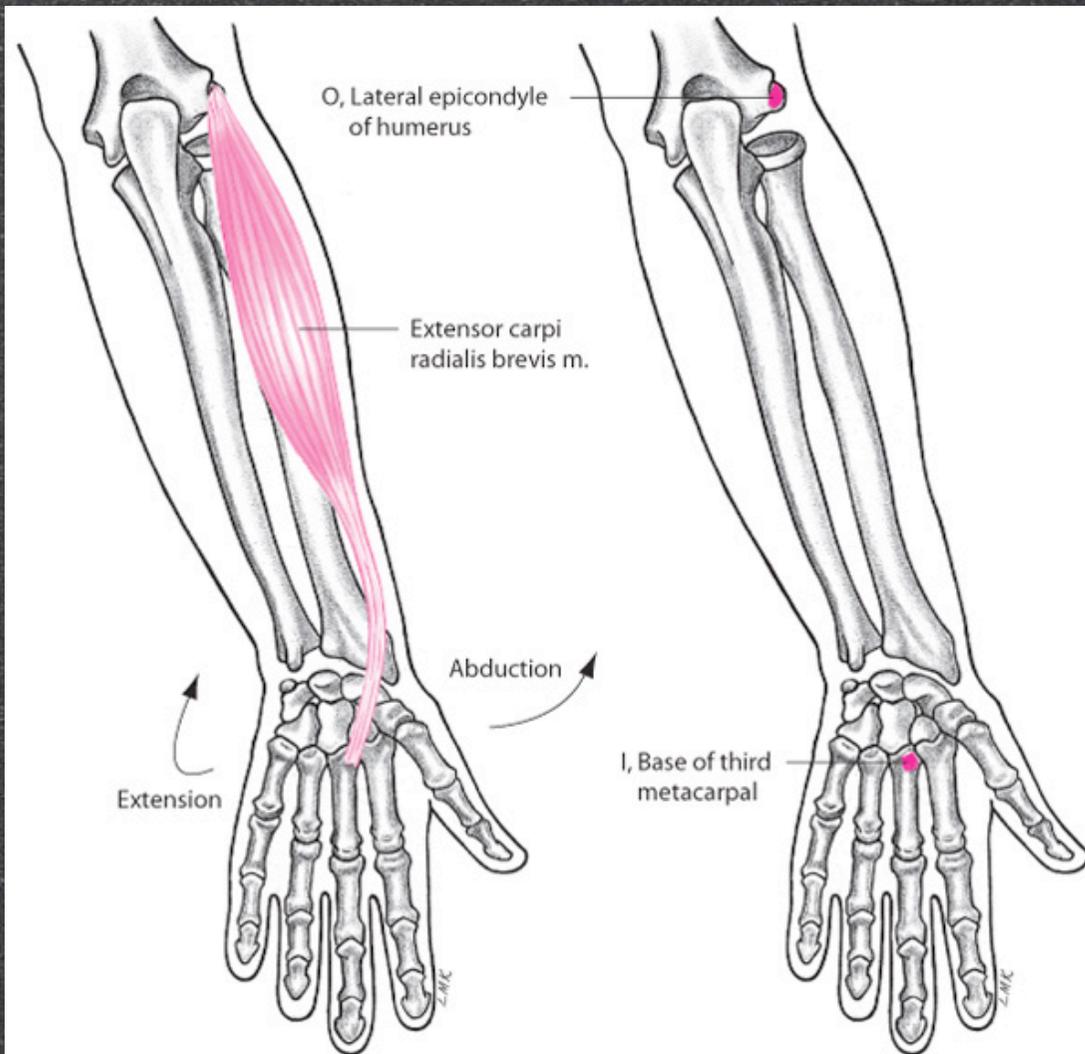
- What do all the 'flexor' muscles have in common?
- What do the following muscles have in common?
 - Flexor carpi radialis
 - Flexor carpi ulnaris
 - Palmaris
 - Flexor digitorum superficialis

Extensor Carpi Radialis Longus

- Location: Dorsal
- Origin: lateral epicondyle
- Insertion:
- Actions:
 - Extension of the wrist
 - Abduction



Extensor carpi radialis brevis



Extension of
the wrist

Abduction of
the wrist

Extensor carpi ulnaris

- Location: Dorsal
- Origin:
 - lateral epicondyle of the humerus
- Insertion:
- Actions:
 - extension of the wrist
 - adduction of the wrist



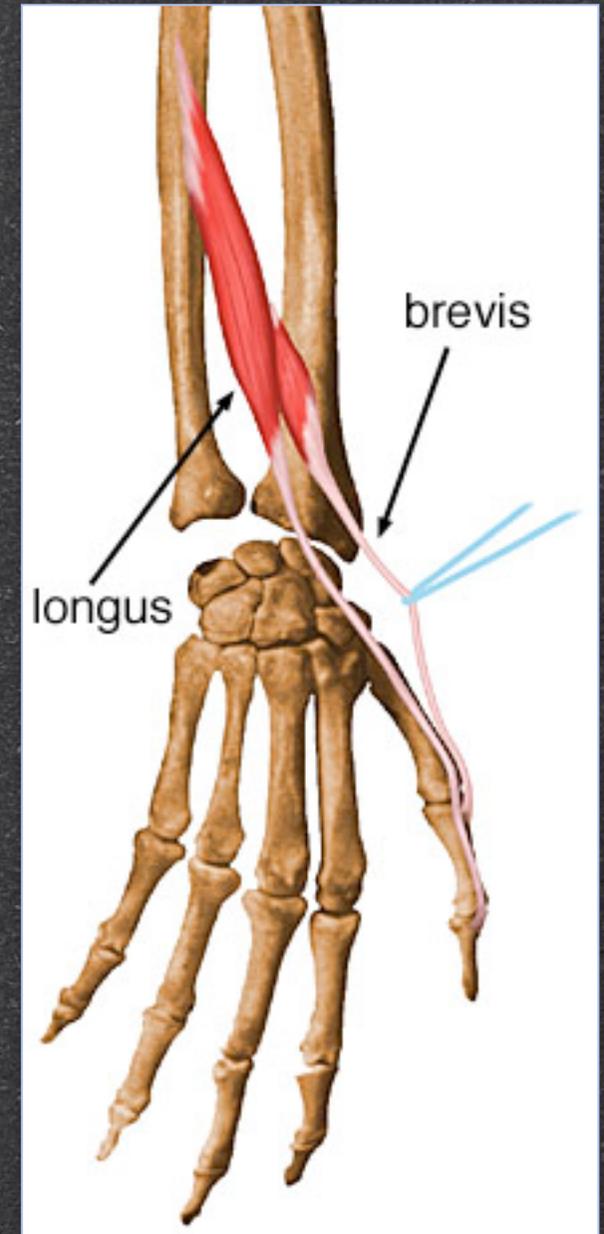
Extensor digitorum

- Location: Dorsal
- Origin:
 - lateral epicondyle of the humerus
- Insertion:
 - middle and distal phalanges of the four fingers
- Actions:
 - extension of the fingers
 - extension of the wrist

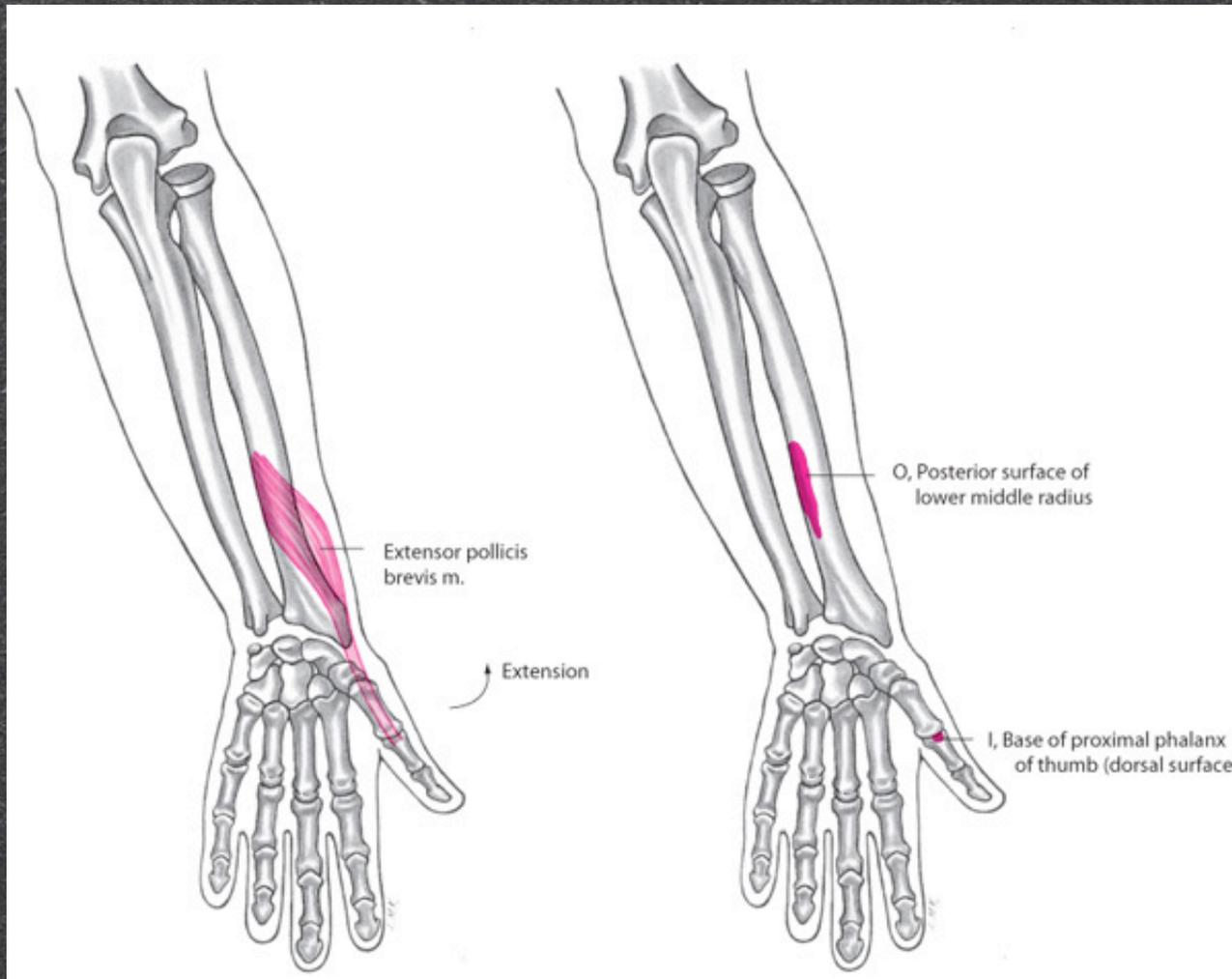


Extensor pollicis Longus

- Location: Dorsal
- Origin:
 - posterior lateral surface of the distal ulna
- Insertion:
 - base of the distal phalanx of the thumb (dorsal side)
- Actions:
 - Extension of the wrist
 - Extension of the thumb
 - Abduction of the wrist



Extensor pollicis brevis



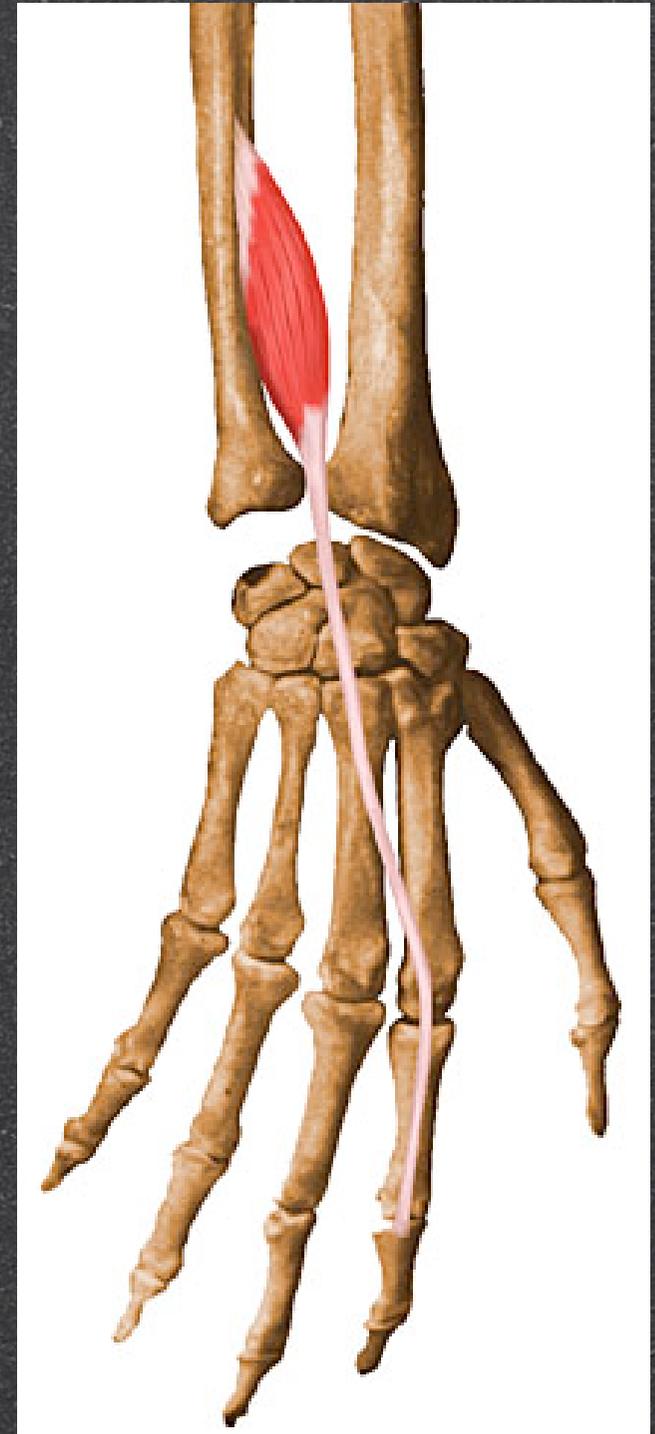
Extension of thumb at
carpometacarpal &
metacarpophalangeal
joints

Weak wrist extension

Wrist abduction

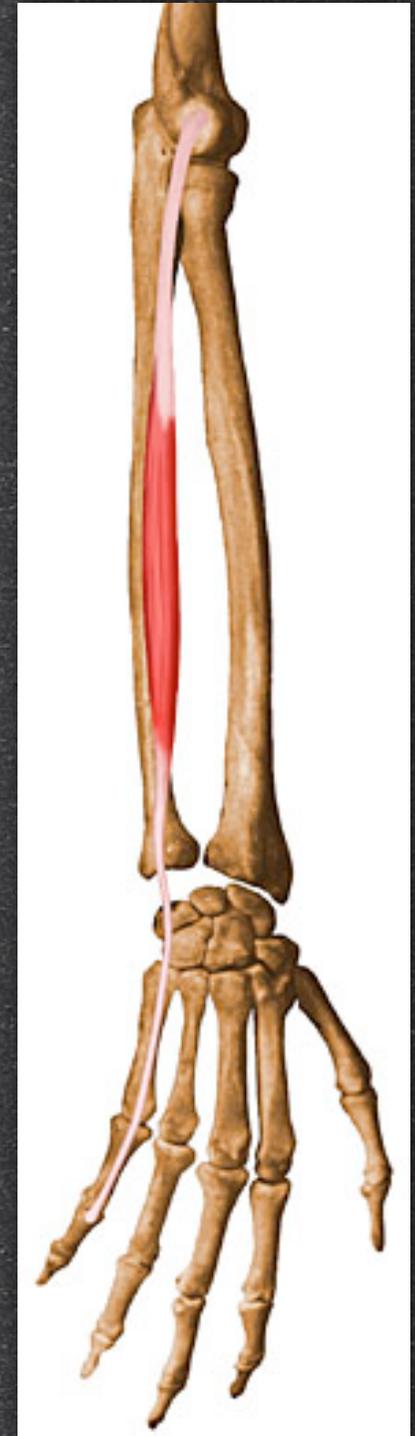
Extensor indicis

- Location: Dorsal
- Origin:
- Insertion:
- Actions:
 - Extension of the 2nd phalange
 - Weak wrist extension



Extensor digiti minimi

- Location: Dorsal
- Origin:
 - Lateral epicondyle of the humerus
- Insertion:
- Actions:
 - Extension of the 5th phalange
 - Weak wrist extension



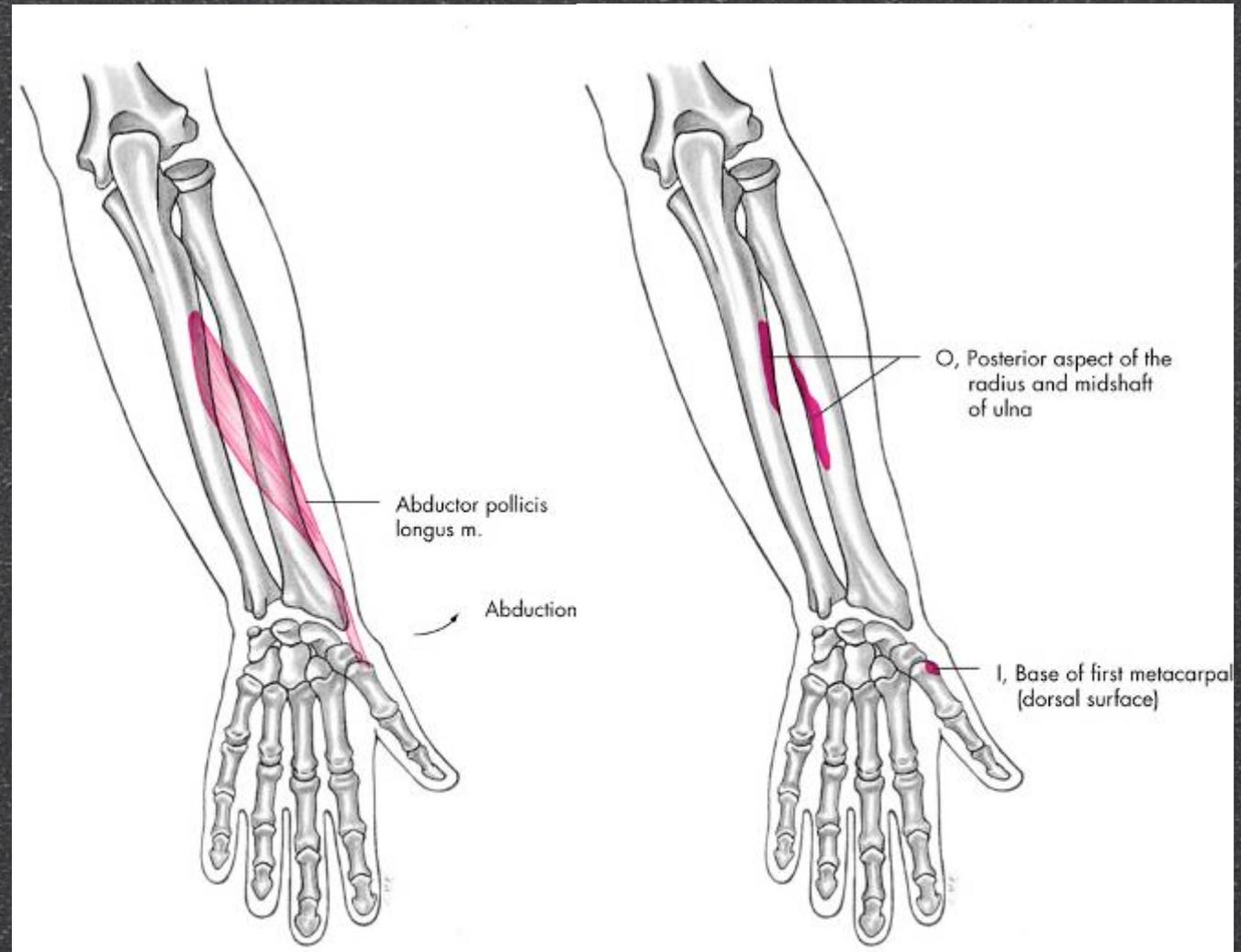
Abductor pollicis longus

Abduction of the Thumb

Abduction of the wrist

Extension of the thumb

Weak flexion of the wrist



- What do all the extensor muscles have in common?
- What do the following muscles have in common?
 - Extensor carpi radialis
 - Extensor carpi ulnaris
 - Extensor digitorum

- What do the following pairs of muscles have in common besides their actions
 - Flexor carpi radialis and extensor carpi radialis
 - Flexor carpi ulnaris and extensor carpi ulnaris

Nerves and Arteries

• Median

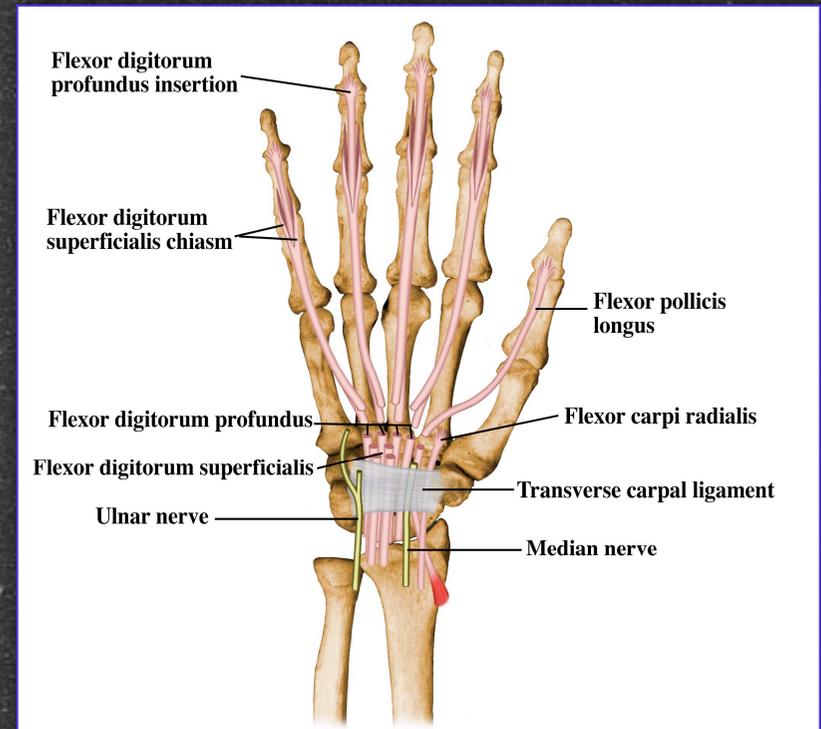
- Anterior and lateral muscles of the forearm and radial side of hand

• Ulnar

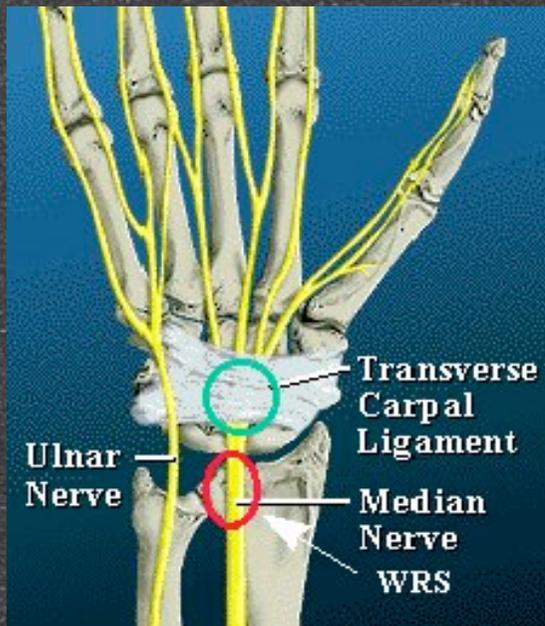
- Anterior and medial forearm and ulnar side of hand

• Radial

- Posterior forearm.



Nerves



Ulnar Nerve



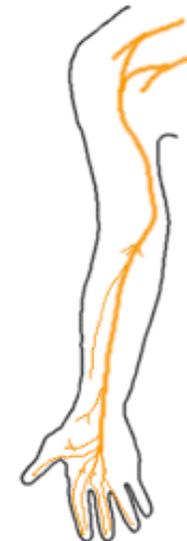
formed from medial cord of brachial plexus
no branches to arm

lies behind medial epicondyl

gives off dorsal branch

forms deep and superficial branches

Median Nerve



formed from medial and lateral cords

No branches to arm

Passes into forearm between heads of pronator teres

Gives off palmar cutaneous branch

Passes into hand below flexor retinaculum

Arteries

- Radial
- Ulnar

