

# Hand Injuries

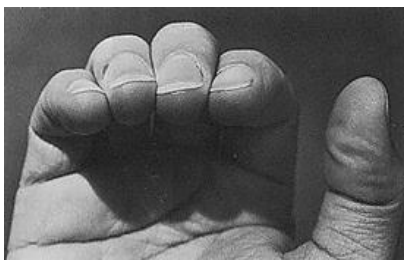
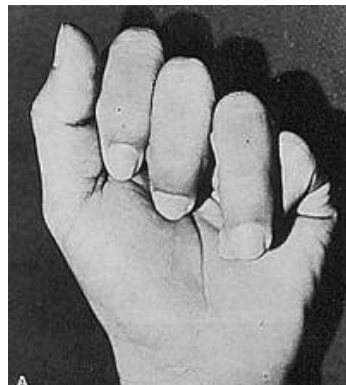
- The most common cx after hand injury is stiffness
- Results from swelling & immobilization
- Usually #s heal in 4w
- Clinical evaluation: more important than XR evidence of healing.

## Safe immobilization

- Wrist extended
- MPJs flexed
- IPJs straight
- Thumb abducted

## Metacarpal fractures

- Angular deformity :usually no interference with function
- Rotational deformity :interferes



## Shaft #

- Direct force
- Punching
- Twisting force → spiral #

### Rx

- CR + volar or dorsal slab
- Spiral # may need ORIF

## Neck #

- Usually 5<sup>th</sup> MCB
- Usually due to punching
  - Boxer`s #
- May be open # (teeth)

## Boxer`s #

- Unstable
- Palmar angulation : well tolerated
- Needs reduction & K. wire to avoid malunion & 2ndary flexion of IPJ

## Fractures of base of 1st MCB

- Epibasal #
- Bennett`s #
- Rolando`s #

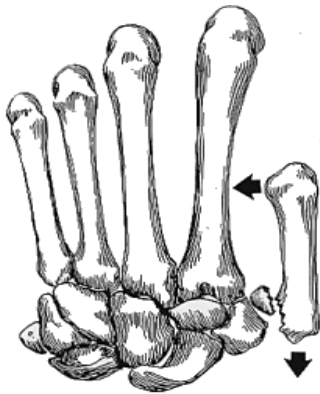
## Epibasal #

Rx : reduction ± K. wire



## Bennett's #

- Punching
- Triangular piece remains attached to the trapezium while the rest of the thumb subluxates
- CR + K. wire



## Rolando's #

- Comminuted intraarticular # of the base of the 1<sup>st</sup> MCB
- Rx : CR + K. wires or ORIF



## Phalangeal fractures

### Rx

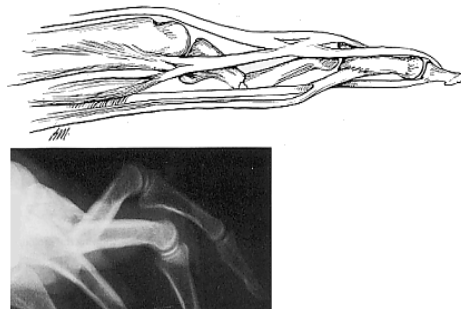
- Undisplaced # : buddy strapping 2-3 w



- Displaced # : reduction by traction
  - stable : buddy strapping
  - unstable : IF

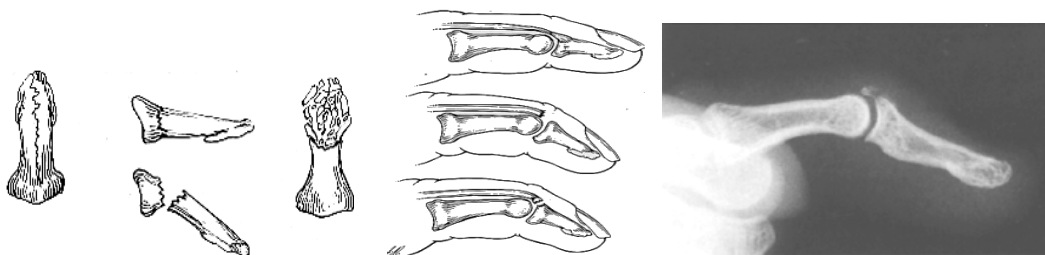


Intrinsic muscles → angulation with apex volar → counteract by MPJ flexion

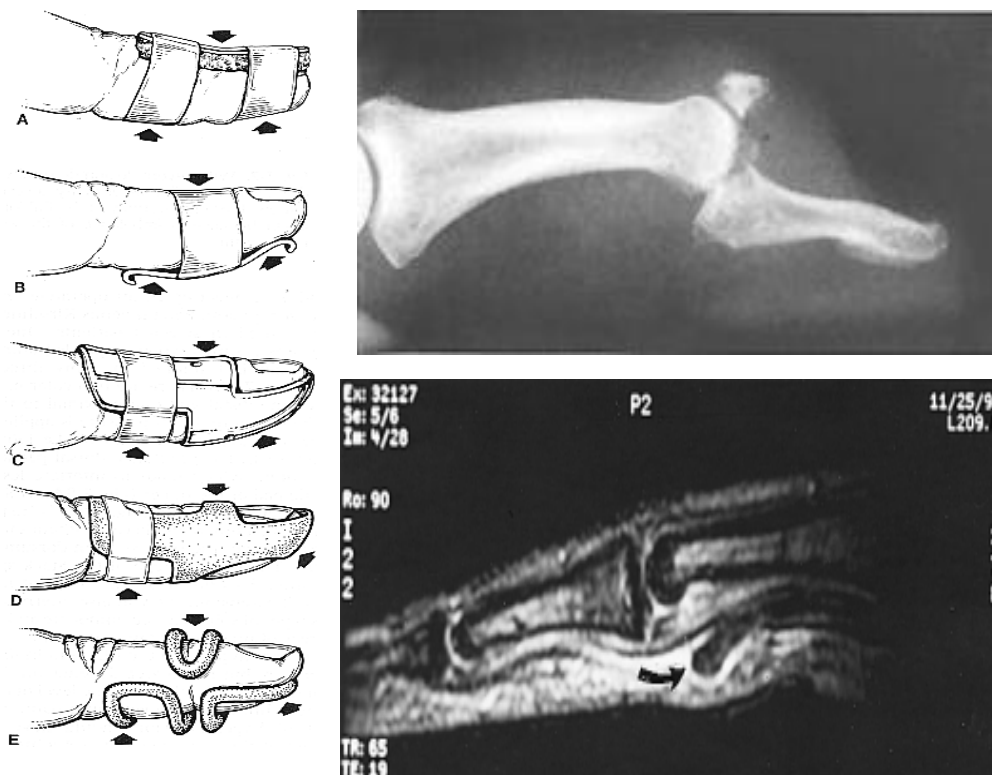


## Distal phalanx #

- Tuft # : bone is shattered  
Focus on swelling & nail injury
- Shaft # : if displaced : CR + needle
- Physeal # : Salter – Harris 2



- Mallet finger : avulsion of the extensor tendon ± bone fragment
  - mallet finger splint
- Avulsion of the flexor tendon



## CMJ dislocation

- Usually the thumb
- Reduction by traction & hyper-pronation  $\pm$  K. wire



## MPJ dislocation

- Usually the thumb
- Simple : CR
- Complex : palmar plate lodged in the joint & MC head clasped between flexor tendon & the lumbrical
  - CR or OR

IPJ dislocation

**Rx** : traction & buddy strapping



## Injury to the ulnar collateral ligament of 1st MPJ

- = gamekeeper or skier injury
- Partial : thumb stable in extension → immobilize 4w
- Complete : thumb unstable in flexion & extension → repair

## Zones of tendon injury

- I : beyond insertion of FDS
- II : between distal palmar crease & insertion of FDS ( flexor sheath)
- III : between end of carpal tunnel & distal palmar crease
- IV : within carpal tunnel
- Proximal to carpal tunnel

**Zone 2** = no - man`s land : adhesions are very likely