

Deep Fascia of Palm

Is modified (thickened): 1-Over the wrist to form **the flexor retinaculum**. 2-In the middle of the palm to form the **palmar aponeurosis**. 3-In the fingers to form the **fibrous flexor sheaths**.

1- Flexor retinaculum	<i>Is thickening of deep fascia bridging over the front of carpus, thus converting the carpal groove to a carpal tunnel.</i>	Attachments: 1-Med. : pisiform & hook of hamate. 2-Lat. : Scaphoid & Trapezium (where it splits into 2 laminae to form a special compartment for flexor carpi radialis).	Structures superficial to it (med. to lat.): 1-Ulnar Nerve. 2-Ulnar vessels. 3-Palmar cutaneous branch of ulnar N. 4-Palmaris longus tendon. 5-Palmar cutaneous branch of median N.	Structures deep to it (in carpal tunnel): 1-Median N. 2-Tendon of Flexor carpi radialis (& its synovial sheath). 3-Tendon of Flexor pollicis longus (& its synovial sheath called <u>radial bursa</u>). 4- 4 tendons of flexor digitorum superficialis + 4 tendons of flexor digitorum profundus (& its synovial sheaths called <u>ulnar bursa</u>).
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Synovial Sheaths of Flexor Tendons: are tubular sacs surround the terminal parts of the tendons before its insertion to provide **a sort of lubrication** for it/ **Each synovial flexor sheath is composed of 2 layers; inner & outer layers** separated by a thin film of fluid to facilitate the movements of the tendons.

* **There are 3 sheaths that surround the long flexors of the different digits.**

* **All start 1-1½ inches above flexor retinaculum**

***These synovial sheaths include: Radial bursa + Ulnar bursa**

Radial bursa:

The synovial sheath that surrounds the **tendon of flexor pollicis longus**. It continues around the tendon till its insertion + The sheath that surrounds the tendon of **flexor carpi radialis** (extends till its insertion).

Ulnar bursa :

This is a common synovial sheath which surrounds the **8 tendons of flexor digitorum superficialis & profundus**. The sheath extends distally on its medial side without interruption on the tendons of the little finger as far as their insertion (into the base of the distal phalanx).

2- Palmar aponeurosis
Triangular with its apex proximally & its base distally

Attachments :

1-Proximally: Flexor retinaculum & palmaris longus tendon.

2-Distally:It gives 4 slips to the med. 4 fingers,(Each slip divides into 2 processes).

***There is no 5th slip to the thumb to keep it freely mobile.**

3-Medially & laterally:

a. Continuous with the deep fascia covering hypothenar & thenar eminences respectively.

Carpal tunnel syndrome

Due to Deposition of fat & fibrous tissue DEEP to flexor retinaculum causing compression of Median nerve.

Results:

1-Weakness of muscles of the thenar eminence & the lat. 2 lumbricals.

2-Tingling & sensory loss of the lat. 3½ fingers (but the palm is spared since it is supplied by the palmar branch of median N. which passes SUPERFICIAL to the retinaculum).

Treatment: Surgical division of the retinaculum.