

Hand Examination

Dr. Abdullah E. Kattan
Division of Plastic Surgery



History

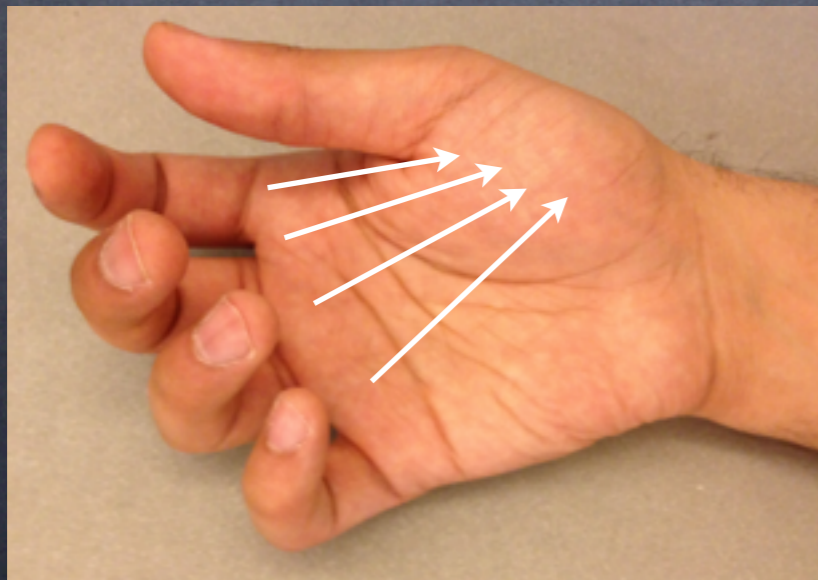
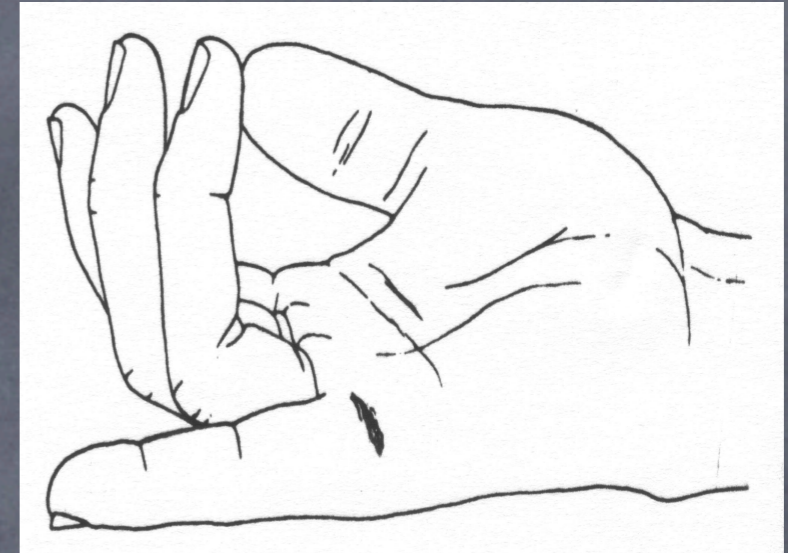
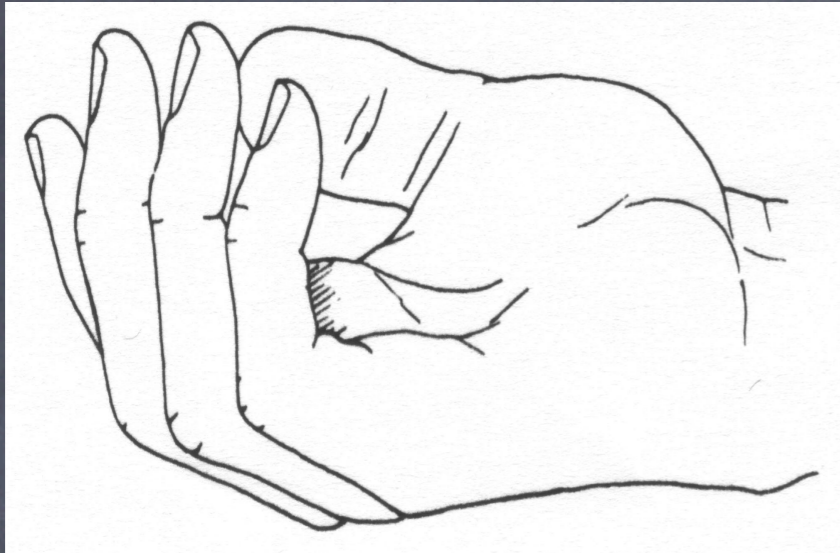
- Age & and dominance
- Occupation & hobbies
- Previous hand injuries/surgeries
- PMH (RA, OA, DM ...)
- Medications & allergies
- Tetanus

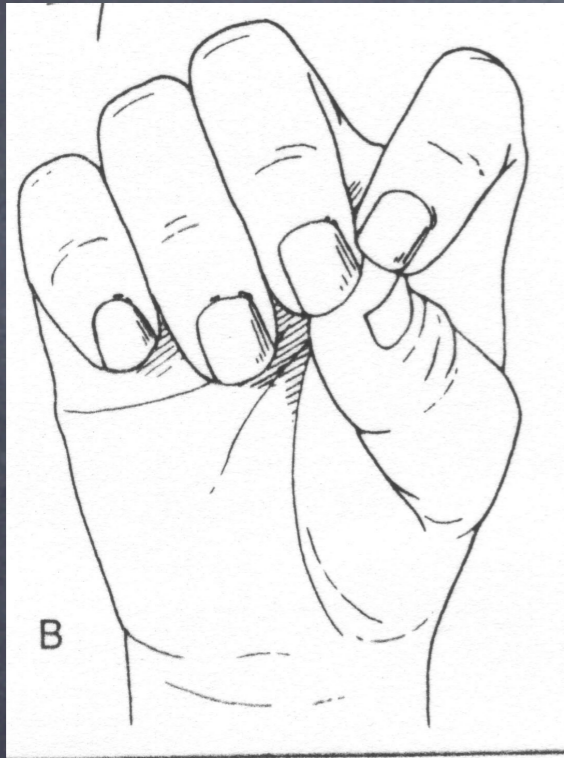
Exam

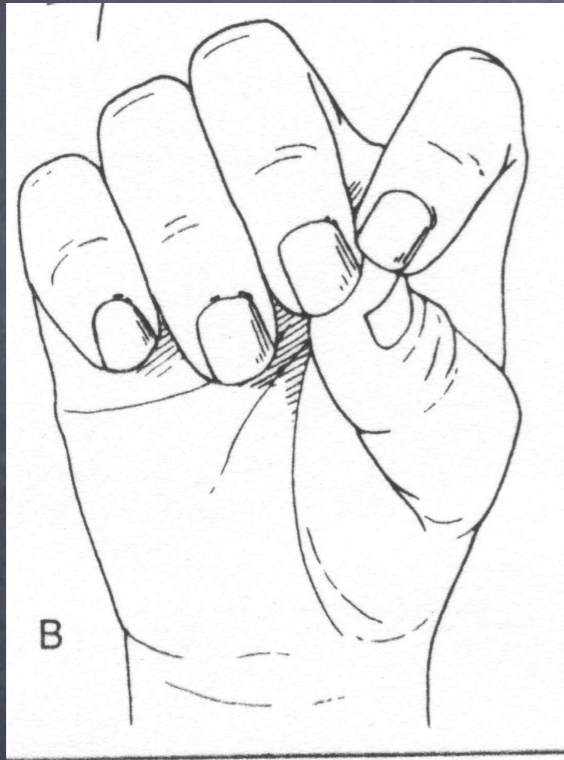
- Inspection
- Palpation
- Motor
- Sensory
- Vascular

Inspection

- Posture / cascade
- Deformity, scars
- Rotation or scissoring
- Wasting or swelling
- Color







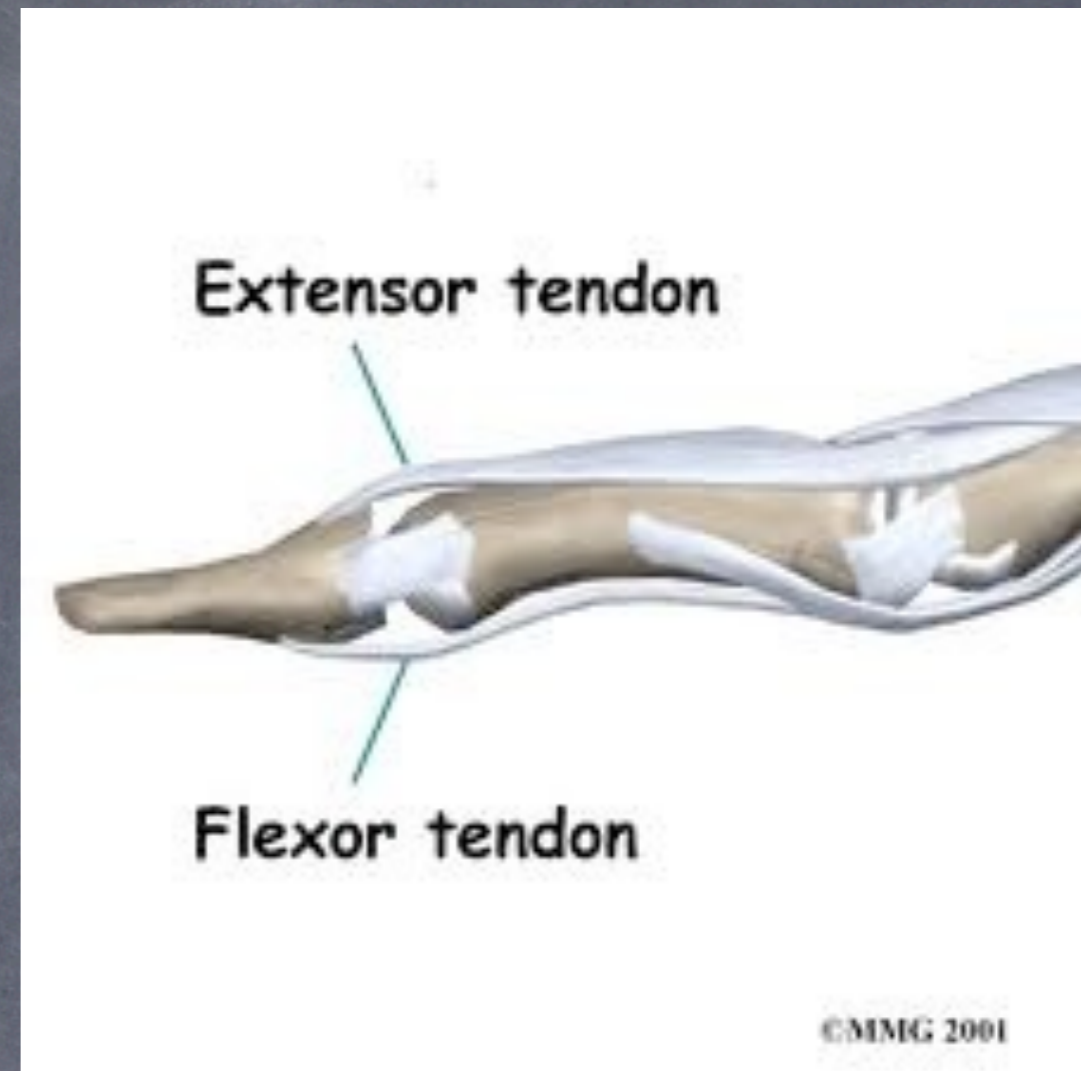


Palpation

- Tenderness
- Temperature (warm or cold)
- Thrill
- Range of motion (ROM)
 - Active
 - Passive

ROM

- For full & normal AROM you need
 - Normal skin
 - Normal nerves
 - Normal tendons
 - Normal joints



ROM

- If pt. is unable to actively move the finger
 - you put it through passive ROM (PROM)
 - FULL PROM = problem in tendon or nerve
--> tenodesis
 - Incomplete PROM = problem in joint or scarring (skin or tendon)
--> X-ray

Tenodesis

Tenodesis











Motor

- Cervical Nerve Root (Brachial Plexus)
 - C5 --> Deltoid
 - C6 --> Biceps
 - C7 --> Triceps
 - C8 --> Finger Flexors
 - T1 --> Interossei

Motor

- Peripheral Nerves:

- Radial:

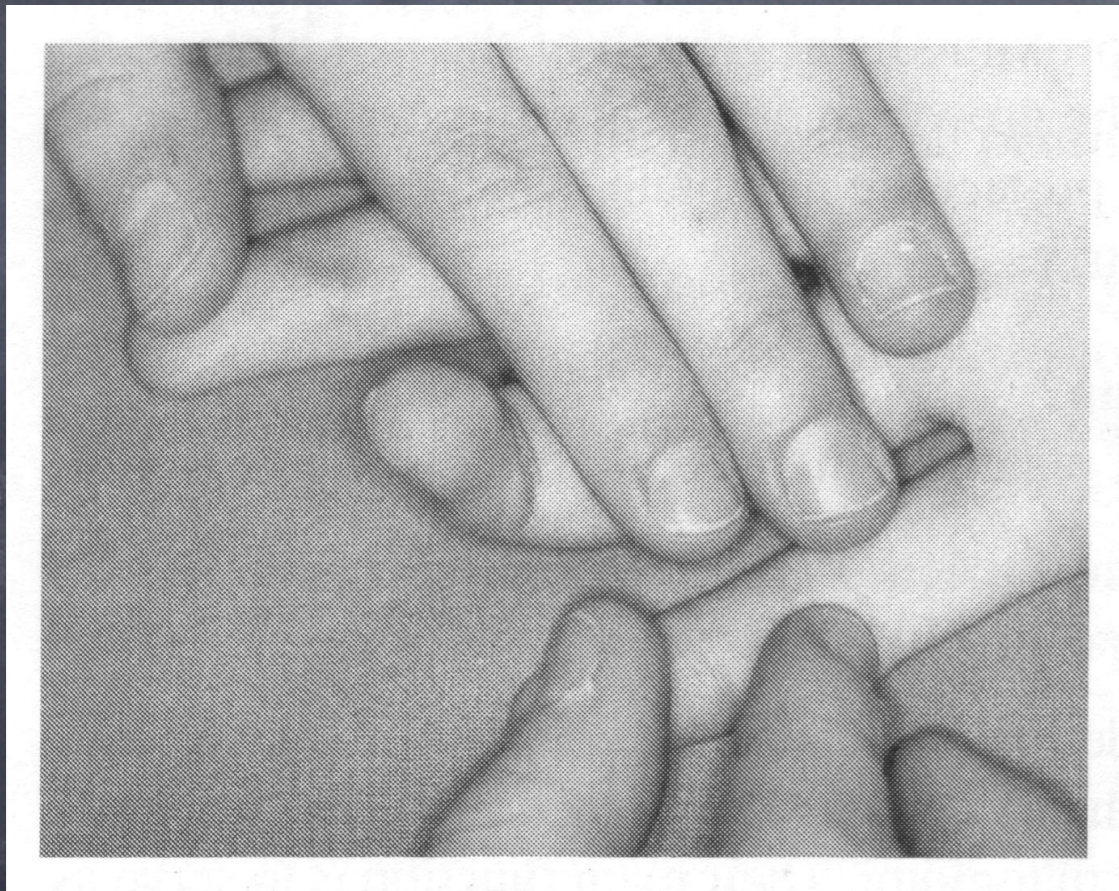
- Wrist, finger and thumb extensors

- Median:

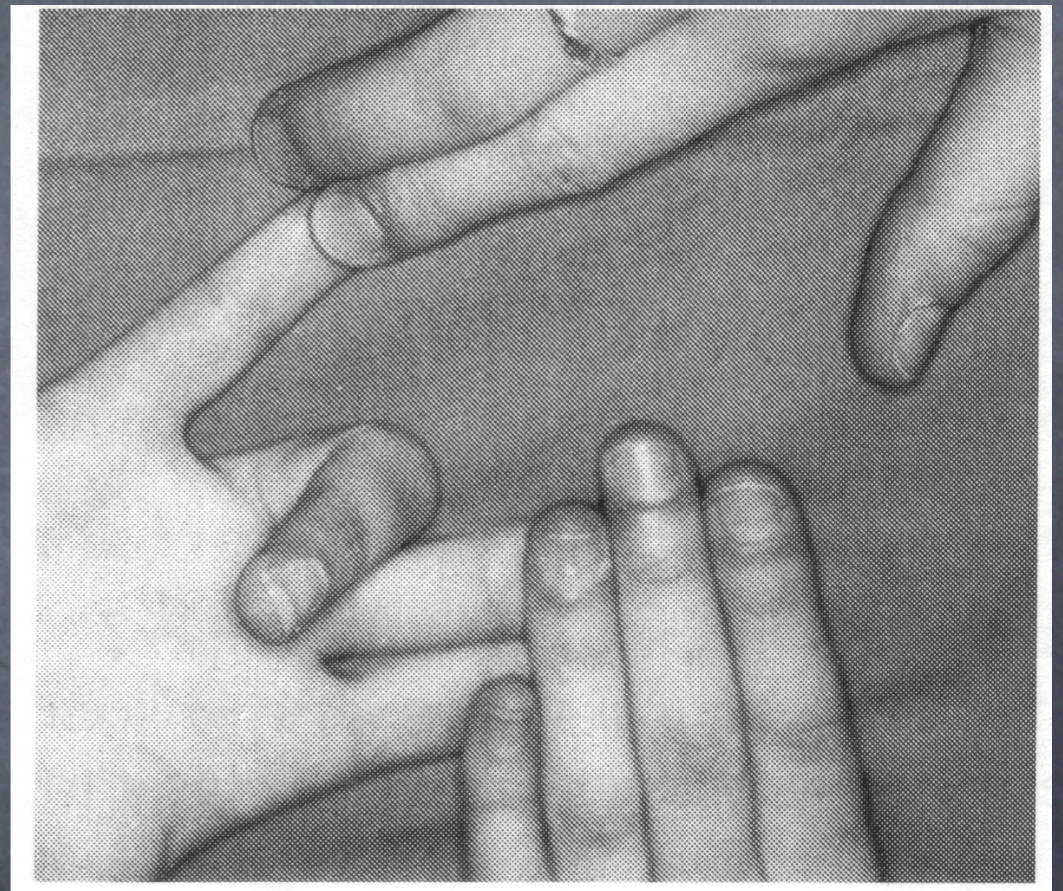
- FCR, PL, FDS, FDP(2,3), FPL, thenar muscles (APB), 2 lumbricals

- Ulnar:

- FCU, FDP(4,5), hypothenar muscle, adductor pollicis, 2 lumbricals, interossei (1st DI)

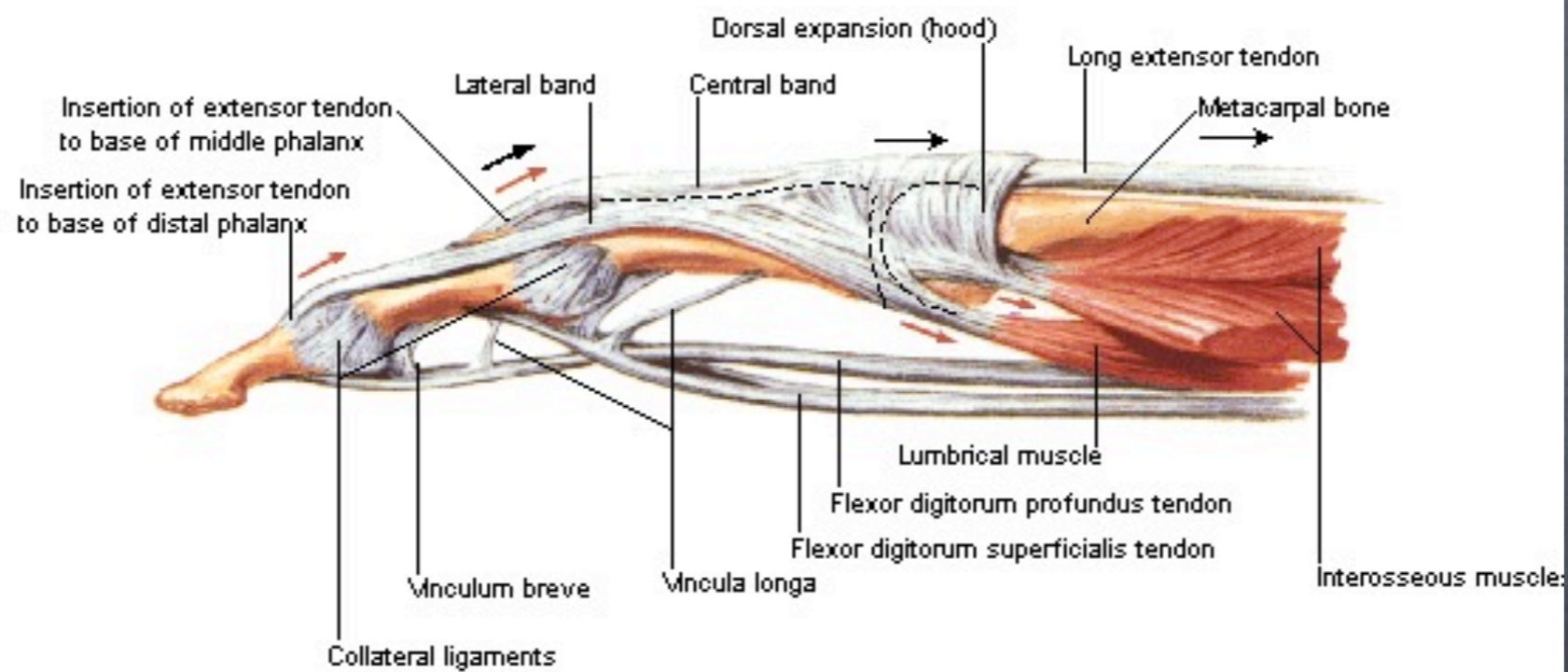


Flex Dig Prof (FDP)



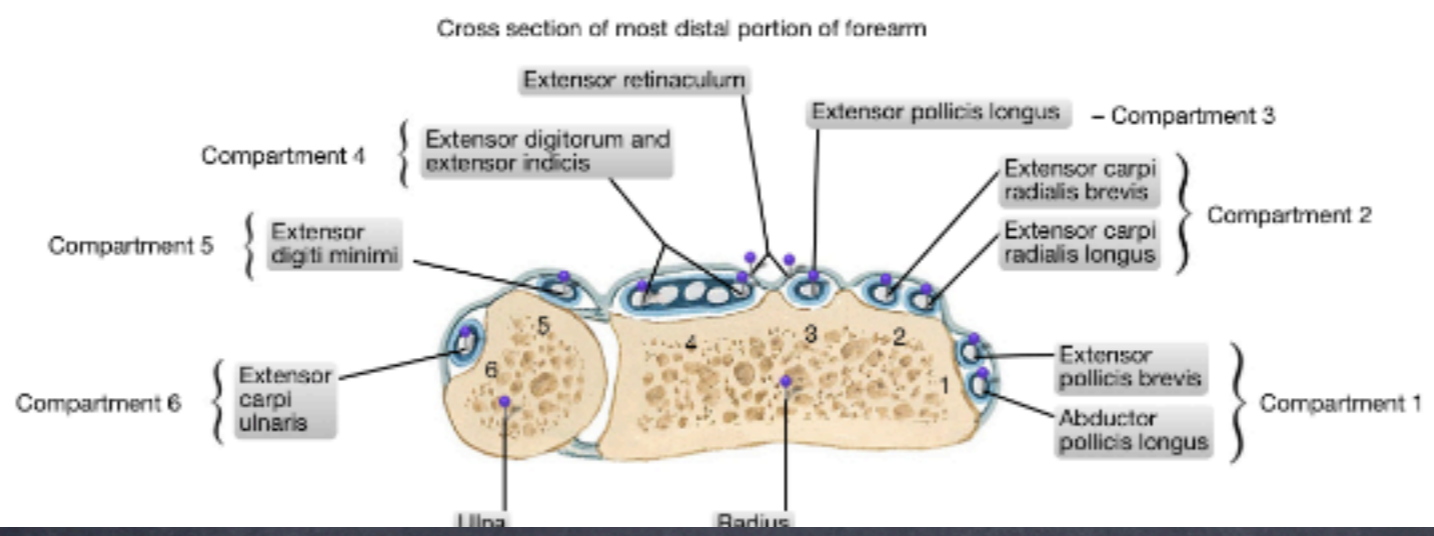
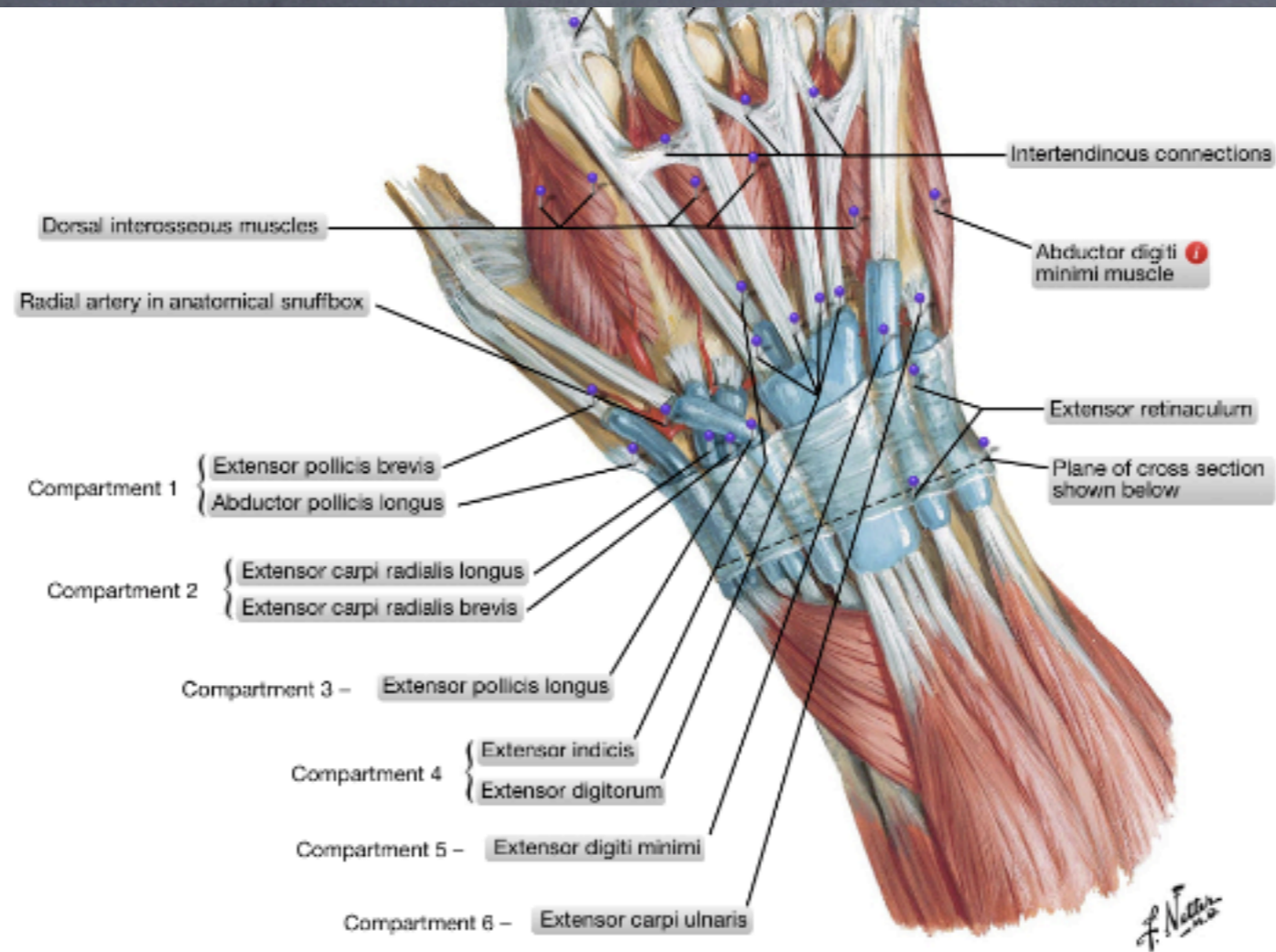
Flex Dig Sup (FSD)

Flexor and Extensor Tendons in Fingers Extended - Lateral View

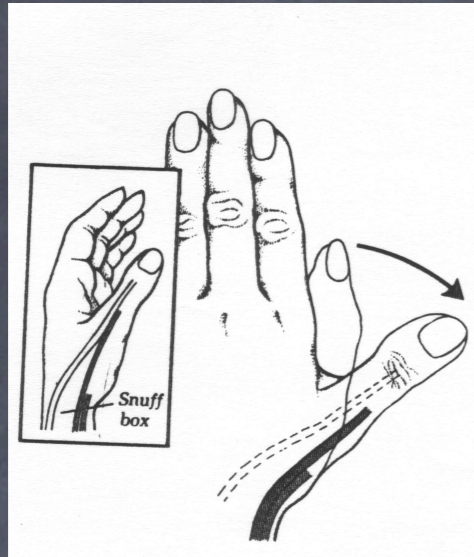


Note: black arrows indicate pull of long extensor tendon; red arrows indicate pull of interosseous and lumbrical muscles

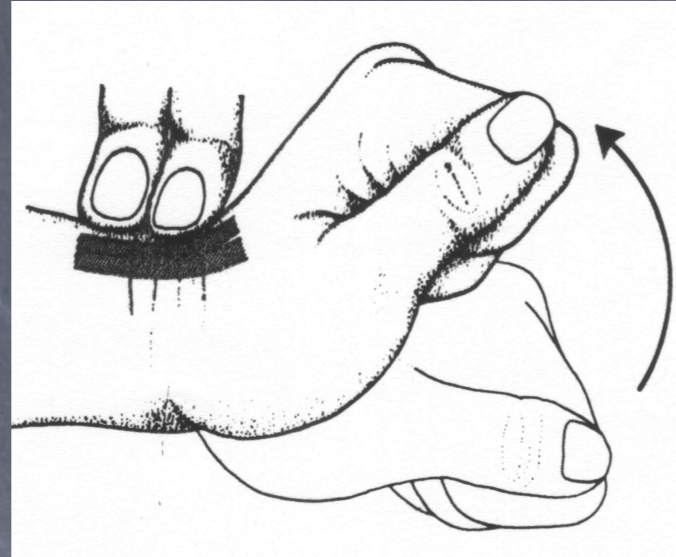
F. Natter
M.D.



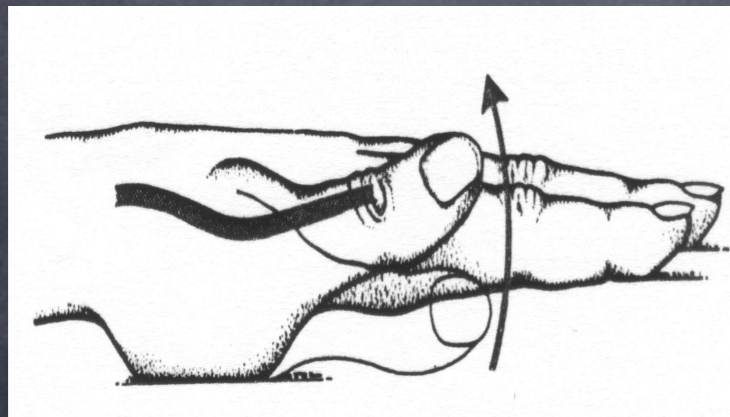
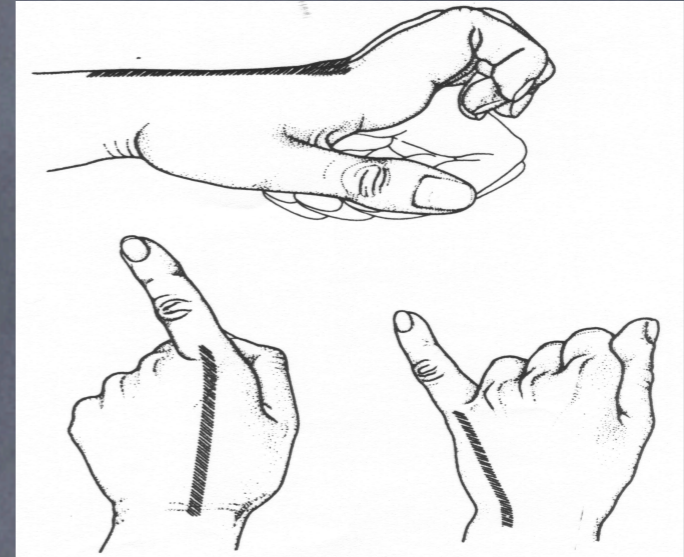
APL/EPB



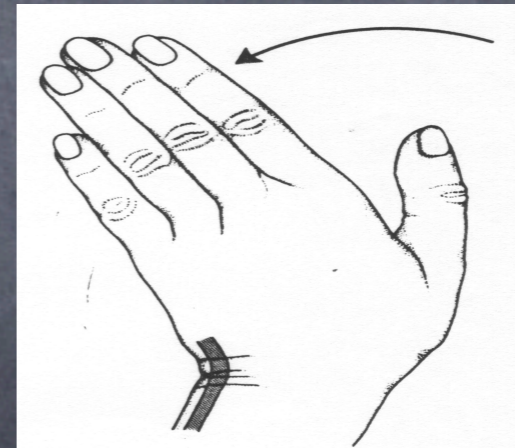
ECRL/ECRB



EDC/EIP/EDM



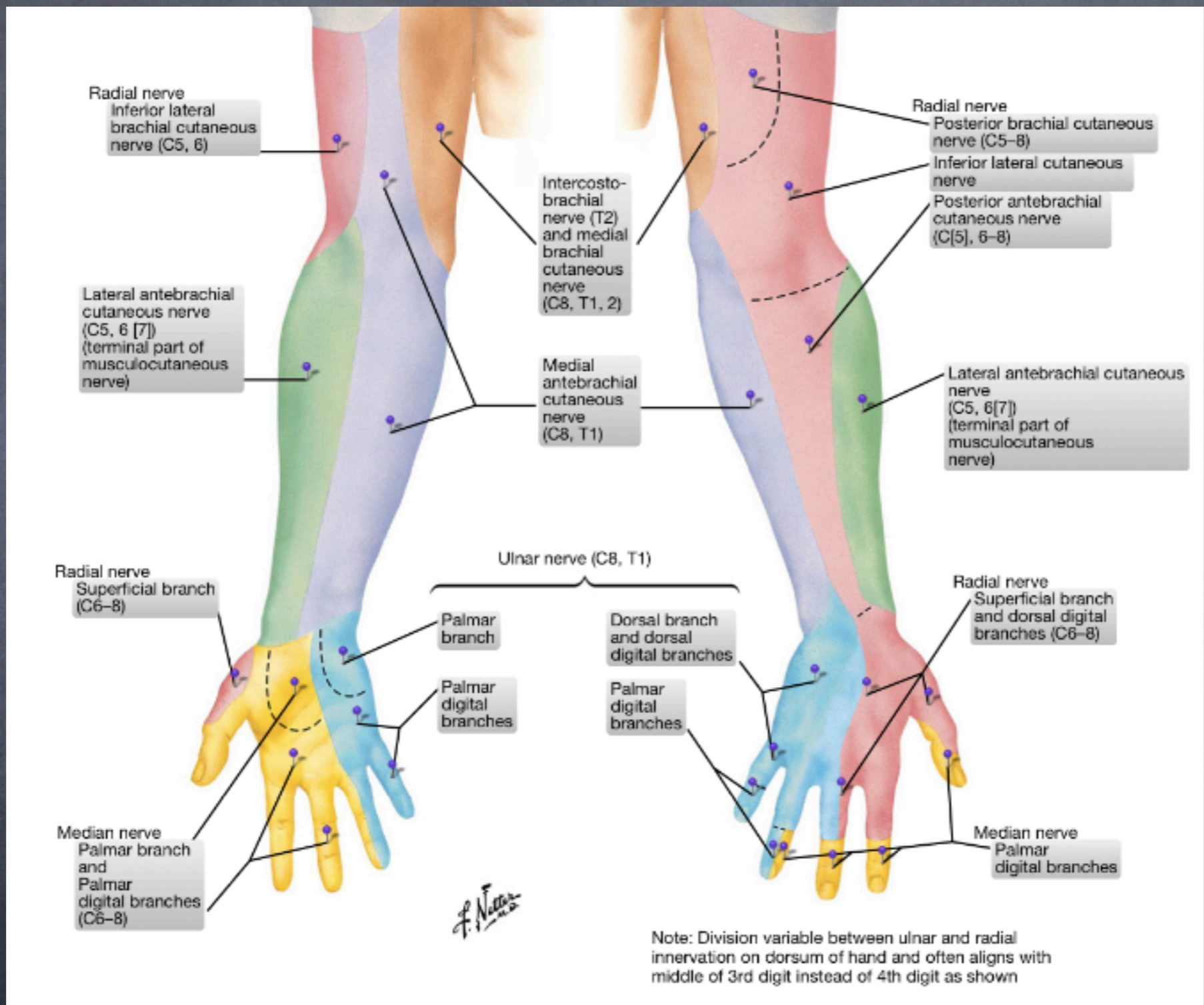
EPL

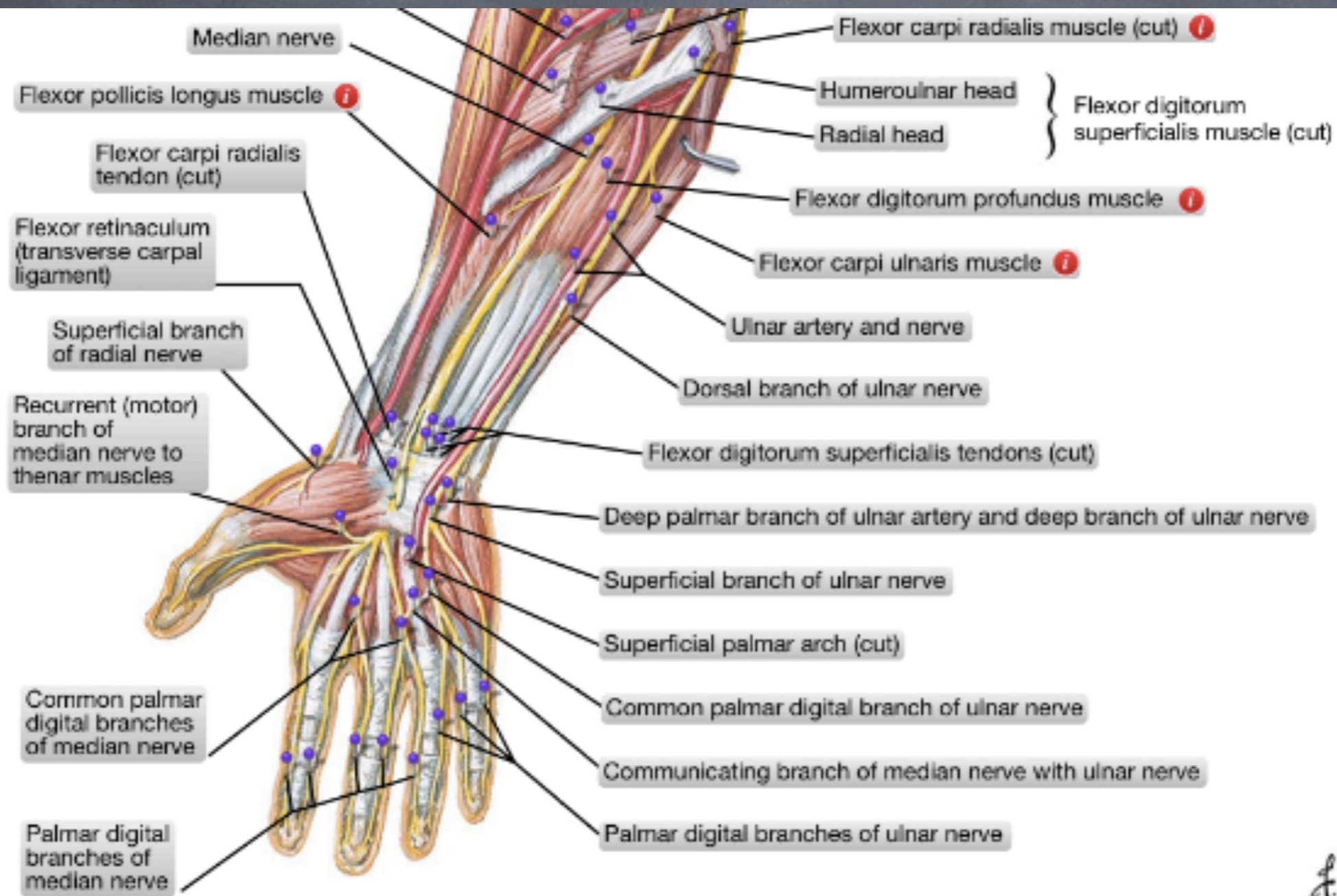


ECU

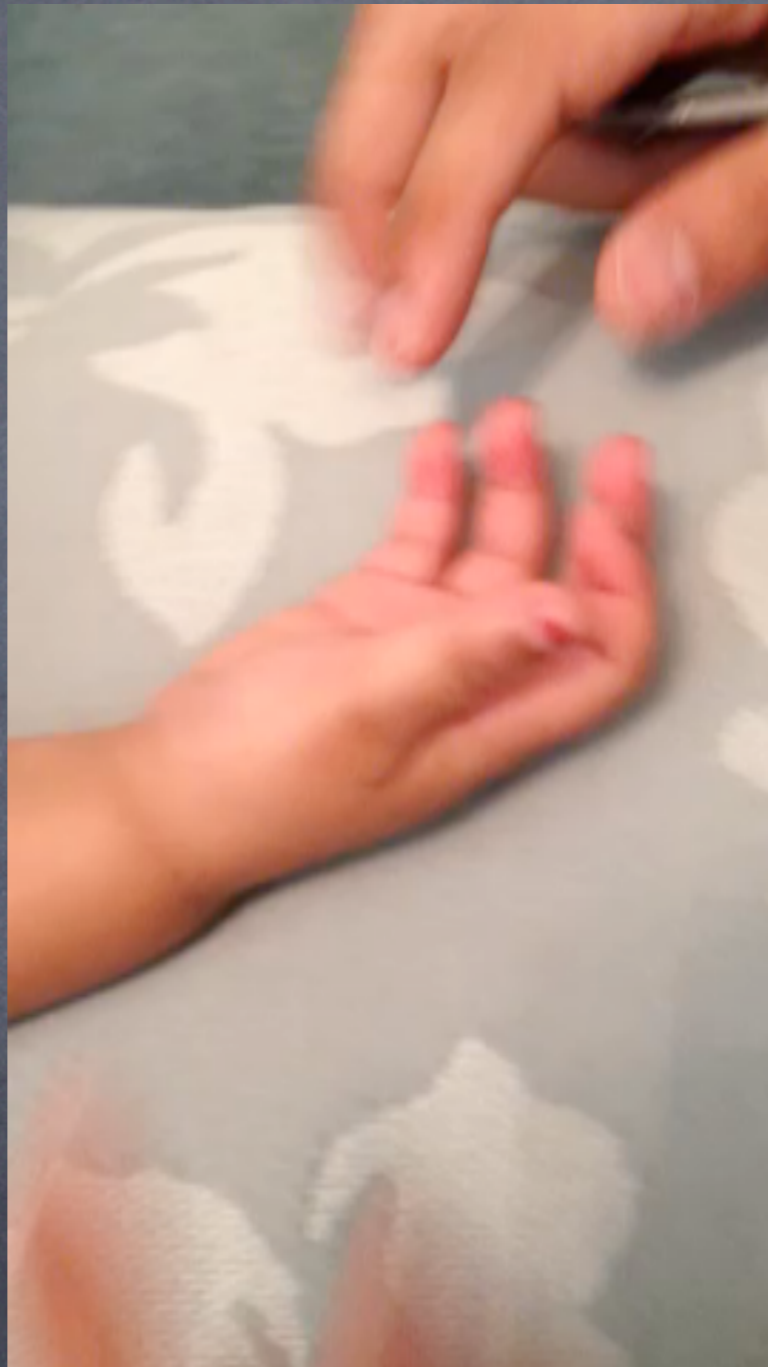
Sensory Exam

- Types of sensation:
 - Pain
 - Pressure
 - Light touch
 - Vibration
- Moving 2 point discrimination (M2PD)
 - 3-5 mm N





F. Netter M.D.

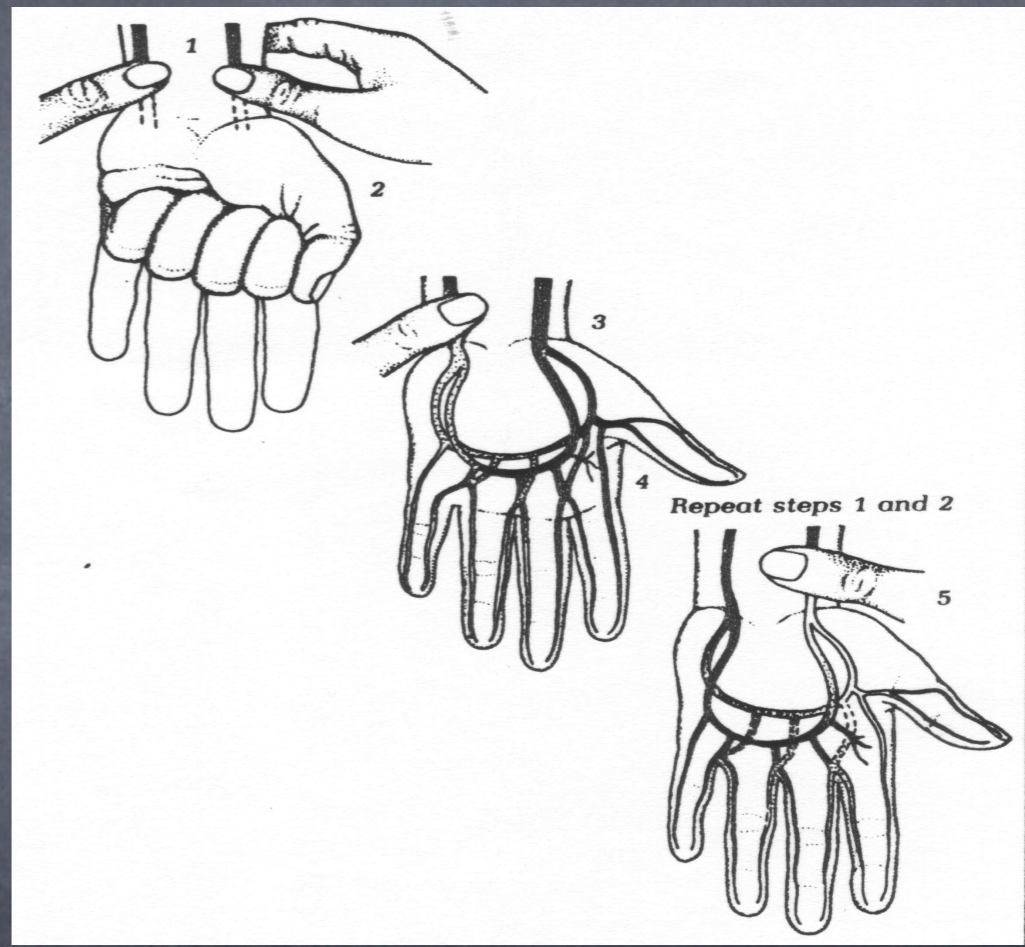
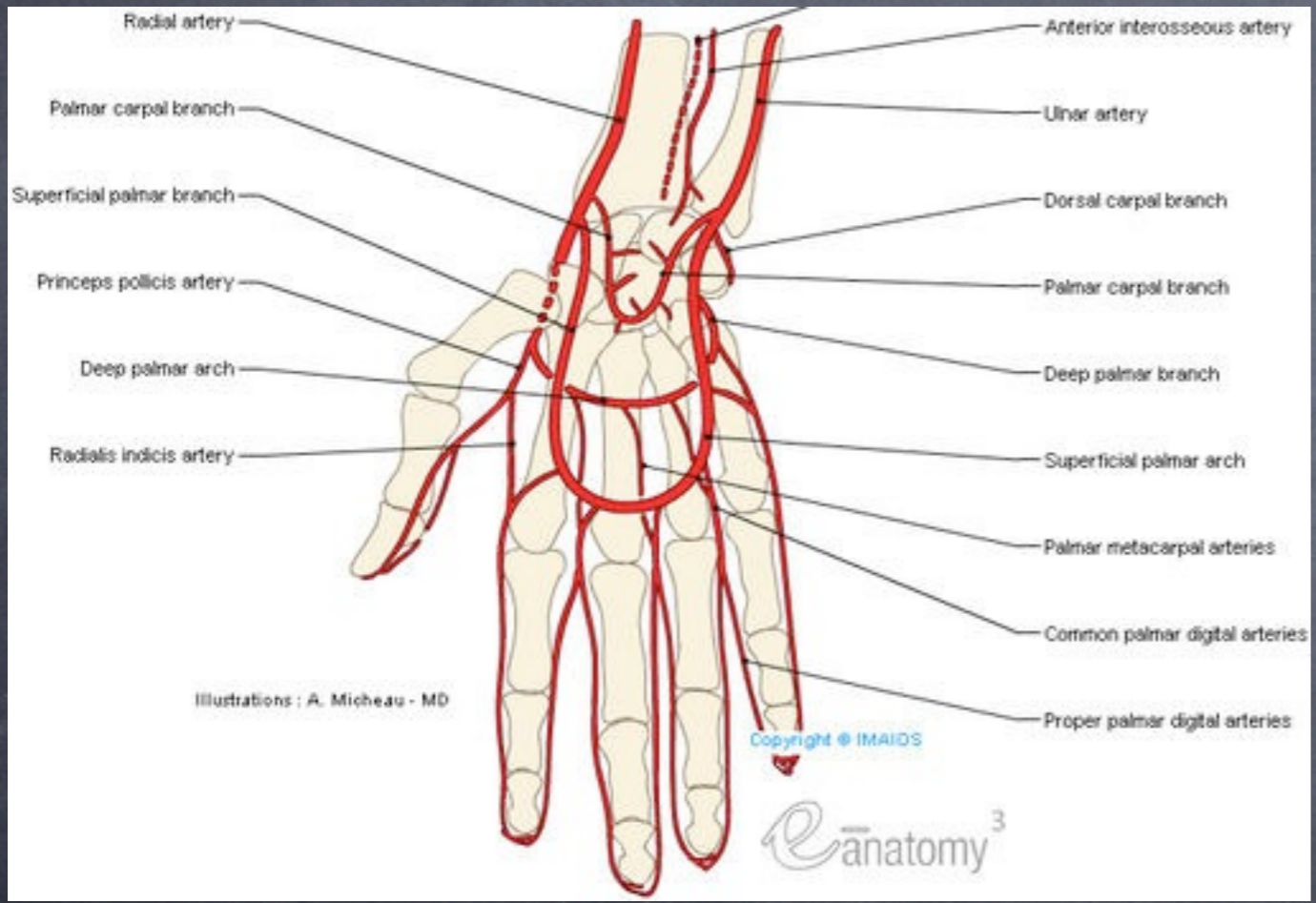


Vascularity

- Color:
 - White --> ischemic (arterial compromise)
 - Blue --> venous congestion
 - Black --> Gangrene
- Temperature
- Allen's test
- Capillary refill

Allen's Test

- Two main arteries in the hand
 - Radial
 - Ulnar
- Two arteries in each digit
 - Radial digital artery
 - Ulnar digital artery





Monday, 26 May, 14





(F)