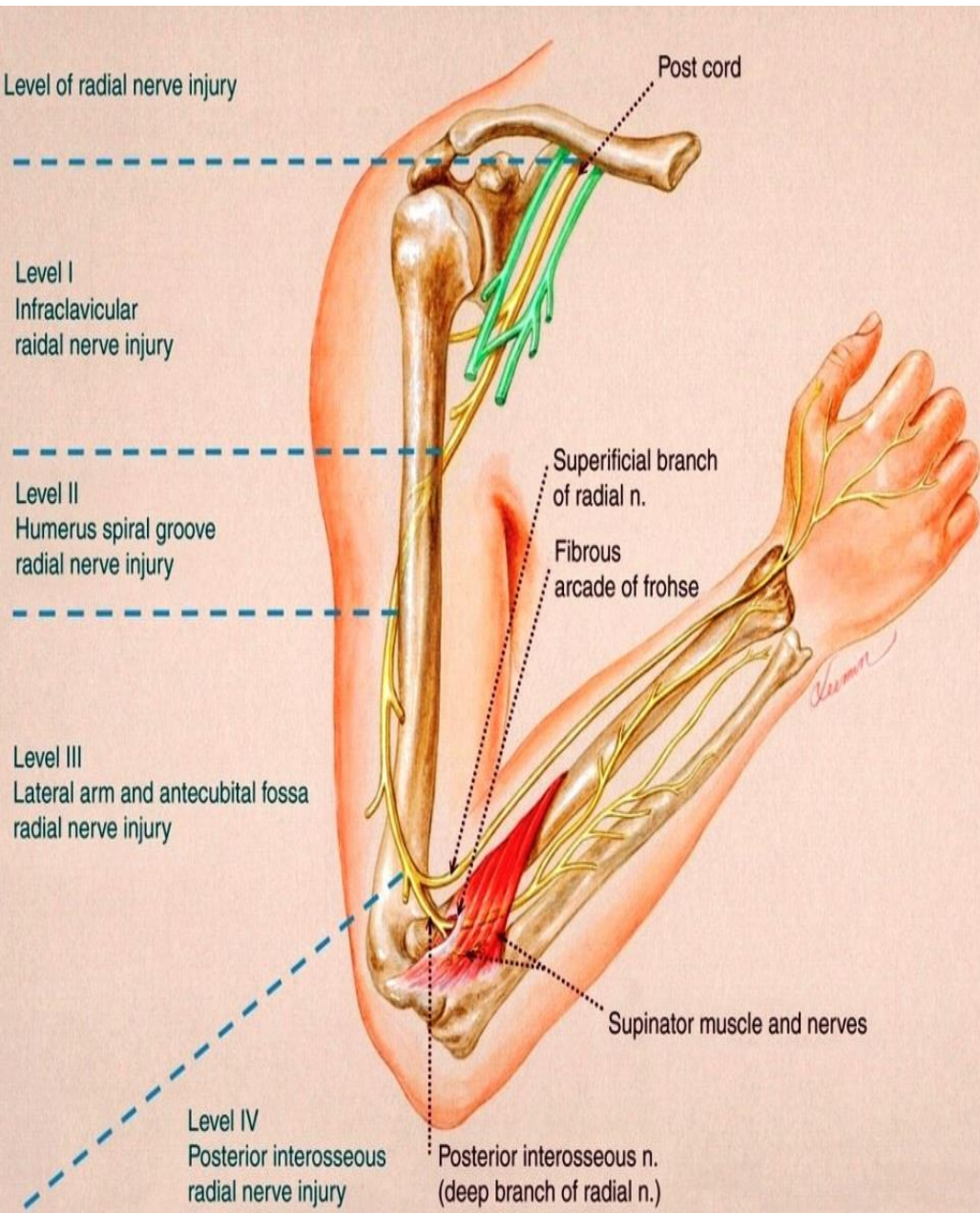


# RADIAL NERVE



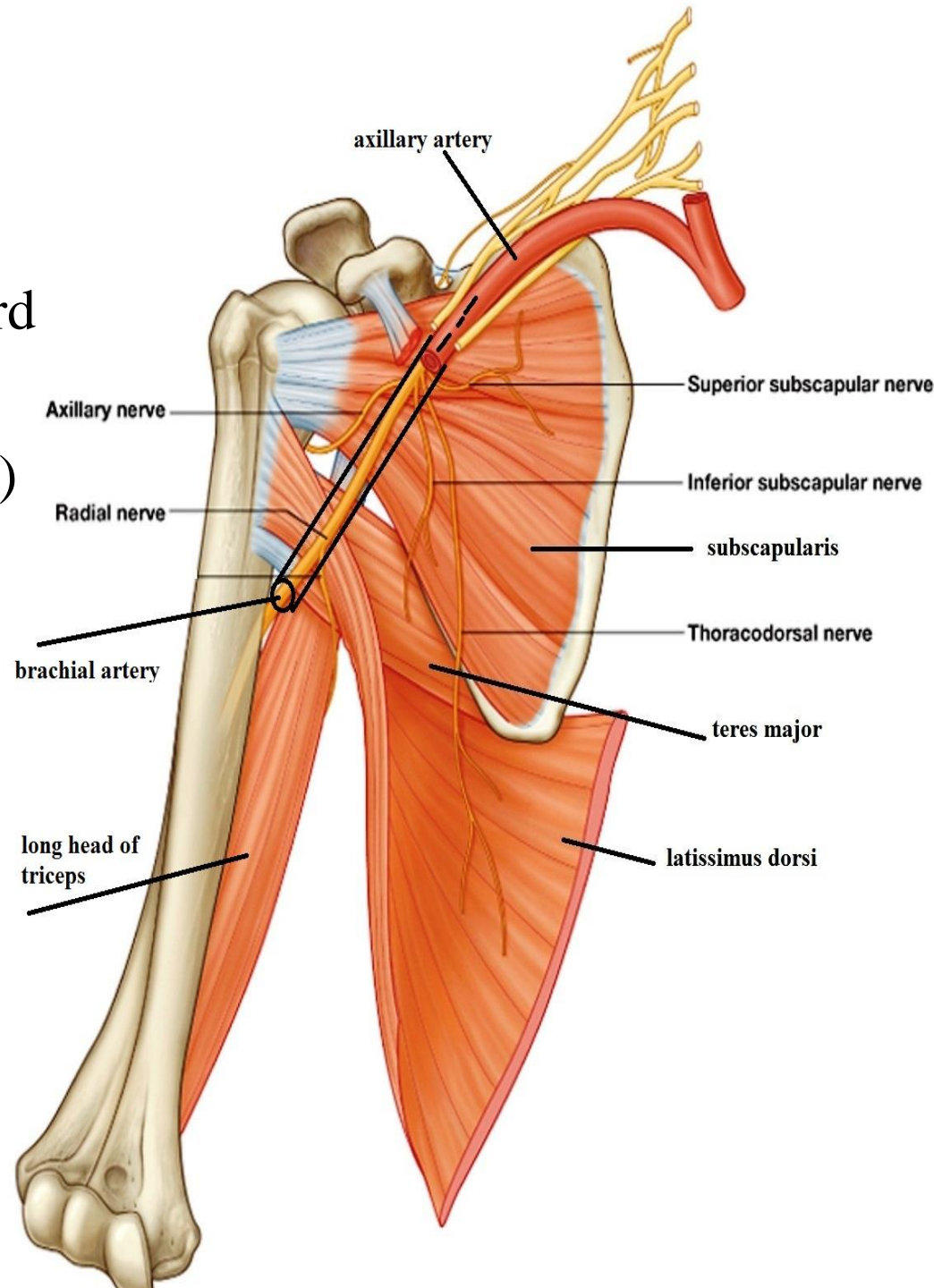
BY  
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ANATOMY & EMBRYOLOGY  
MUTAH UNIVERSITY

# RADIAL NERVE

**O.:-**

- Behind the axillary artery
  - as a continuation of posterior cord of the brachial plexus
- (largest branch of brachial plexus)

**Root value:-** C 5 , 6 , 7 , 8, T1



# RADIAL NERVE

## C. & R.

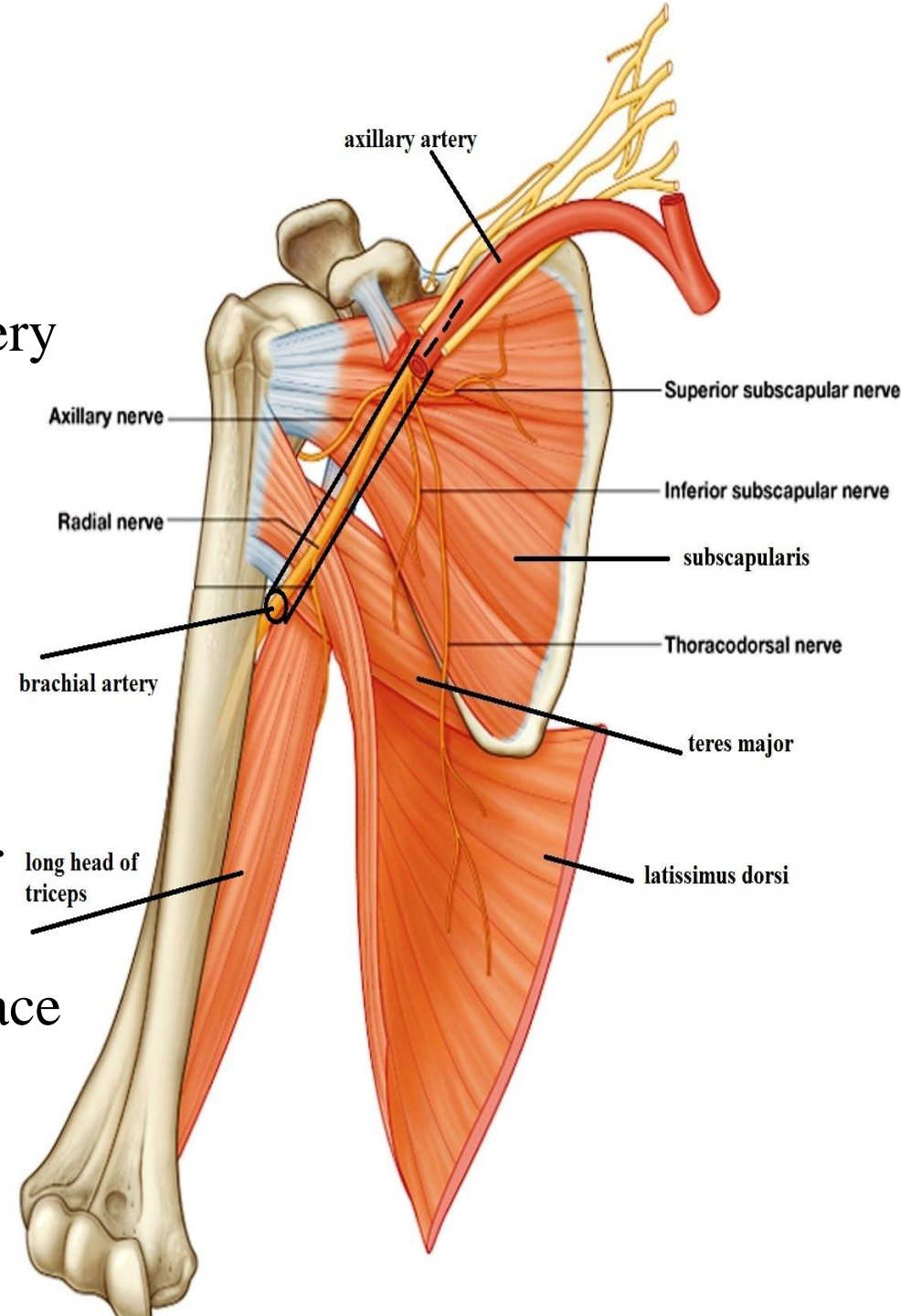
### In the axilla

- Descends behind the axillary artery between it & subscapularis, teres major, latissimus dorsi

### In the arm

(On medial side of the arm):-

- Descends behind the brachial art. between it & long head of triceps
- pass through lower triangular space with profunda brachii artery to enter the back of arm



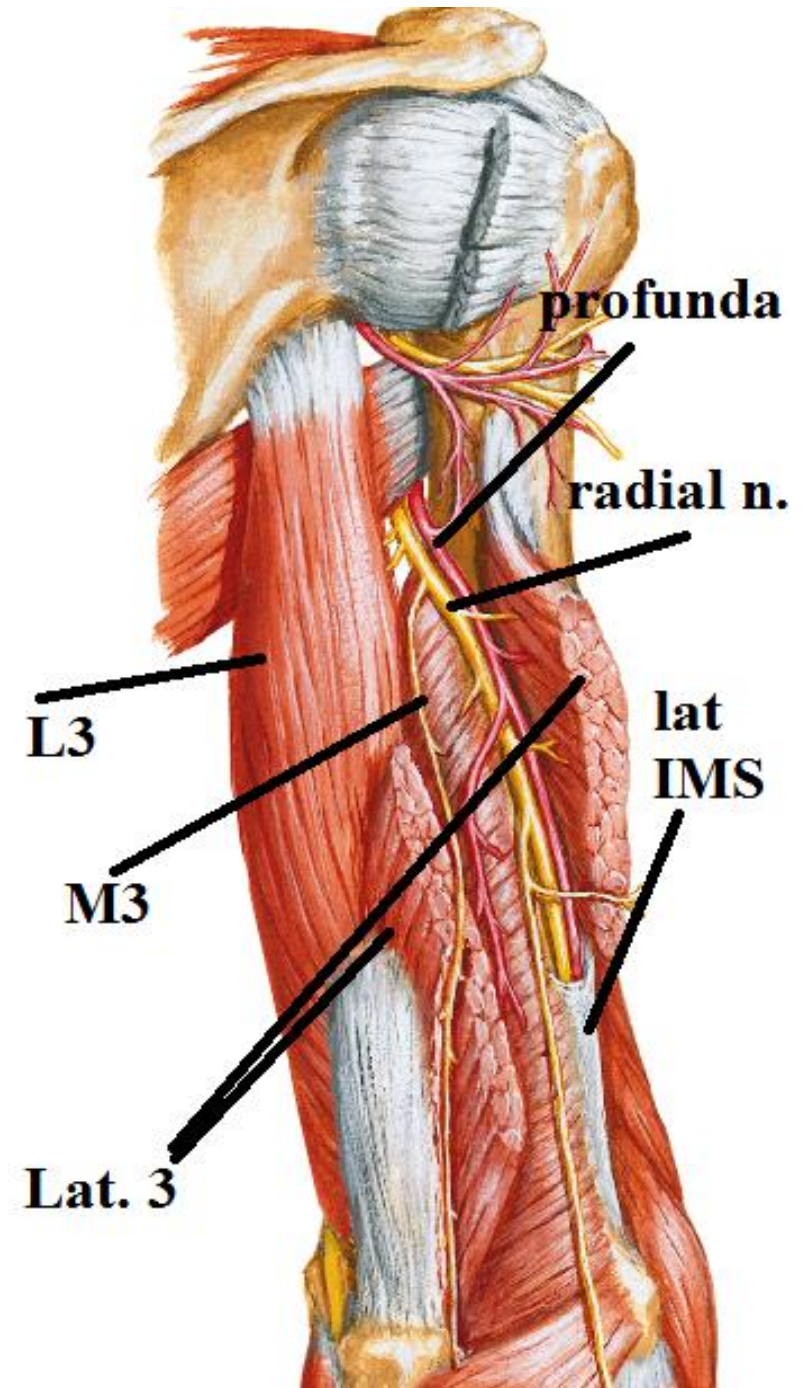
# RADIAL NERVE

**C. & R.**

In the arm

(On back of the arm):-

- Runs in the spiral groove with profunda brachii artery covered by lateral head of triceps to reach the lateral side of arm



# RADIAL NERVE

**C. & R.**

**In the arm**

**(On lateral side of the arm):-**

- At middle of the arm it pierces the lateral intermuscular septum to enter the anterior compartment to
- lie ( ) brachialis & brachioradialis,

**In the forearm**

ends in cubital fossa in front lateral epicondyle

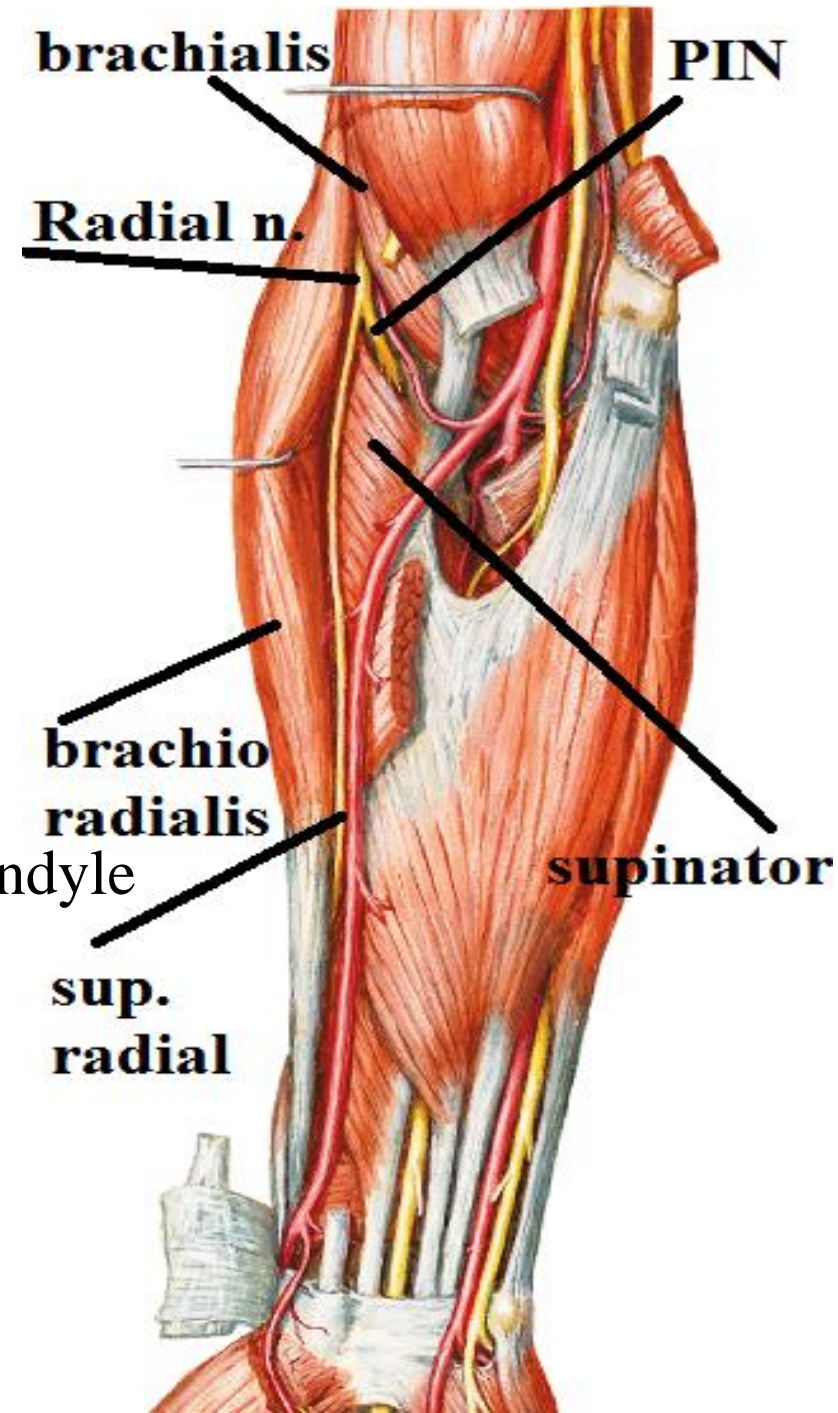
dividing into

1-superficial terminal branch

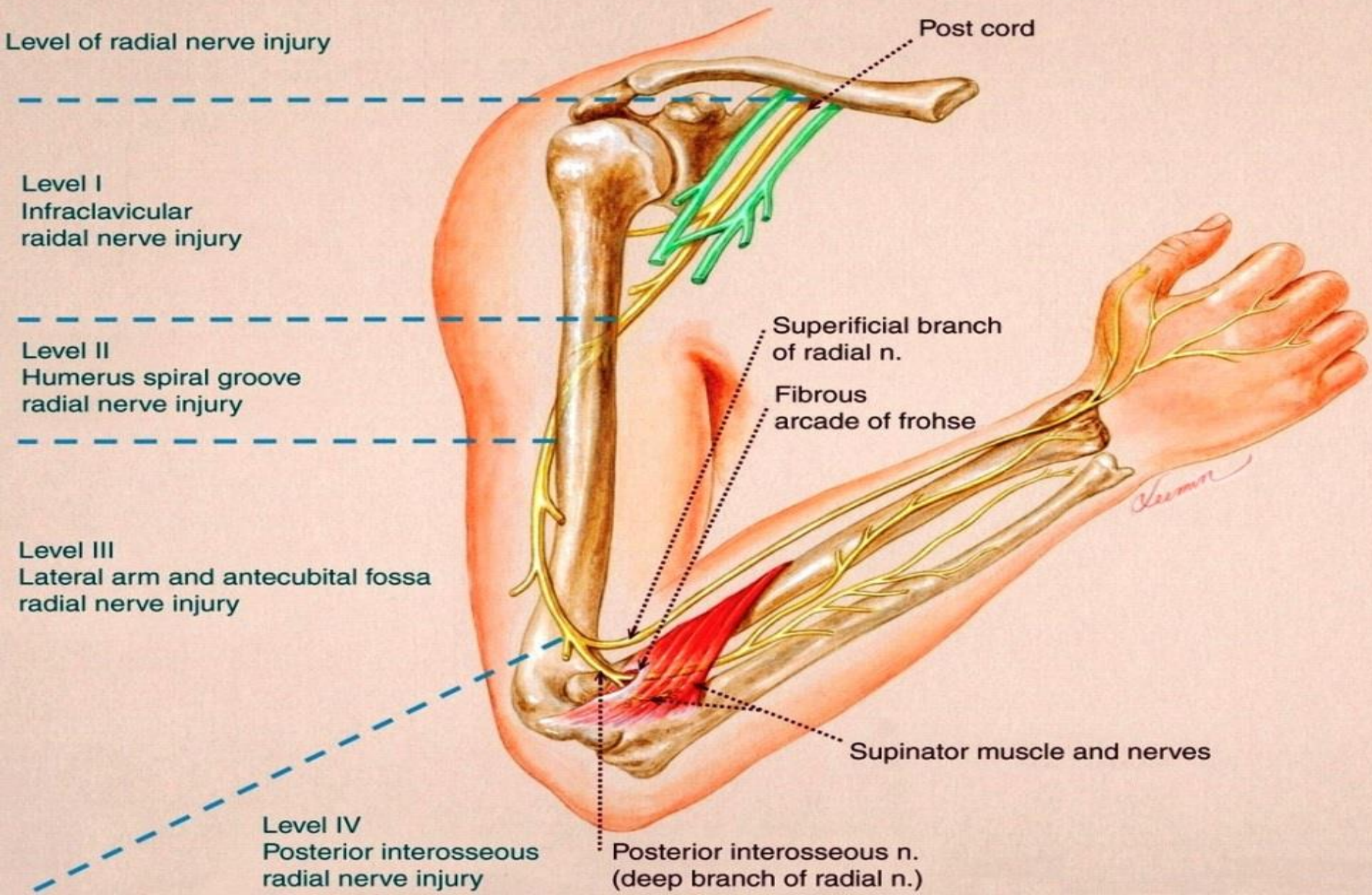
(superficial radial n.)

2- deep terminal branch

(post. interosseous n.)



# RADIAL NERVE



# RADIAL NERVE

## Branches

in the arm

in medial side of arm:

long head of triceps.

medial head of triceps

post. cutaneous n. of arm.

in (back of arm) spiral groove:

medial head of triceps.

lateral head of triceps

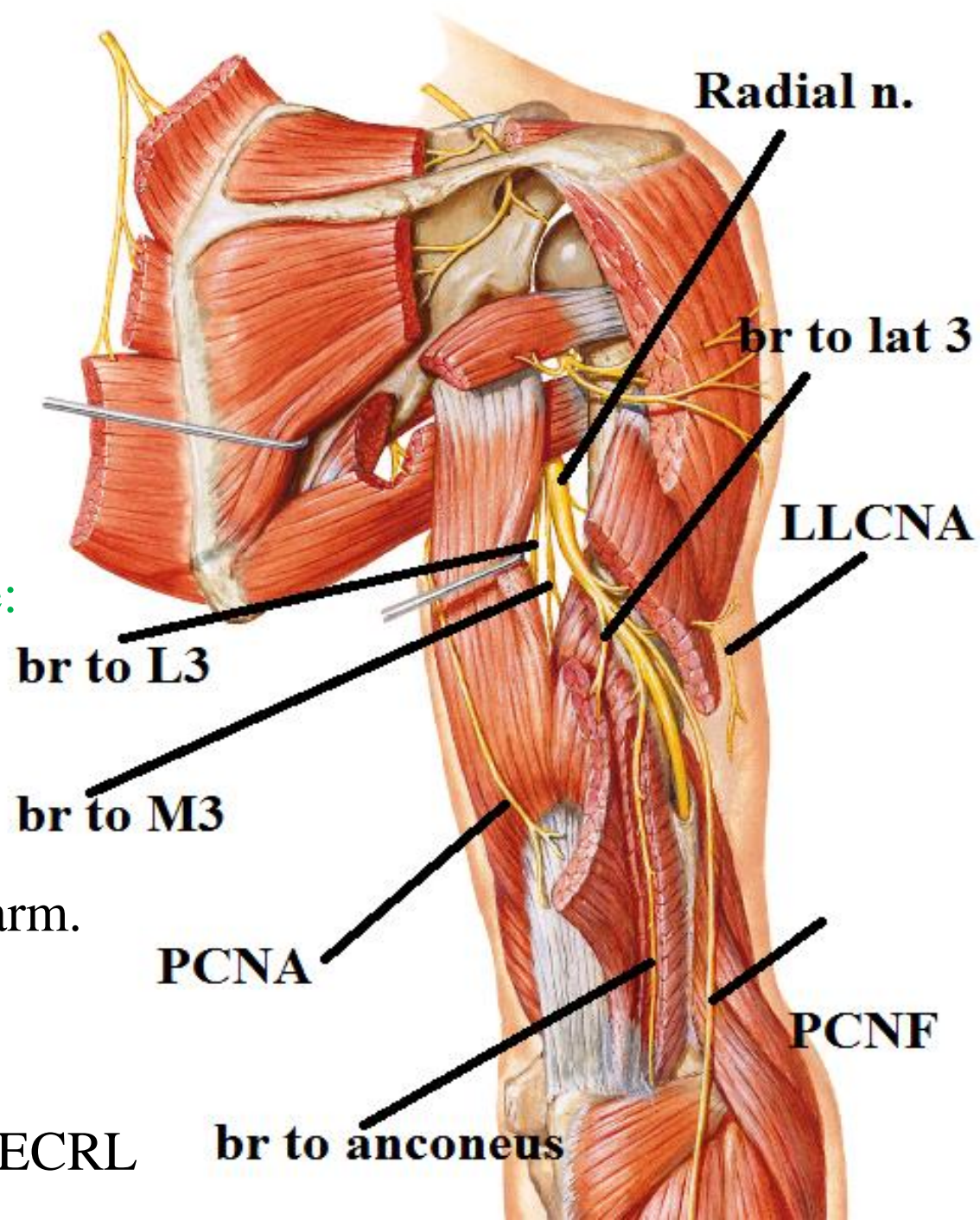
anconeus.

lower lateral cutaneous n. of arm.

post. cutaneous n. of forearm:

in lateral side of arm:

brachialis , brachioradialis & ECRL



# RADIAL NERVE

## Branches

in the forearm

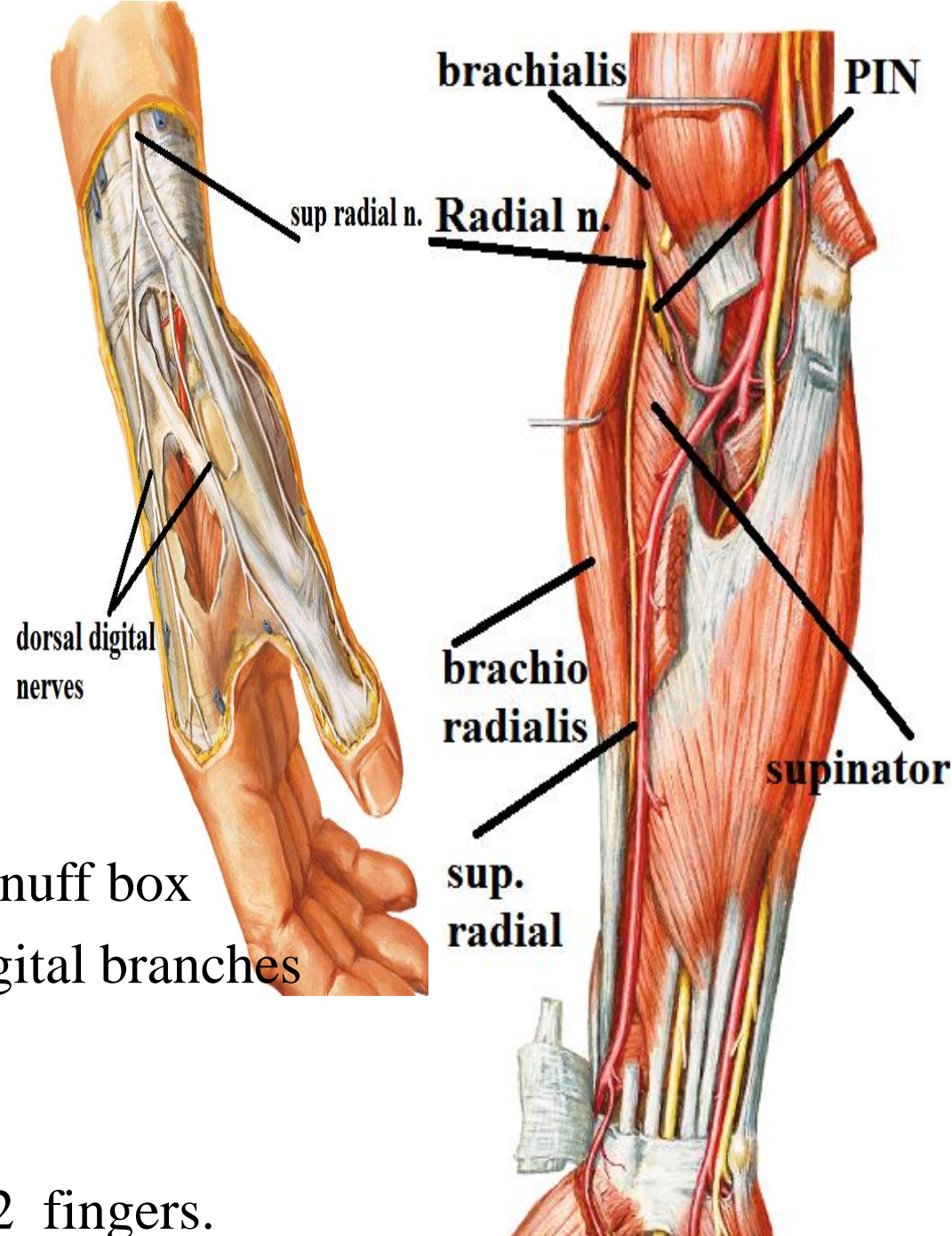
1-superficial radial n. =sensory

## Course & relations:-

- Descends vertically in lateral side of forearm deep to brachioradialis
- 5 cm above the wrist it turns backwards to run in roof of anatomical snuff box where it divides into 5 dorsal digital branches

## supply:

dorsum of lateral 2/3 of hand &  
Proximal phalanx of lateral 3 1/2 fingers.





# RADIAL NERVE

## Branches

in the forearm

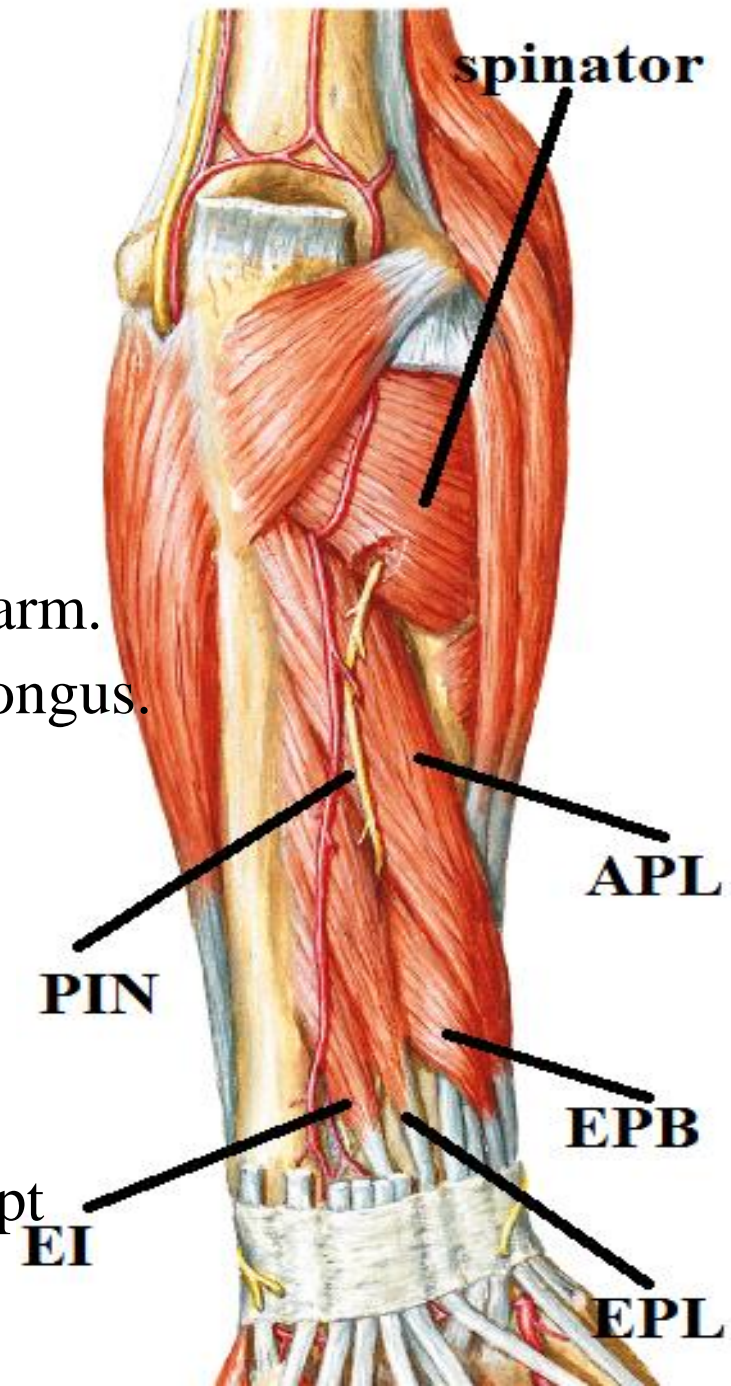
2-post. Interosseous n.=motor

course & relations:

- Pierce supinator
- Turn inside the supinator around lateral side of radius to back of forearm.
- Appear ( ) supinator & abductor pollicis longus.
- Run ( ) superficial & deep extensors
- Then ( ) extensor pollicis longus & inteross. Membrane
- Ends deep to extensor retinaculum

branches:-

--all the muscles of the back of forearm except (brachioradialis – ECRL – anconeus)

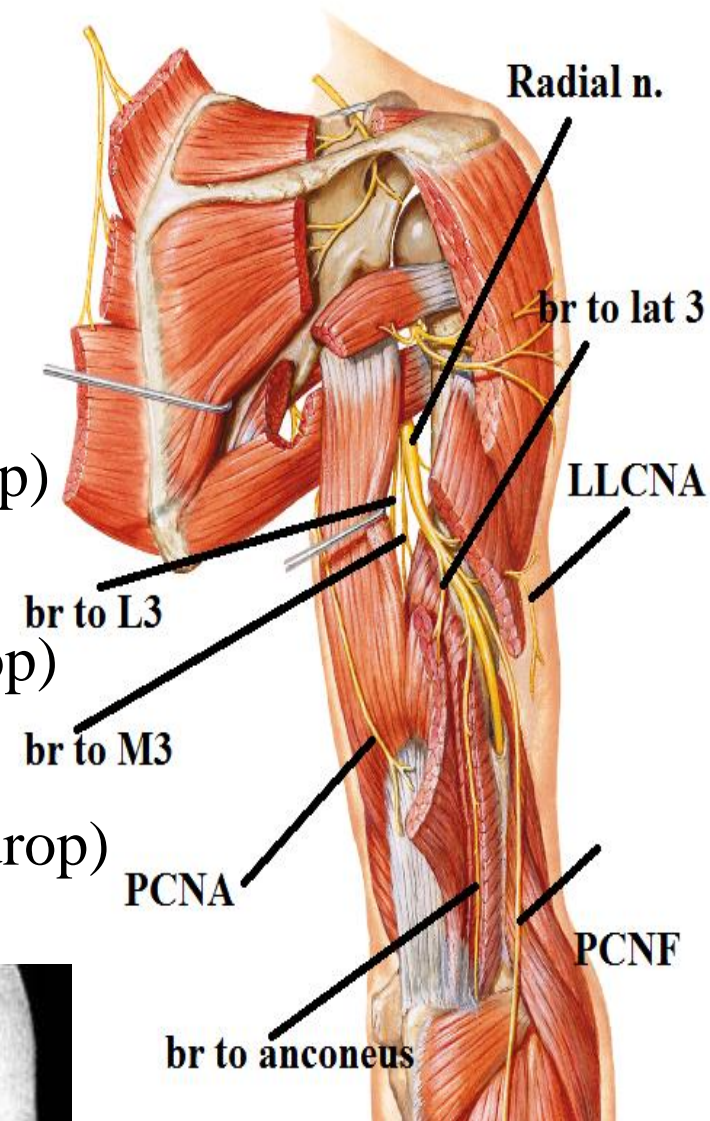
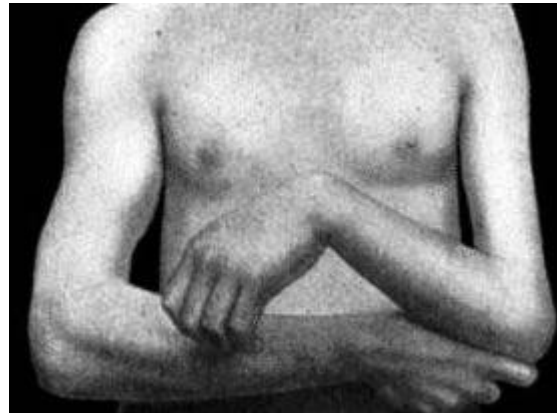


# RADIAL NERVE

## Effect of injury

### In axilla

- paralysis of triceps & anconeus leading to loss of elbow extension (elbow drop)
- Paralysis of wrist extensors leading to loss of wrist extension (wrist drop)
- Paralysis of fingers extensors leading to loss of fingers extension (fingers drop)



# RADIAL NERVE

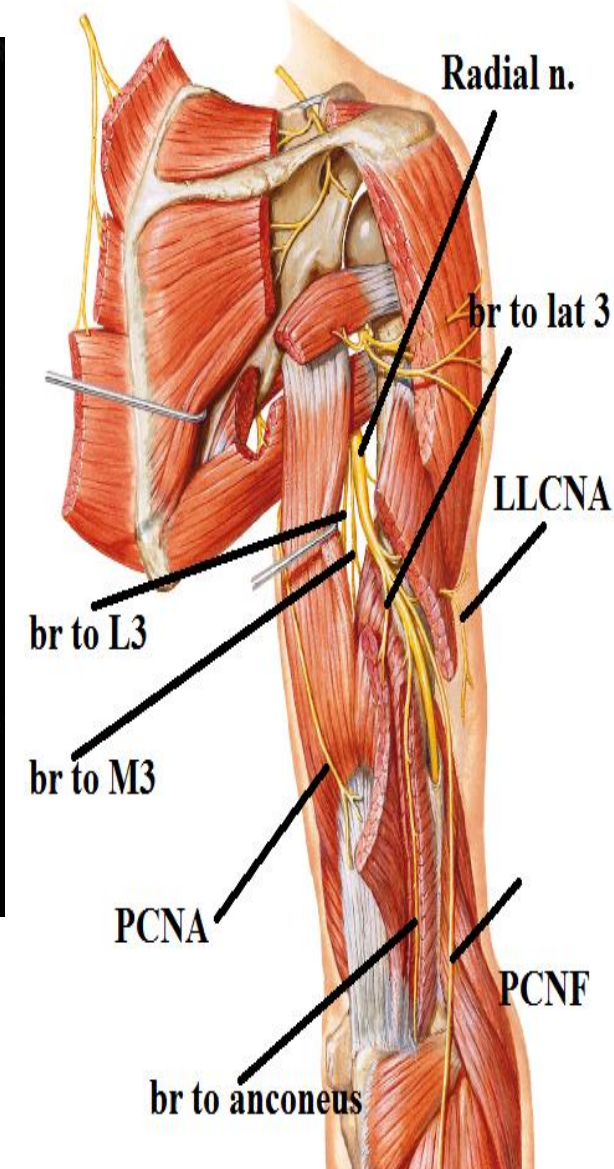
## Effect of injury

### In spiral groove:-

(fracture shaft of humerus or wrong I.M. injection)

**Motor effect:** - As above except elbow extension is intact due to long & medial heads of triceps are working

as they receive the nerve supply before the spiral groove  
fingers



# RADIAL NERVE

## Effect of injury

### Injury of superficial radial nerve:-

Loss of sensation in  
back of lateral 2 /3of hand  
and proximal phalanx of lateral 3.5 fingers

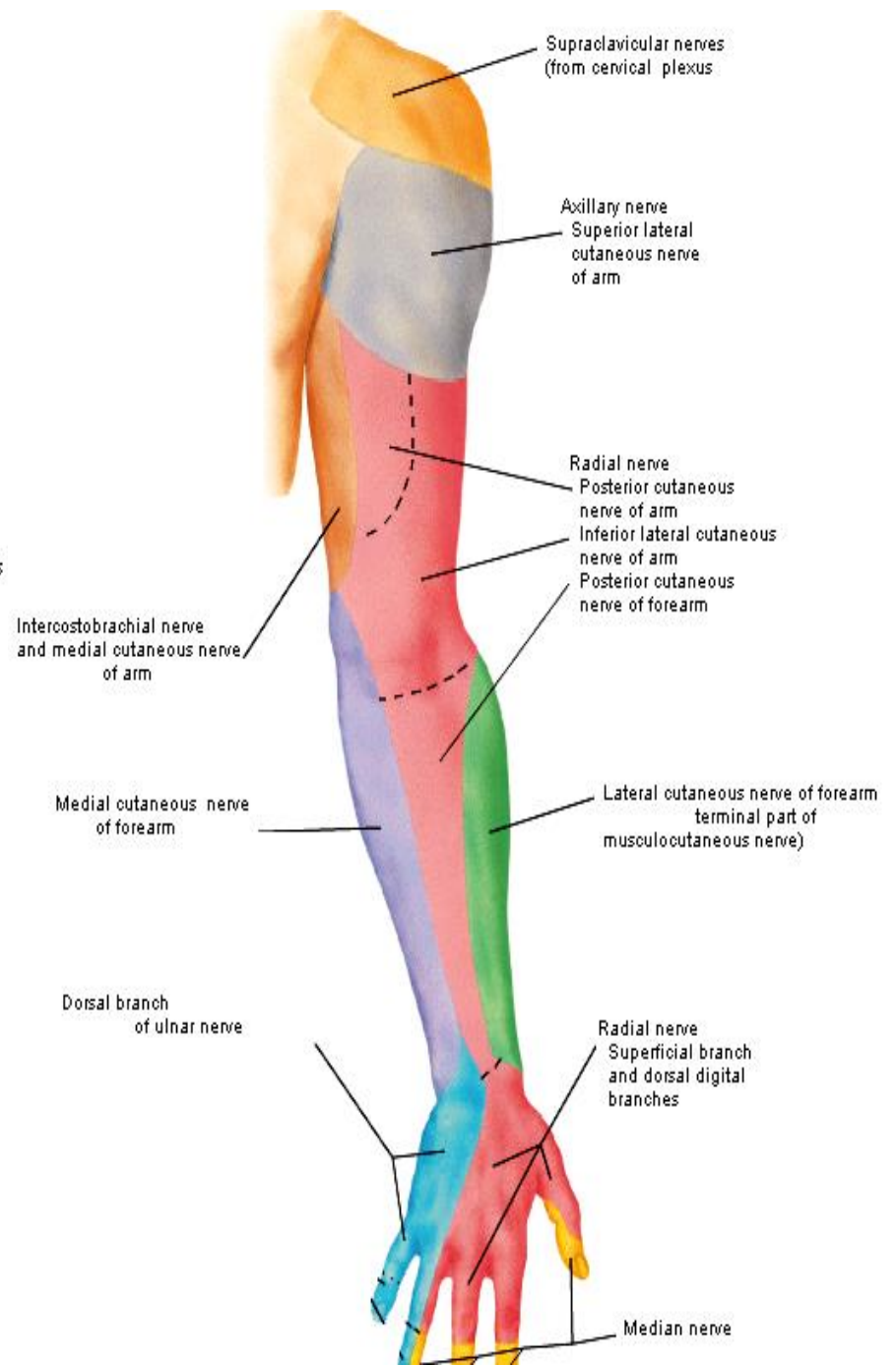
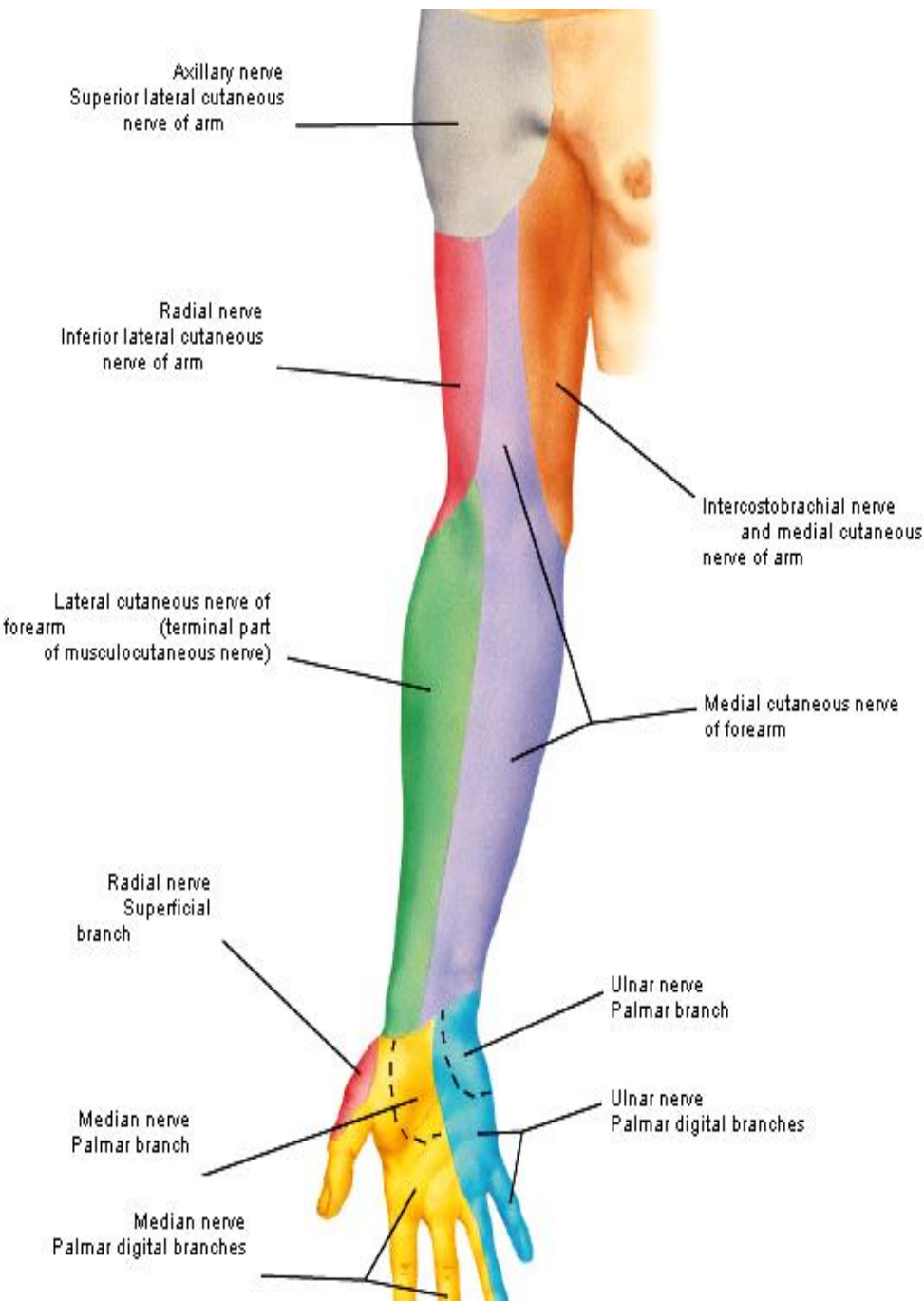
### Injury of post. Interosseous nerve:-

(fracture upper part of radius)

Only finger drop



CUTANEOUS  
INNERVATION  
OF UPPER LIMB



THANQ