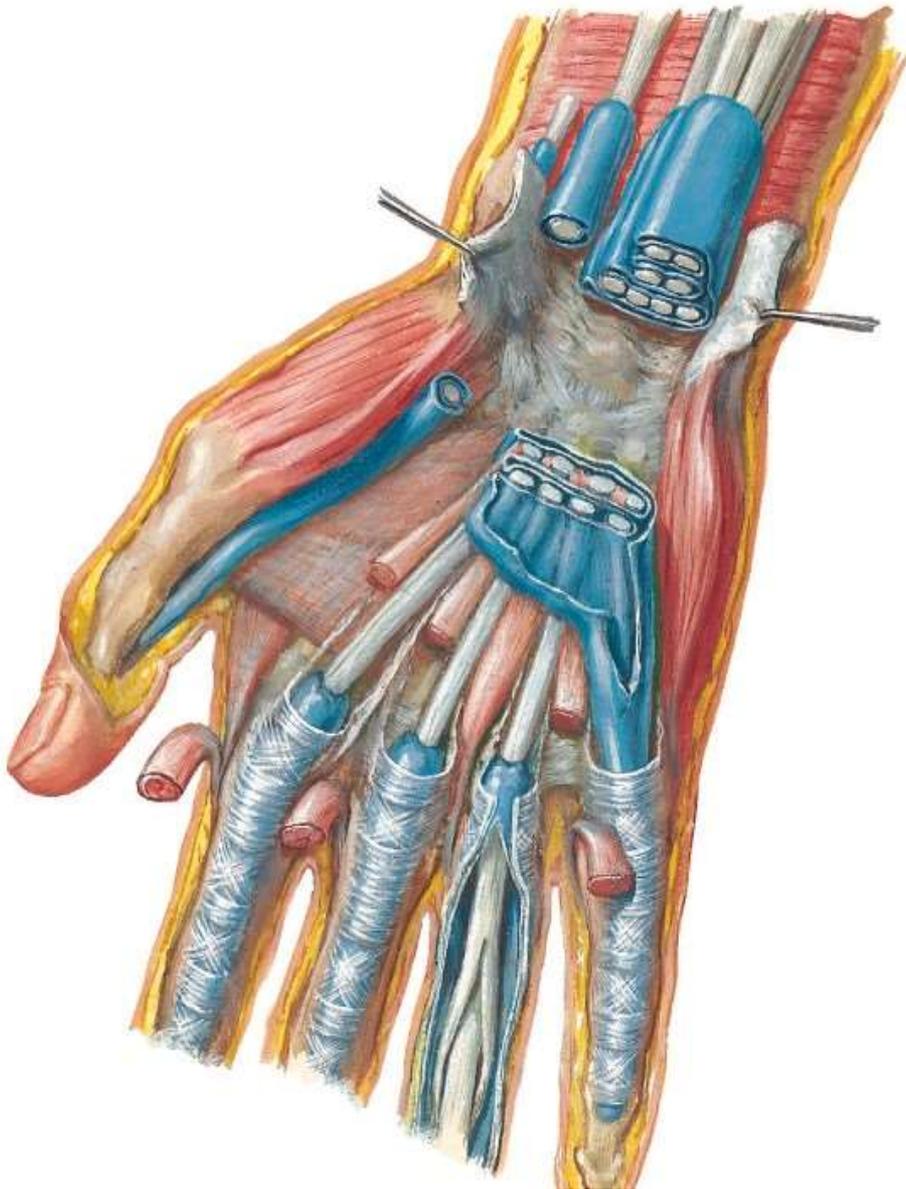


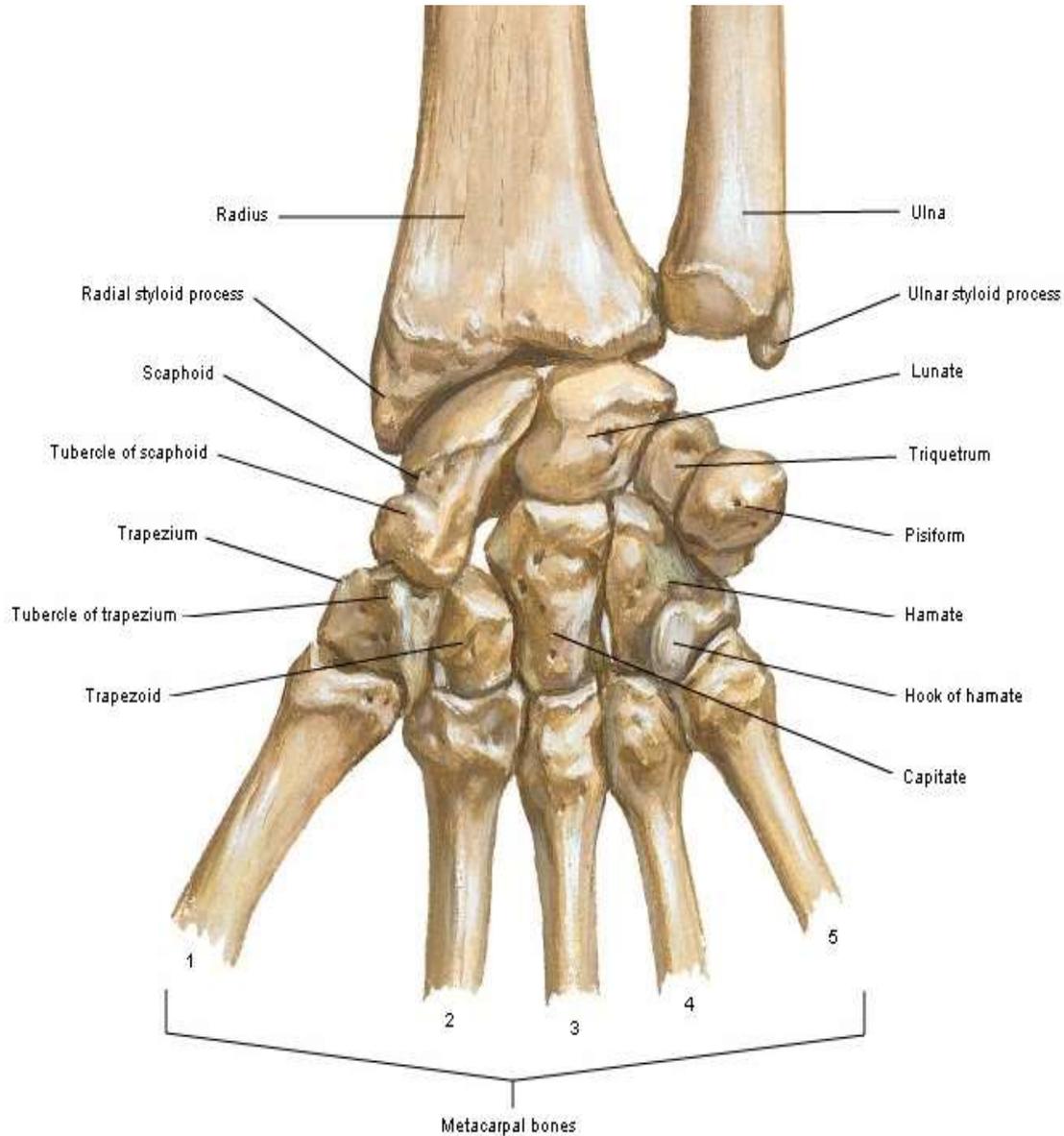
FLEXOR RETINACULUM & HAND



BY

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FLEXOR RETINACULUM & HAND



FLEXOR RETINACULUM

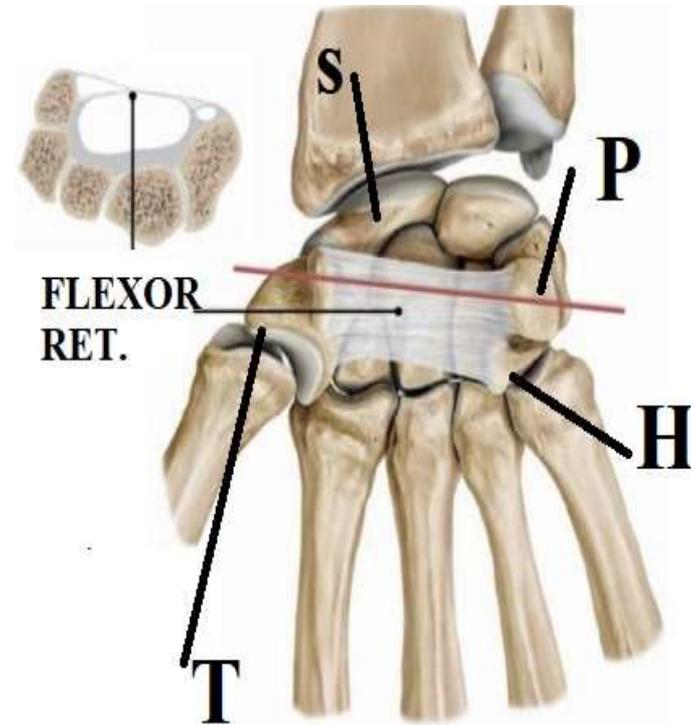
Def.: thick band of deep fascia in front of carpal bones converting their concavity into tunnel called carpal tunnel

Function: keep long flexor tendons in place during contraction.

Attachments:

medially: attached to pisiform & hamate

laterally: splitted into 2 layers then attached to scaphoid & trapezium.



FLEXOR RETINACULUM

Relations:

Deep (structures in carpal tunnel):

1-median nerve(directly under retinaculum)

2-tendon of FPL(lateral to other tendons)

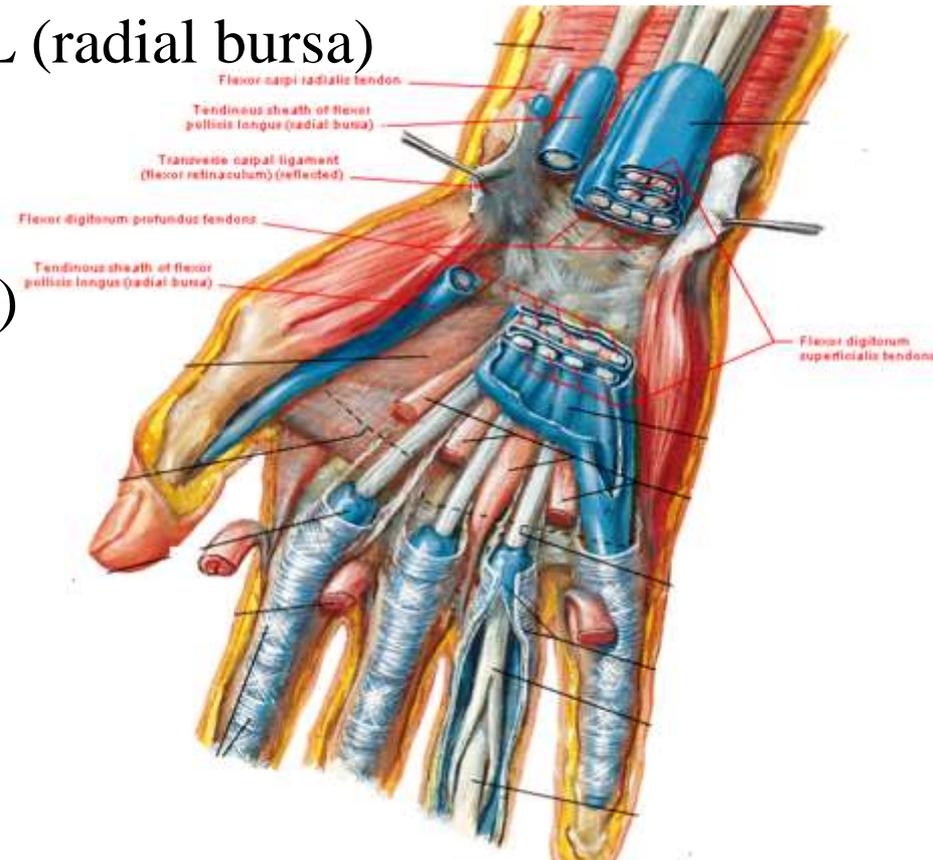
3-synovial sheath for tendon of FPL (radial bursa)

4-tendons of FDS & FDP

5-common synovial sheath for tendons of FDS& FDP (ulnar bursa)

Between the 2 lateral laminae:

tendon of flex. carpi radialis
& its synovial sheath

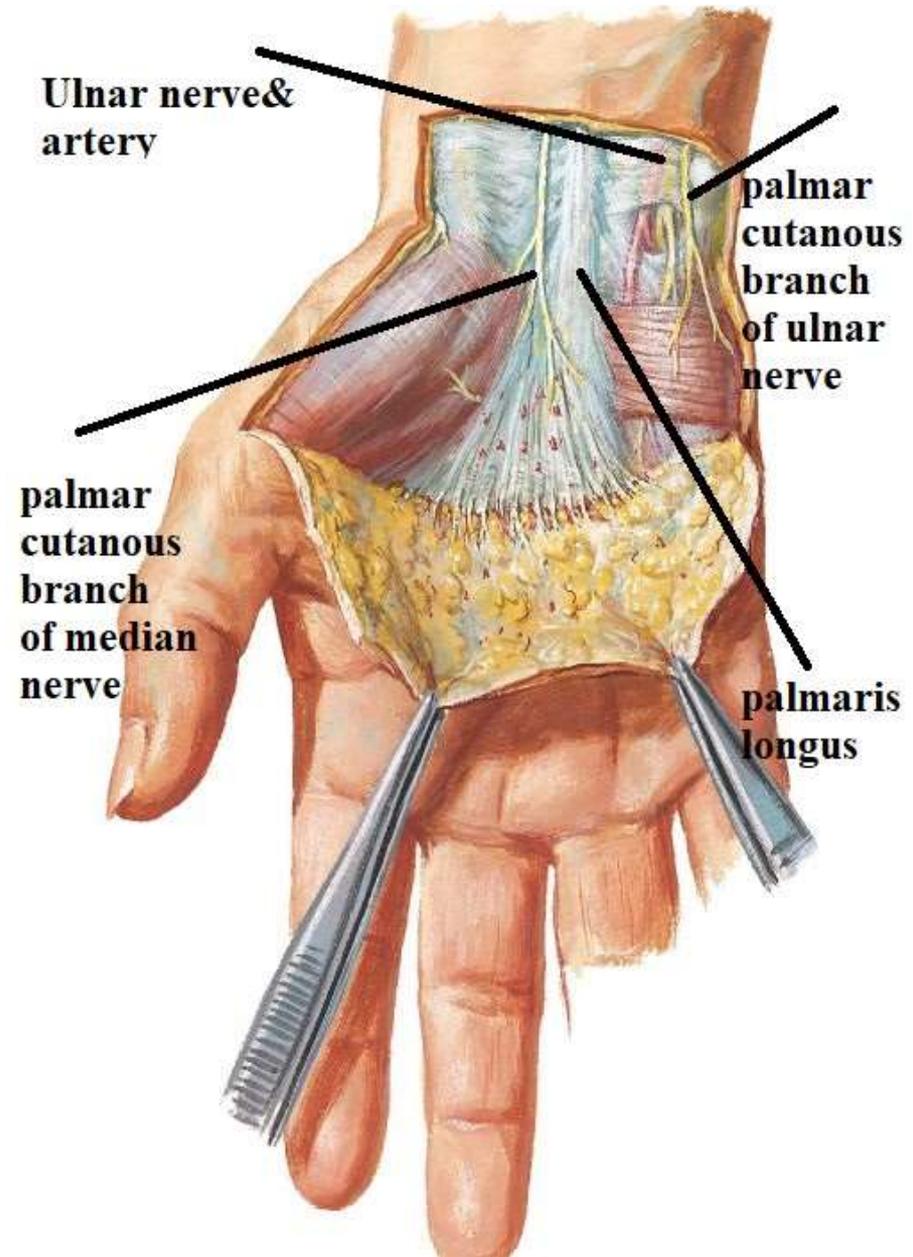


FLEXOR RETINACULUM

Relations:

Superficial:

- 1-ulnar n.
- 2-ulnar vessels.
- 3-palmar cutaneous br. of ulnar n.
- 4-tendon of palmaris longus.
- 5-palmar cutaneous br. of median n.

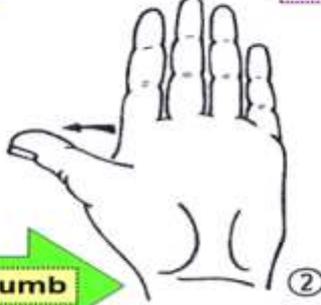


MUSCLES OF THE HAND

Position of rest



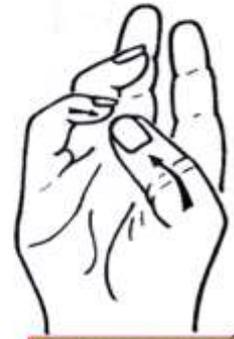
Flexion of thumb



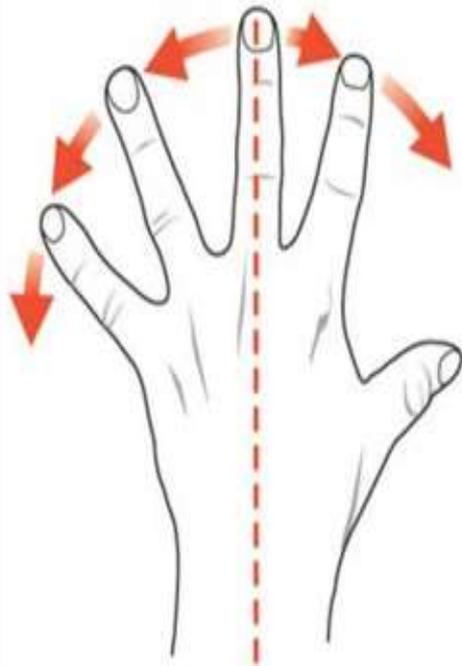
Abduction



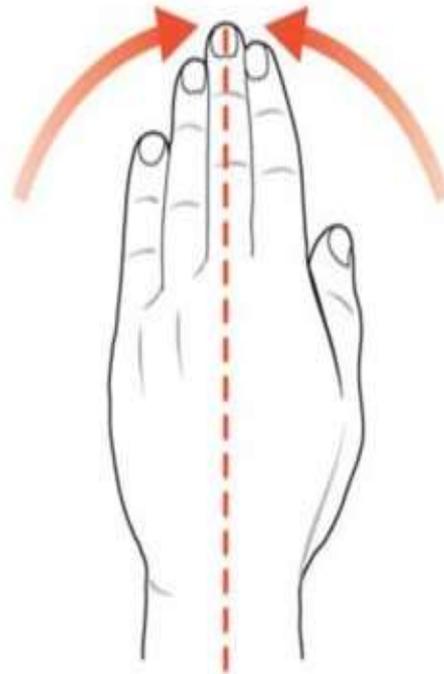
Adduction



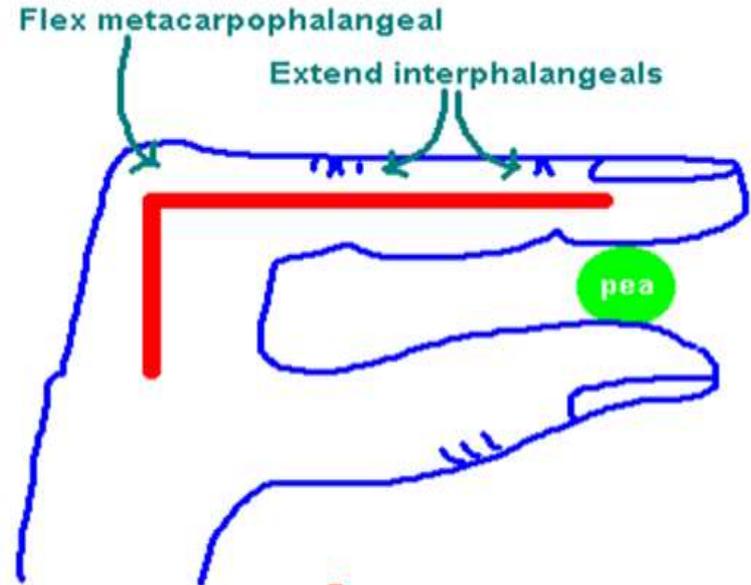
opposition



Abduction



Adduction



Lumbrical

MUSCLES OF THE HAND

Short muscles of thumb

1-Abductor pollicis brevis :-

abduction of thumb

2-Flexor Pollicis brevis:-

flexion of thumb

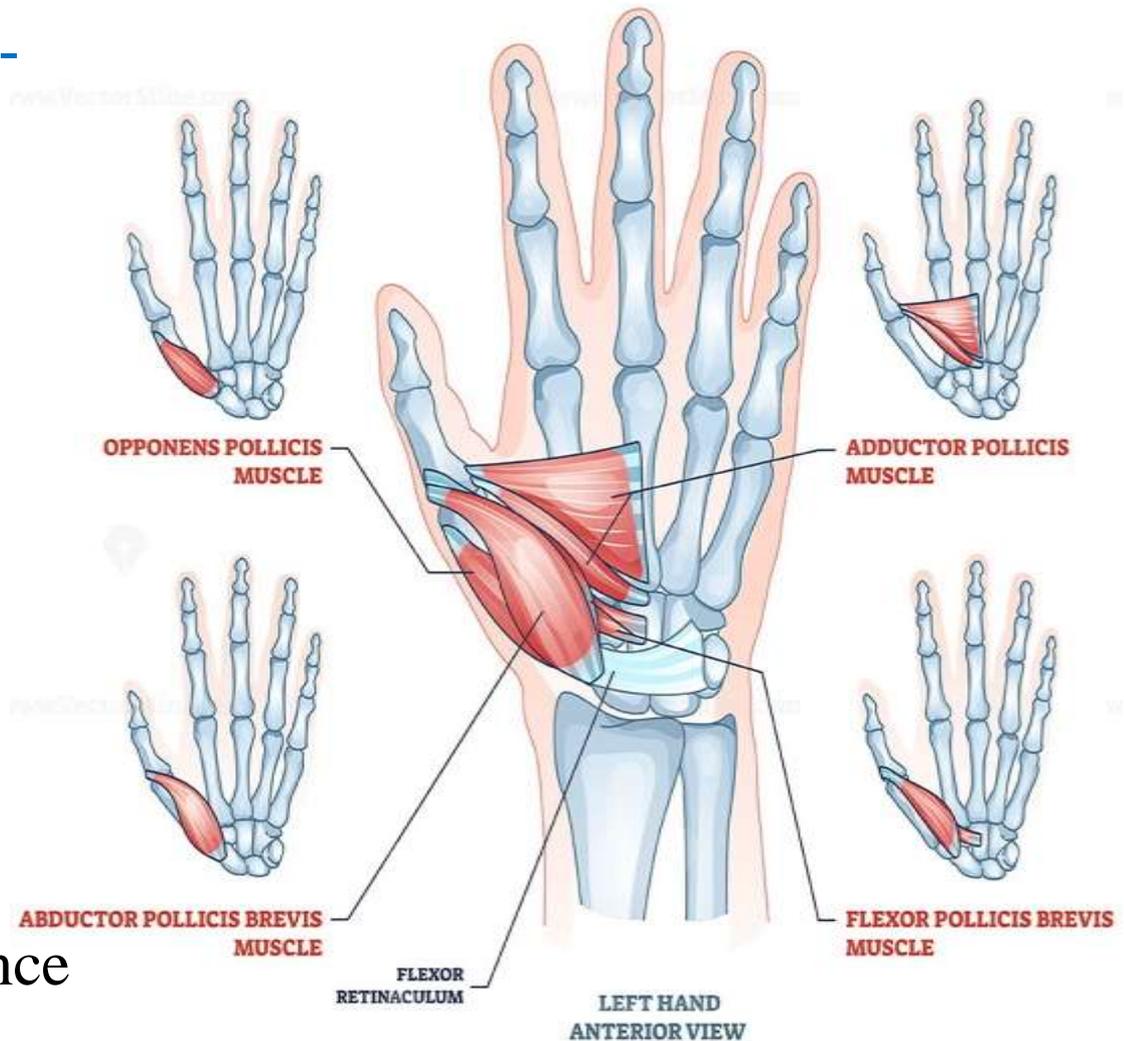
3-Opponens pollicis:-

opposition of thumb by flexion & medial rotation of 1st metacarpal bone

4-Adductor pollicis:-

adduction of thumb

N.B.:- 1,2,3= thenar eminence



MUSCLES OF THE HAND

Short muscles of little finger

1-Abductor digiti minimi :-

abduction of little finger

2-Flexor digiti minimi:-

flexion of little finger

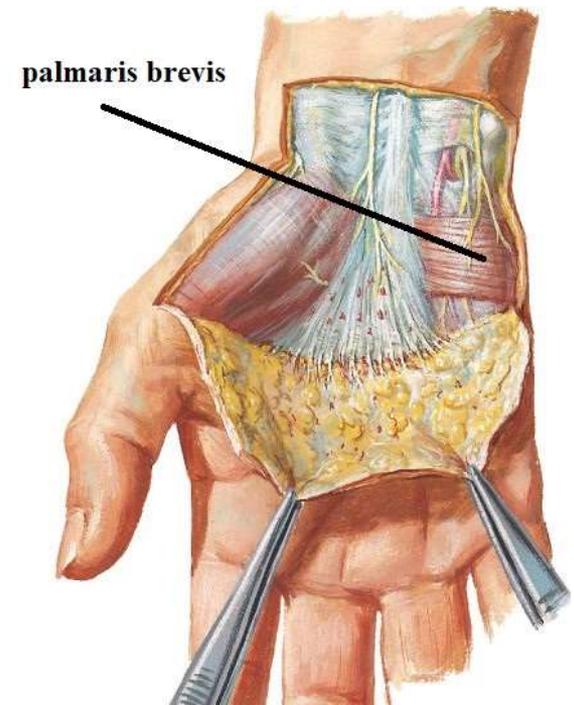
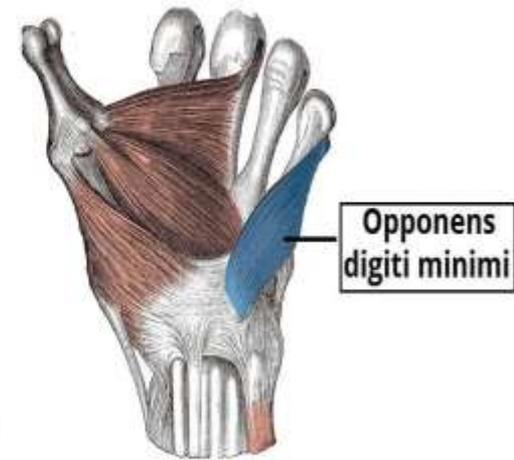
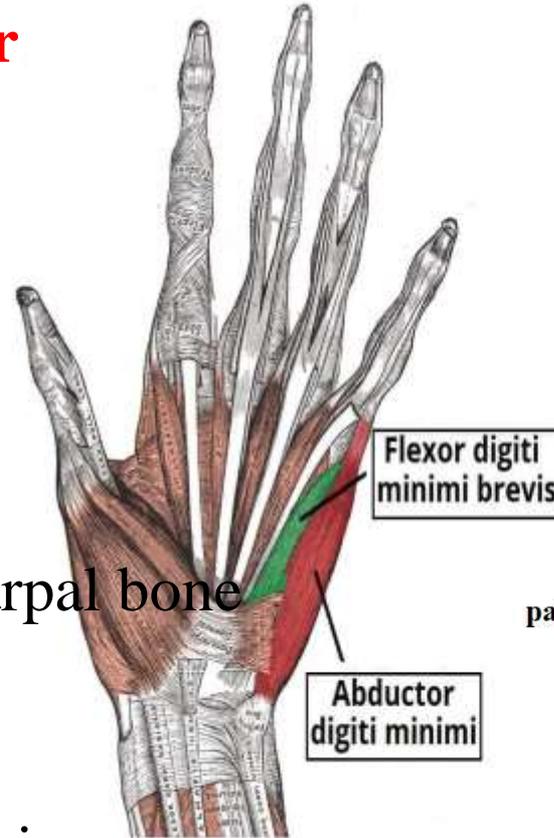
3-Opponens digiti minimi:-

lateral rotation of 5th metacarpal bone

4-palmaris brevis:-

to corrugate the skin at the base of the hypothenar eminence and So improve the grip of the palm in holding a rounded object

1,2,3= hypothenar eminence

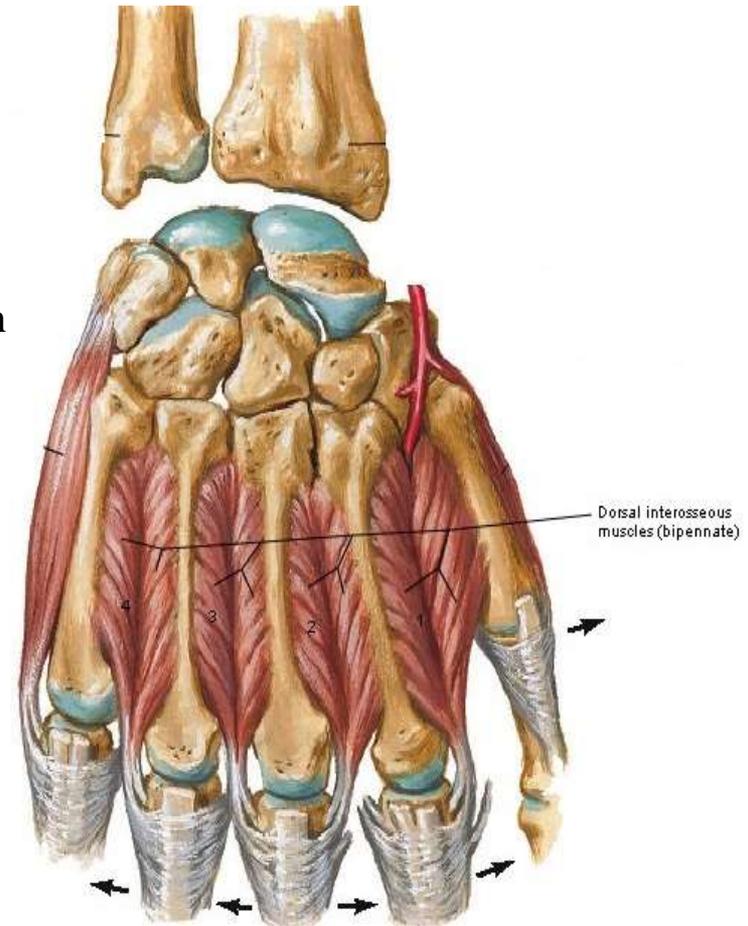


MUSCLES OF THE HAND

The intermediate group

Dorsal interossei:-

- bipennate
- 4 muscles for all fingers except 1st & 5th
- abduct the middle 3 fingers
(away from axis of middle finger) DAB

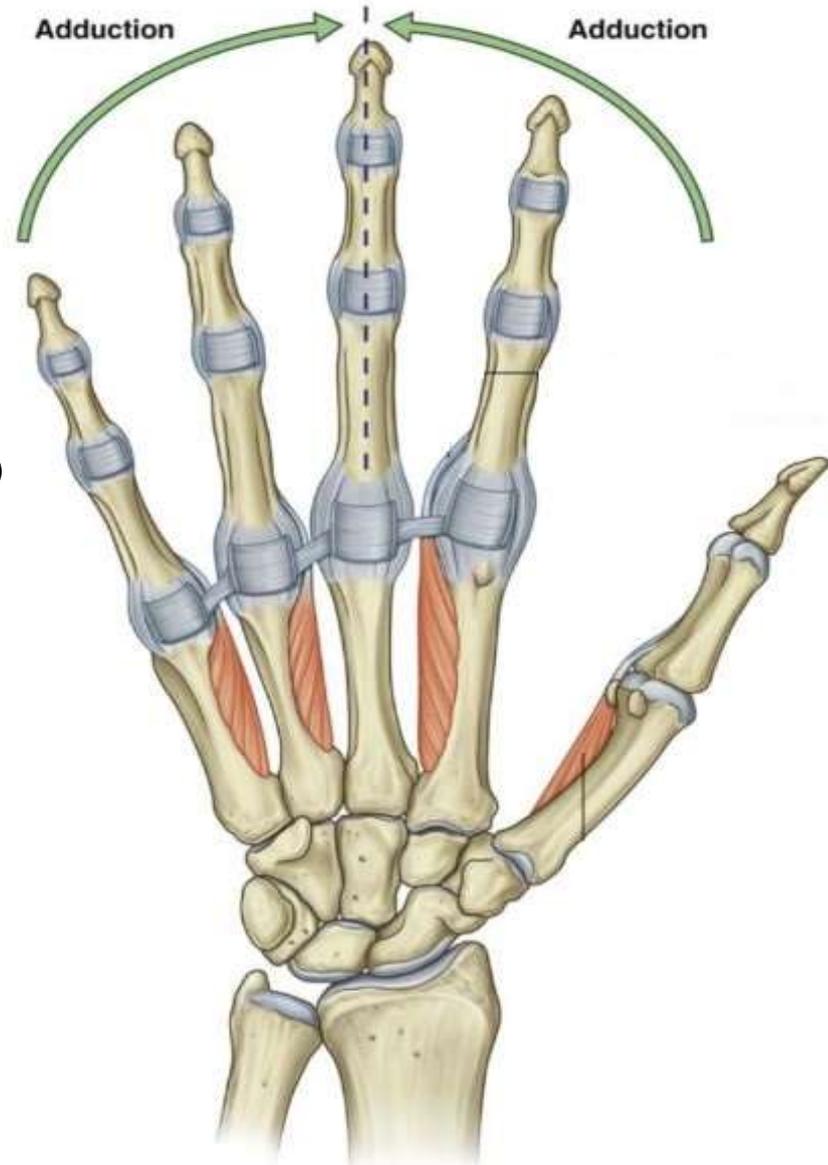


MUSCLES OF THE HAND

The intermediate group

Palmar interossei

- unipennate
- 4 muscles for all fingers except 3rd
- adduct the corresponding finger (towards axis of middle finger) PAD

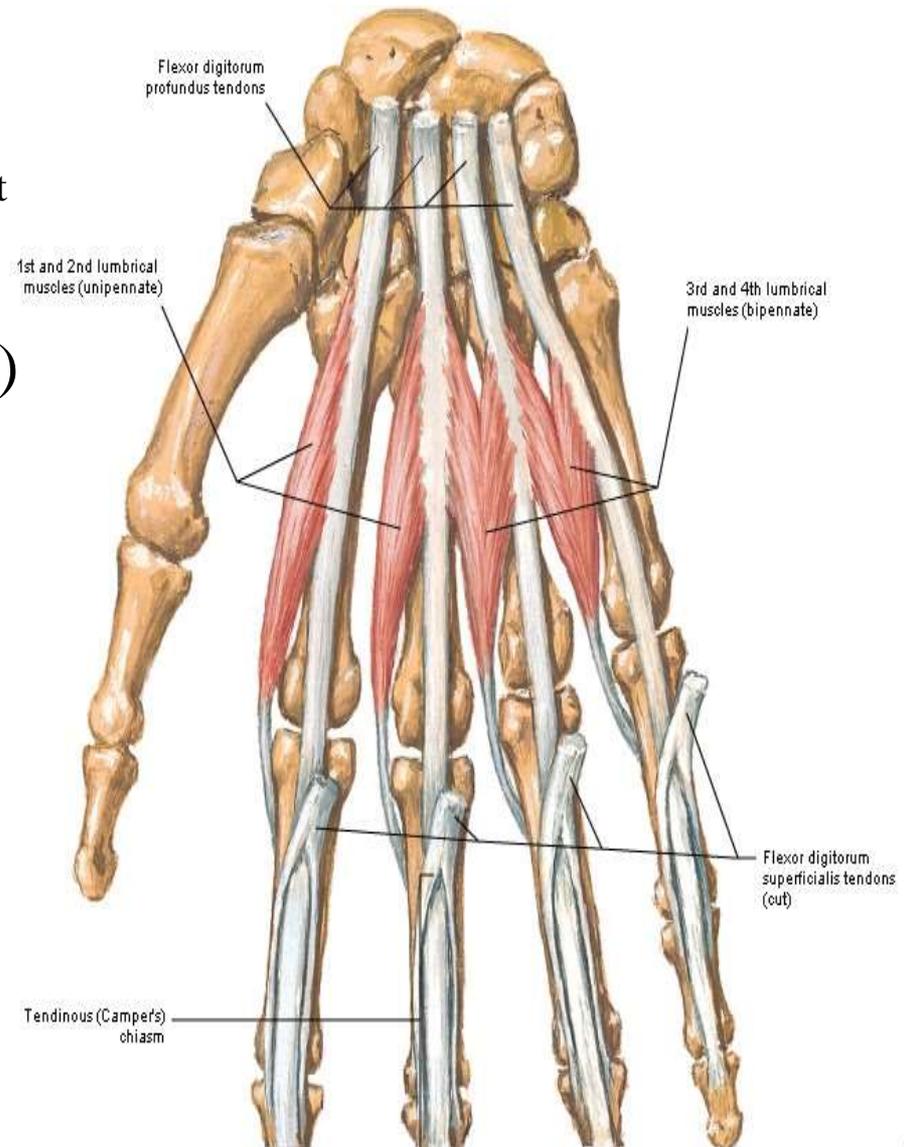


MUSCLES OF THE HAND

The intermediate group

Lumbrical muscles

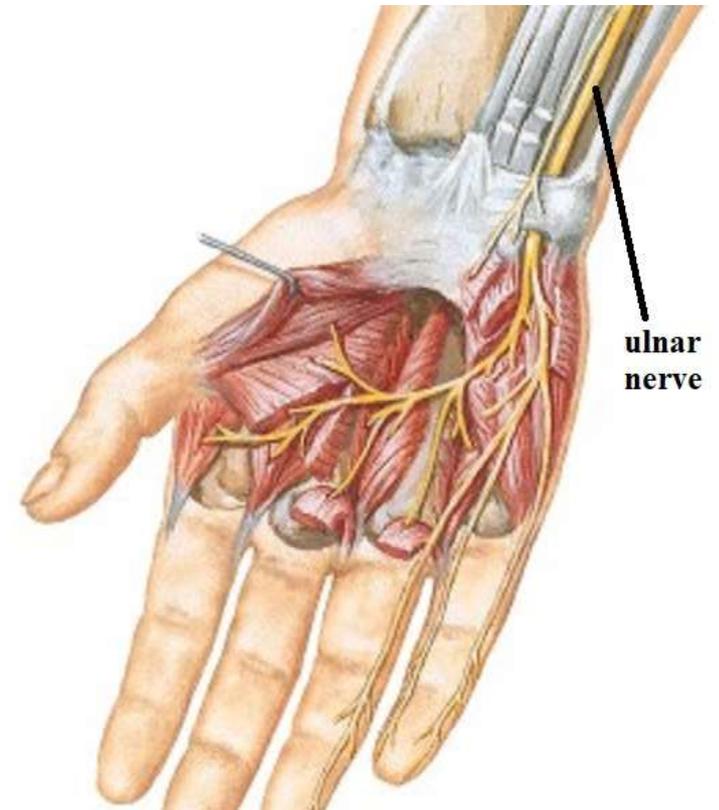
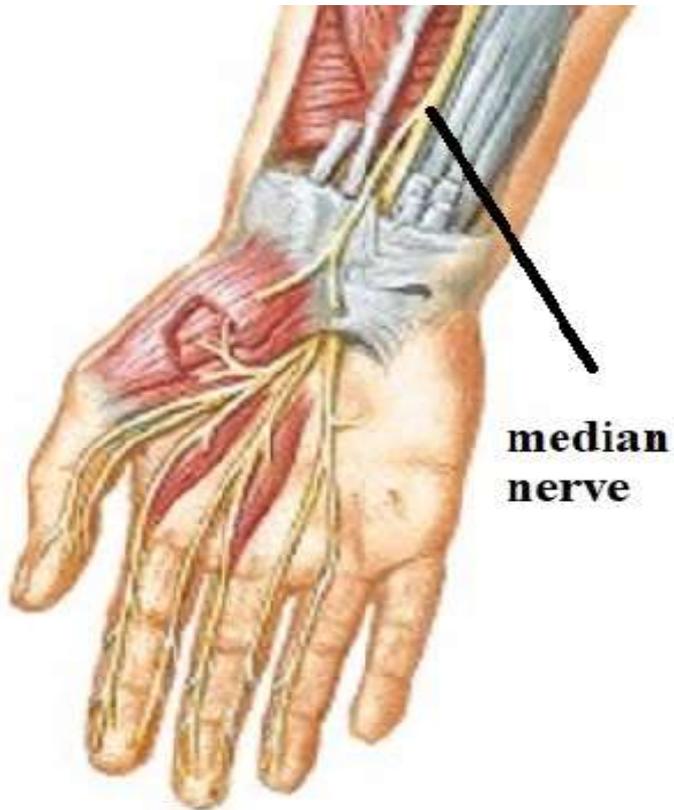
- 4 muscles for all fingers except 1st
- put the hand in writing position (flexion of M/P & extension of I/P)



MUSCLES OF THE HAND

Nerve supply of muscles of the hand:-

All muscles of the hand are supplied by the **ulnar nerve** except muscles of the thenar eminence and 1st & 2nd lumbricals which are supplied by **median nerve**

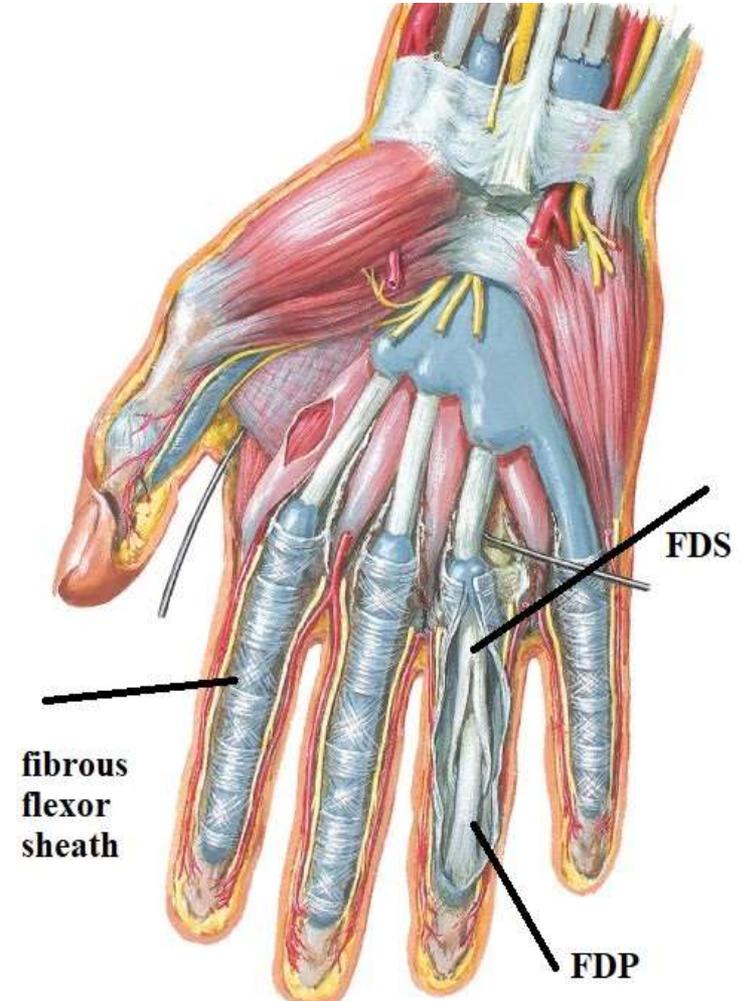


FASCIA OF THE HAND

Fibrous flexor sheath:

Def: thick deep fascia in front phalanges of medial 4 fingers

contents: 2 tendons FDS & FDP.



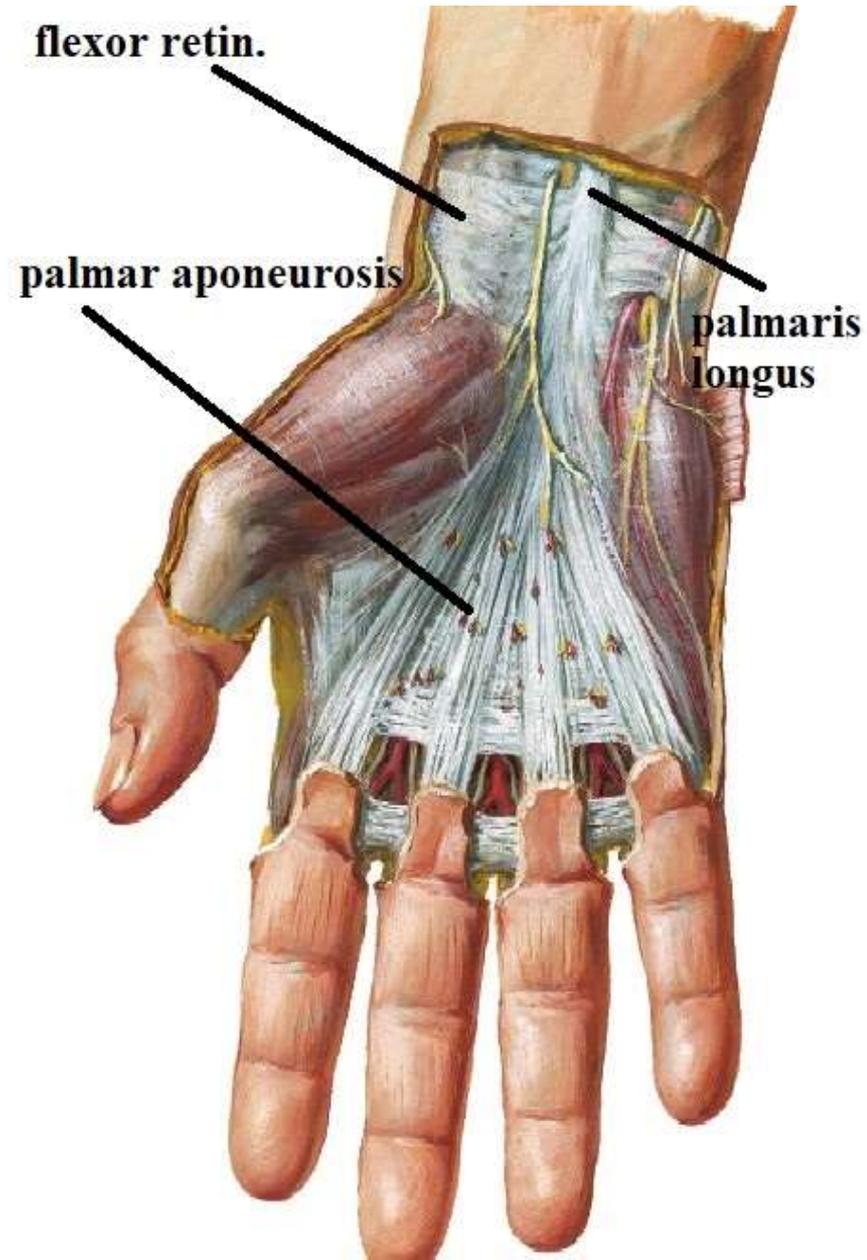
FASCIA OF THE HAND

PALMAR APONEUROSIS

Def: thick deep fascia in front of middle part of hand.

shape & attachment: triangle with
apex: attach to flexor retinaculum & palmaris longus

base: give 4 slips to medial 4 fingers
each attach to skin
& fibrous flexor sheath
& proximal phalanx



FASCIA OF THE HAND

PALMAR APONEUROSIS

extensions:

lateral palmar septum

attach to 1st metacarpal bone

medial palmar septum

attach to 5th metacarpal bone

intermediate palmar septum

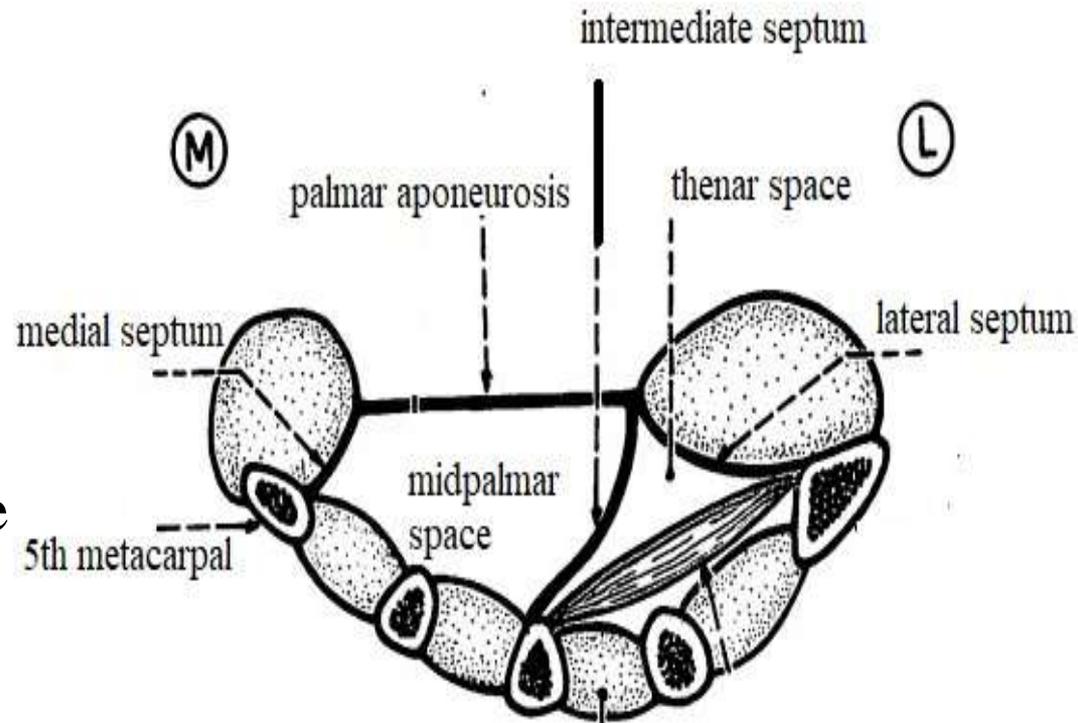
attach to 3rd metacarpal bone

N.B: the medial & lateral septa divide hand into: 3 compartments
lateral: thenar eminence.

medial: hypothenar eminence

intermediate compartment that is divided by intermediate palmar septum
Into 1-thenar space: lateral to intermediate septum

2-midpalmar space: medial to intermediate septum



FASCIAL SPACES OF THE HAND

Thenar space

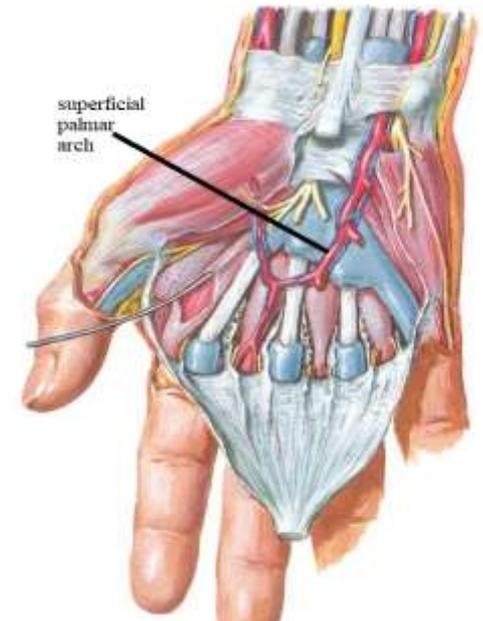
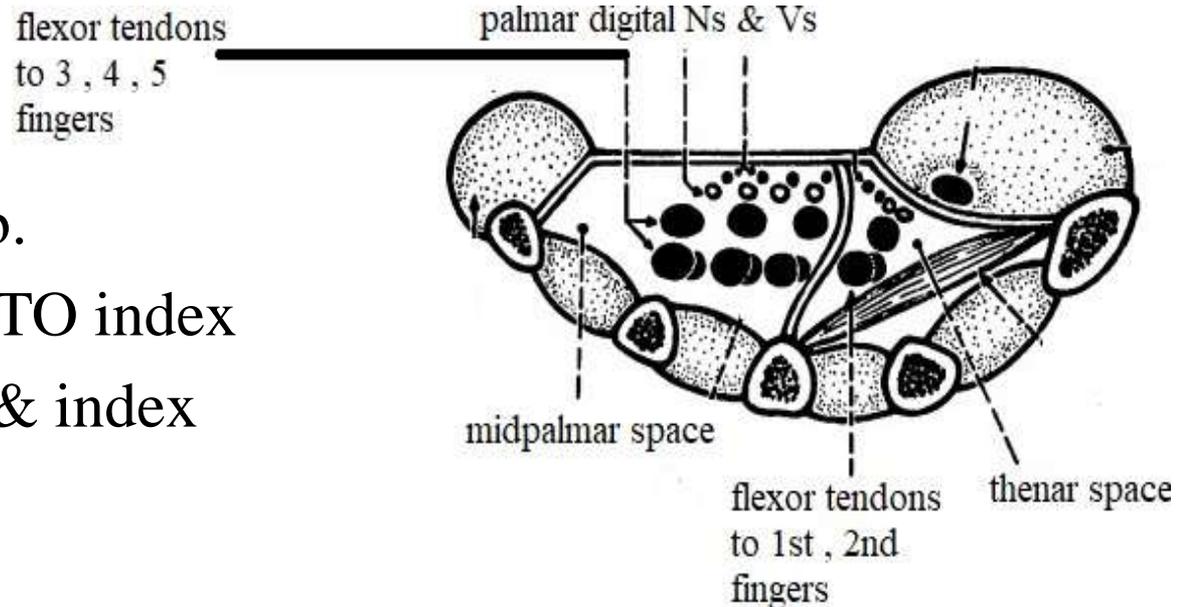
Contents

- 1-Tendon of FPL TO thumb.
- 2- Tendons of FDS & FDP TO index
- 3-digital nerves TO thumb & index

Midpalmar space:

contents

- 1- Tendons of FDS & FDP TO 3rd , 4th , 5th fingers
- 2-digital nerves & vessels TO 3rd , 4th , 5th fingers
- 3-superficial palmar arch
- 4-deep palmar arch & deep br. of ulnar nerve



THANK