



MANIBANDHA (WRISTJOINT)

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MANIBANDHA

तेषामङ्गुलिमणिबन्धगुल्फजानुकूर्परिषु कोराः सन्धयः
(सु.शा.5/32)

- The *Kora Sandhi* are seen in the following region, *Anguli, Manibandha, Gulpha, Janu* and *Kurpara*. Here the flexion and extension type of movements are observed.
- This is Hinge type of joint according to modern anatomical classification

.....जानुकूर्परसीमन्ताधिपतिगुल्फमणिबन्धुकुकुन्द
रावर्तकृकाटिकाश्चेति सन्धिमर्माणि ॥ (सु.शा.6/7)

Manibandha is explained under *Marma sharir* as
Manibandha Marma, in *Sandhi Sharir* as
Manibandha Sandhi

मांससिरास्नाय्वस्थिजालानि प्रत्येकं चत्वारि; तानि
मणिबन्धगुल्फसंश्रितानिपरस्परनिबद्धानिपरस्परगवा
क्षितानि चेति,यैर्गवाक्षितमिदंशरीरम् (सु.शा.5/12)

in *Paribhasha Sharir* as *Asthisanghat* and also as
situation of *Jaala*

गुल्फौ द्वौ मणिबन्धौ द्वौ द्वे द्वे कूर्चशिरांसि च । रुजाकराणि
जानीयादष्टावेतानि बुद्धिमान् (सु.शा.6/14)

- *Manibandha Sandhi* is a type of *Kora Sandhi* composed of *Manibandha Marma* with *Rujakara* character

.....विशेषतस्तु मणिबन्धे कुण्ठता (सु.शा. 6/25)

- on injury cause severe pain.

सिद्धङ्गुलद्वयमितं मणिबन्धगुल्फ....(सु.शा.6/29)

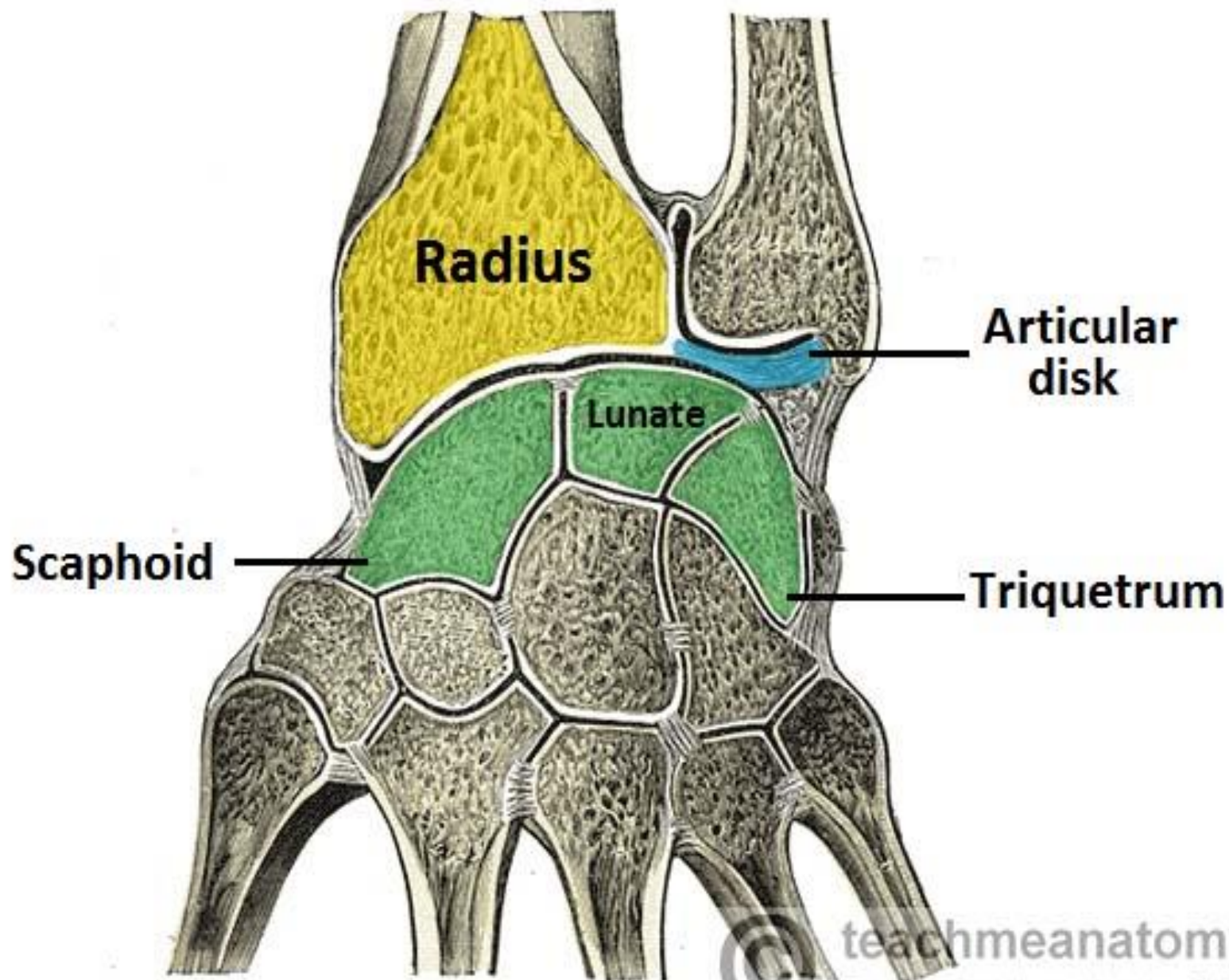
- This *Manibandha Marma* is 2 *Angula* in *Parinam*.

WRIST JOINT

- **The wrist (radiocarpal) joint is a ellipsoid type of synovial joint**
- **Biaxial movement**

Articulation

- **The ulna does not participate in the wrist joint.**
- **The distal end of the radius and the articular disc of the distal radioulnar joint articulates with the proximal row of carpal bones (scaphoid, lunate, triquetral bones), except for the pisiform**



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Joint Capsule

The fibrous layer of the joint capsule surrounds the wrist joint and is attached to the distal ends of the radius and ulna and the proximal row of carpals (scaphoid, lunate, and triquetrum).

The **synovial membrane lines the internal surface of the fibrous layer of the joint capsule.**

Ligaments

- **Palmar Radiocarpal Ligaments**
- **palmar Ulnocarpal ligament**
- **Dorsal Radiocarpal Ligaments**
- **Ulnar Collateral Ligament**
- **Radial Collateral Ligament**

The fibrous layer of the joint capsule is strengthened by strong dorsal and palmar radiocarpal ligaments.

Palmar radio-carpal ligament

- The palmar radio-carpal ligament is a broad band.
- It begins above from the anterior margin of the lower end of the radius and its styloid process, runs downwards and medially, and is attached below to the anterior surface of the scaphoid, the lunate and triquetral bones.

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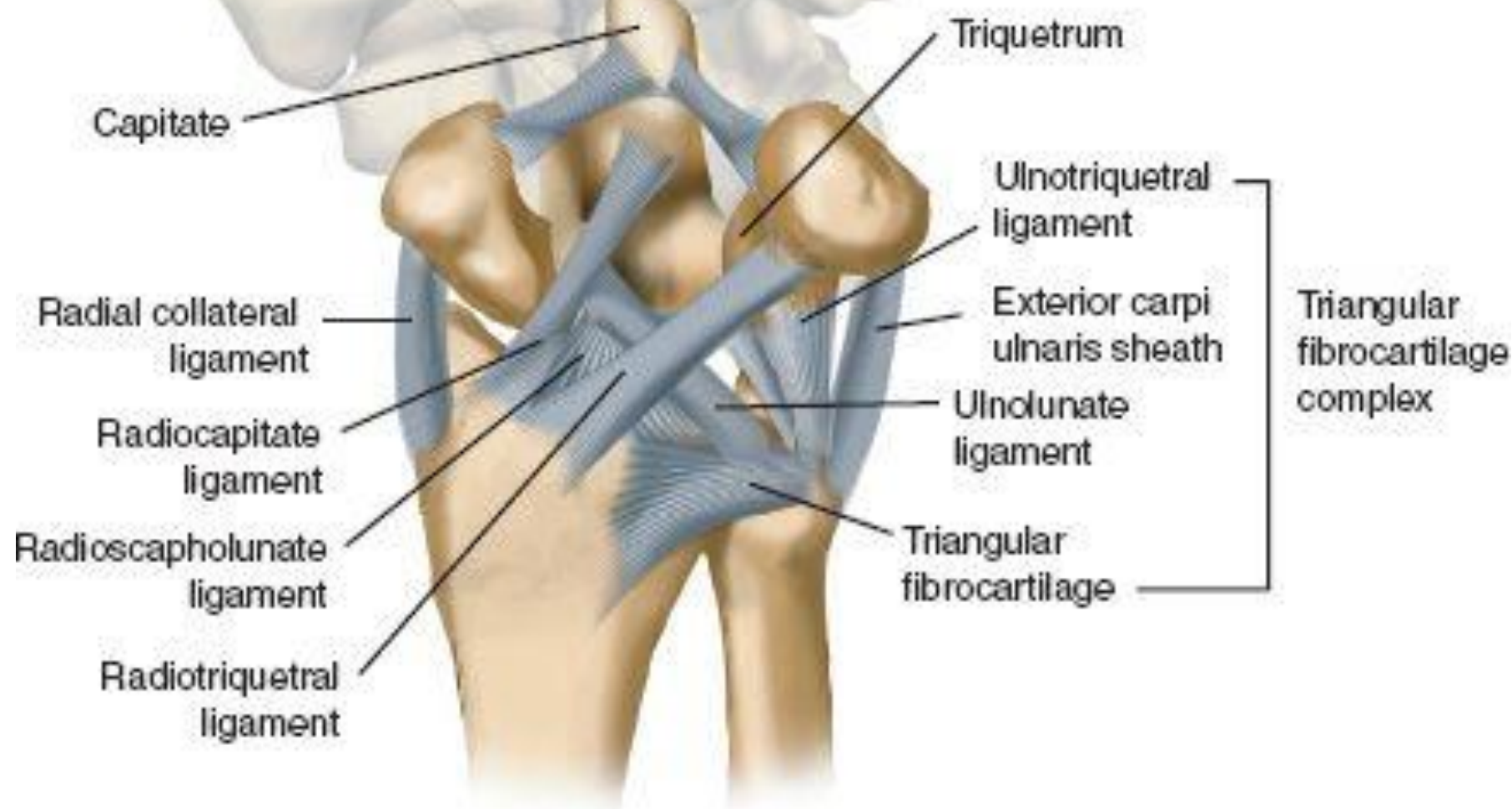
Palmar Ulnocarpal Ligament

- The palmar ulnocarpal ligament is a rounded fasciculus.
- It begins above from the base of the styloid process of the ulna and the anterior margin of the articular disc, runs downwards and laterally, and is attached to the lunate and triquetral bones.

NOTE- Both the palmar carpal ligaments are considered to be intracapsular

Dorsal Radio-carpal Ligaments

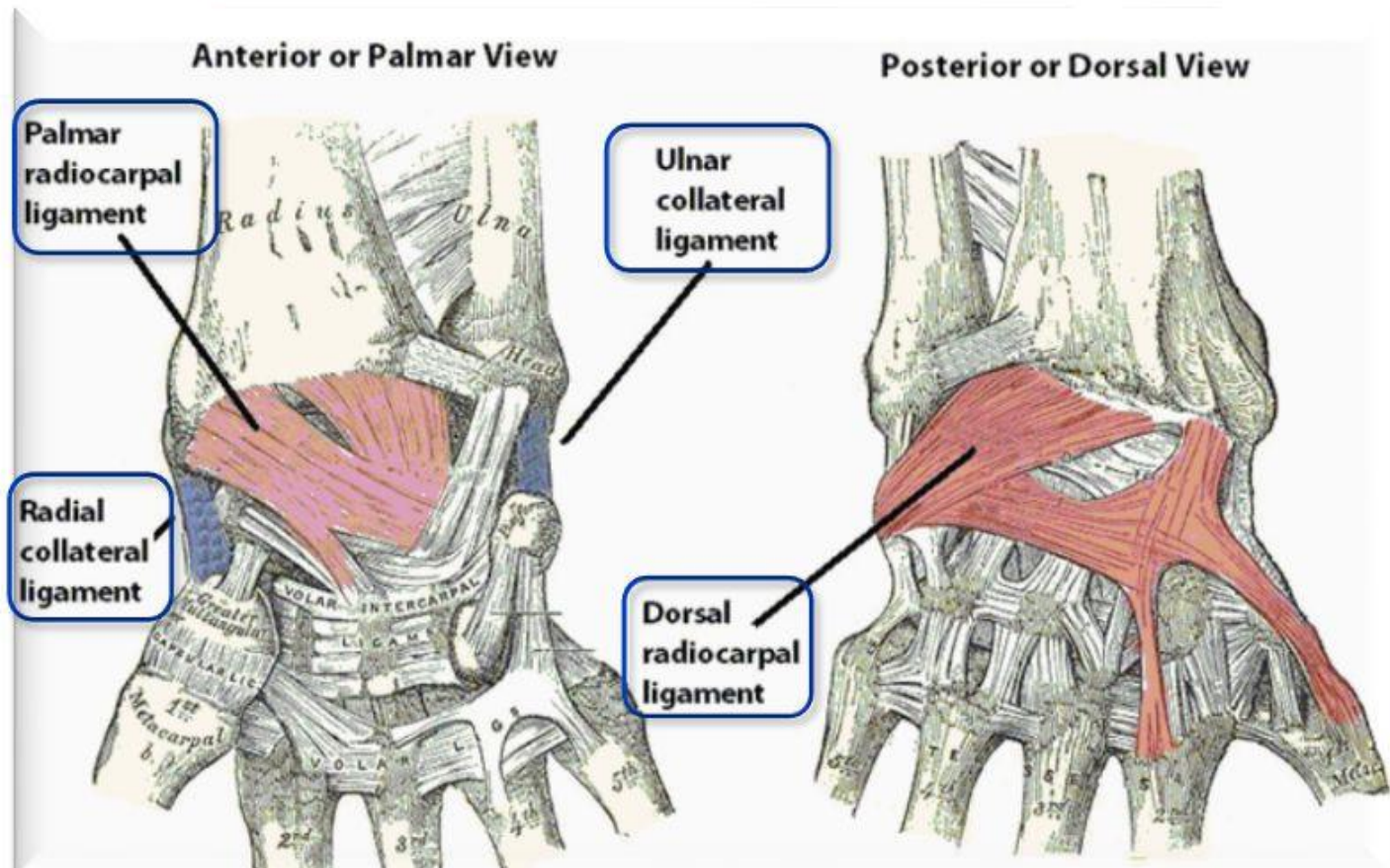
- **On the dorsal aspect of the joint there is one dorsal radio-carpal ligaments.**
- **It is weaker than the palmar ligaments.**
- **It begins above from the posterior margin of the lower end of the radius , runs downwards medially , and it is attached below to the dorsal surfaces of the scaphoid, lunate and triquetral bones.**



LIGAMENTS OF THE WRIST JOINT



1. Dorsal and palmar radiocarpal ligaments
2. Ulnar collateral ligament
3. Radial collateral ligament



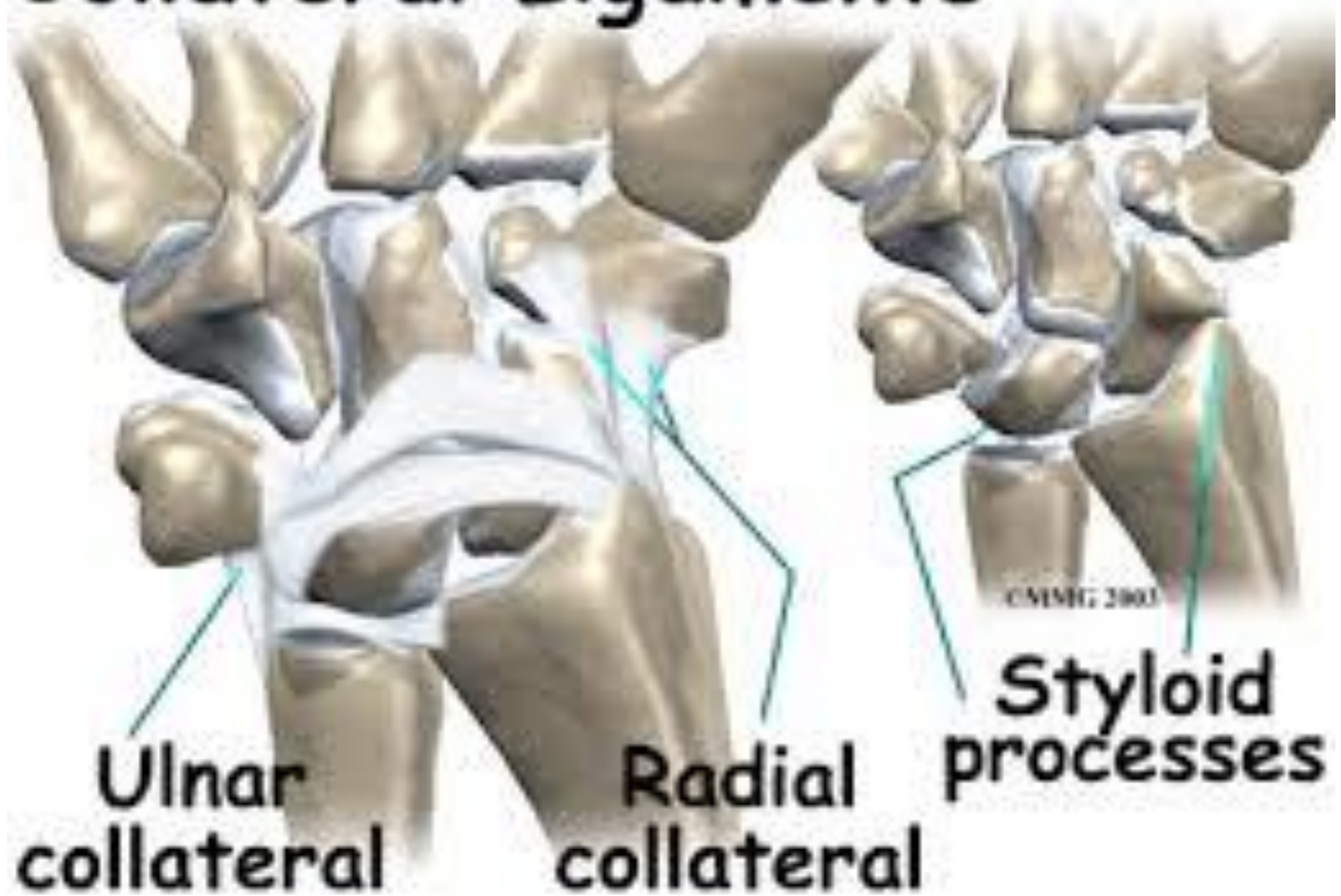
Ulnar collateral ligament

- which is attached to the tip of the styloid process of the ulna to the triquetrum.

Radial collateral ligament

- which is attached to the tip of the styloid process of the radius to the lateral side of the scaphoid
- It is related to the radial artery.

Collateral Ligaments



Movements

- Flexion,
- Extension,
- Abduction,
- Adduction

Blood Supply

- The arteries supplying the wrist joint are branches of the dorsal and palmar carpal arches.

Innervations

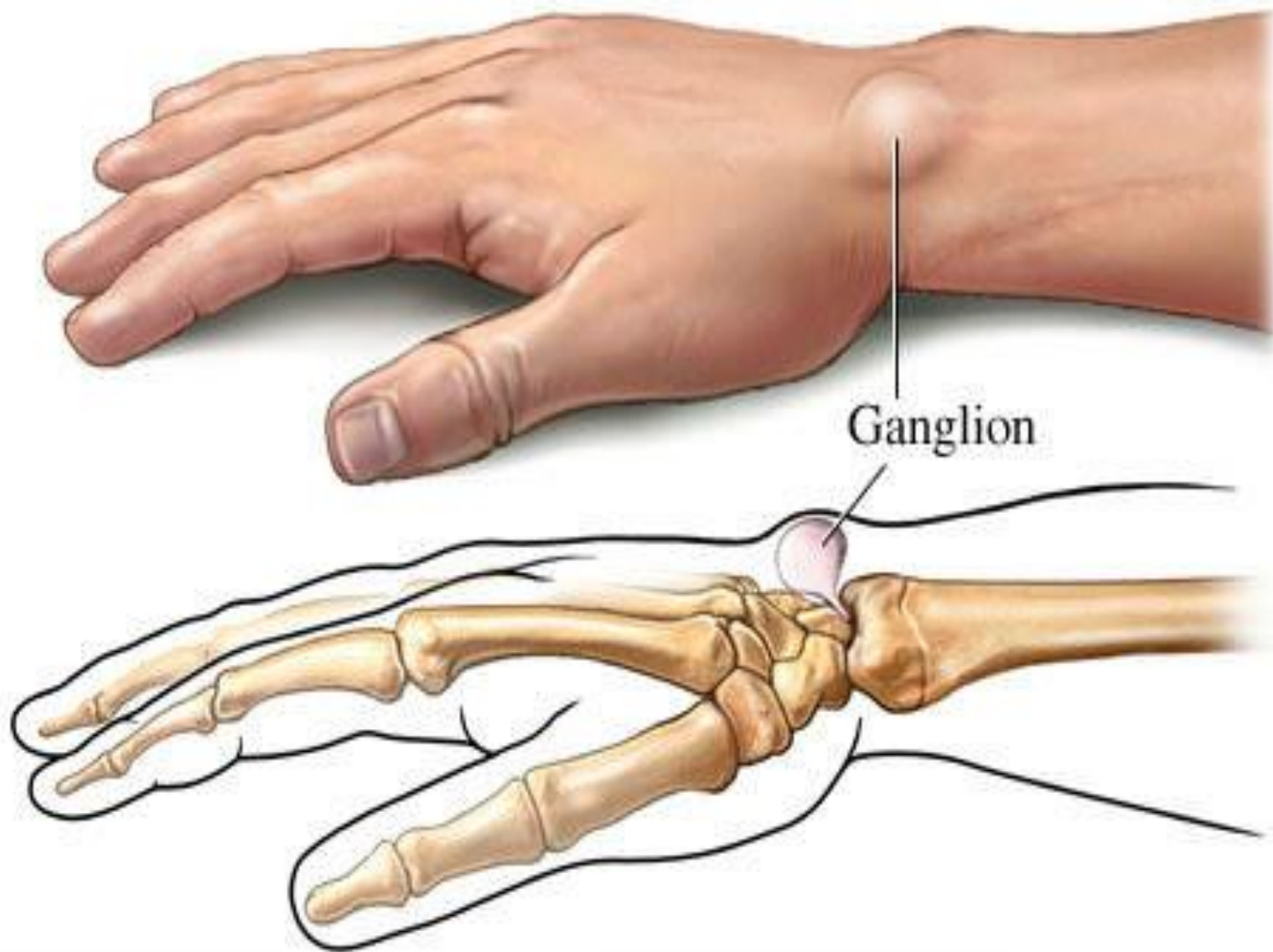
- Anterior interosseous branch of the median nerve
- Posterior interosseous branch of the radial nerve
- Dorsal and deep branches of the ulnar nerve.

Clinical Conditions

- **Wrist sprain**
- **Scaphoid fracture**
- **Gaglion** - the back of the wrist is the common site for a ganglion. It is a cystic swelling resulting from mucoid degeneration of synovial sheaths around the tendons
- **Wrist Drop (Saturday Night Palsy)**







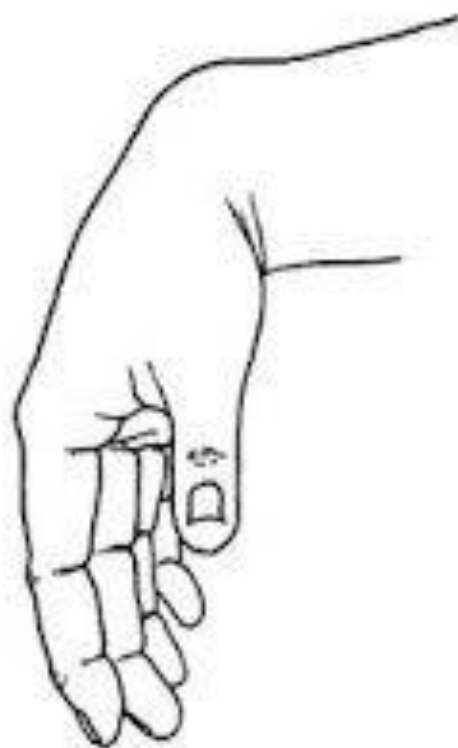
RADIAL NERVE injury (Saturday night palsy)

- Inability to extend thumb, proximal phalanges, wrist and elbow
- Hand is pronated and the thumb adducted
- Total loss of extension of fingers



Wrist Drop

Wrist Drop (Radial Nerve Injury)



A close-up photograph of a bouquet of daisies. The central flower is a large, vibrant pink daisy with a dark brown center. Surrounding it are several purple daisies with yellow centers and some white daisies. The background is a soft, out-of-focus green. In the upper right corner, the words "THANK YOU" are written in a stylized, green, 3D block font with a slight shadow.

THANK YOU