



Emergency fractures Quick reference

All open injuries and/or injuries with neurovascular compromise need discussion with appropriate team (orthopaedics or plastics)

UPPER LIMB | Finger and Hand



1 Tuft Fracture: non-displaced /minimally displaced
Immobilisation: Finger splint for protection (stax/thermoplastic) for 3-4 weeks.
Follow up: GP follow up
Red flags: if open (nail bed or pulp laceration), request plastics opinion



2 Mallet Finger +/- avulsion fragment
Immobilisation: Mallet finger splint (stax/thermoplastic). Must wear splint at all times.
Follow up: Plastics OPD.
Red flags: if intra-articular fracture fragment is more than a 1/3 of DIPJ, request plastics opinion.



3 Volar plate avulsion fragment
• Contact CCT OT for thermoplastic splint within hours
• Apply zimmer finger splint from fast track stores room out of hours
Immobilisation: Dorsal 30° flexion thermoplastic splint or zimmer finger splint.
Follow up: Plastics OPD within a week-hand therapy rehab required.
Red flags: if intra-articular fracture fragment is more than a 1/3 of DIPJ, consult with plastics.



4 Uncomplicated phalangeal fractures: distal and middle phalanx
No rotational deformity, less than a 1/3 intra-articular surface and minimal displacement or angulation
Immobilisation: Extension finger splint (thermoplastic or zimmer).
Follow up: Plastics OPD.
Note: Must wear splint at all times.



5 All proximal phalanx fractures & complicated distal/middle phalangeal fractures
Rotational deformity, more than a 1/3 intra-articular surface & significant displacement or angulation. Discuss with plastics.
Immobilisation: Buddy strap & volar slab
Follow up: Plastics OPD.



6 Uncomplicated Metacarpal fractures
No rotational deformity, minimal displacement/angulation:
• 2nd + 3rd digits- shaft angulation <20° or neck angulation <15°
• 4th digit- shaft angulation <30° or neck angulation <40°
• 5th digit- shaft angulation <40° or neck angulation <60°
Immobilisation: Buddy strap & volar slab. Note: 4th and 5th neck fractures thermoplastic splint or buddy strap
Follow up: Plastics OPD.



7 Complicated Metacarpal fractures
Rotational deformity, multiple fractures, significant displacement/angulation:
• 2nd + 3rd digits- shaft angulation >20° or neck angulation >15°
• 4th digit- shaft angulation >30° or neck angulation >40°
• 5th digit- shaft angulation >40° or neck angulation >60°
Discuss with plastics about management
Immobilisation: Buddy strap & volar slab or ulnar gutter slab.
Follow up: Plastics OPD +-ORIF.



8 Uncomplicated thumb and/or 1st MC fractures
• No rotational deformity
• Not involving articular surface
• minimal displacement or angulation <30°
Immobilisation: Thumb spica backslab.
Follow up: Plastics OPD.



9 Complicated thumb and/or 1st MC fractures
Rotational deformity, involving articular surface, significant displacement or angulation:
Extra-articular # > 30°
Bennett's # > 1mm step off articulation
Rolando # or severely comminuted #
UCL ligament rupture/tear +/- proximal phalange base fragment (ulnar) intra-articular, >20° side to side variation varus/valgus instability or >35° opening or Stener lesion (adductoraponeurosis)
Discuss with plastics about management
Immobilisation: Thumb spica backslab.
Follow up: Plastics OPD +-ORIF.



1 Thermoplastic tuft/mallet splint/protective splint
• Contact CCT OT to apply splint within working hours



2 Stax tuft/mallet splint/protective splint
• Available from fast track store room
• Secure with Elastoplast
• Give directions to patient in how to remove splint correctly, keeping DIPJ straight at all times, supported by firm straight surface underneath (i.e. table)



3 Dorsal 30° flexion thermoplastic finger splint for volar plate injuries
• Available by contacting ED CCT OT within hours



4 Dorsal 30° flexion zimmer finger splint for volar plate injuries
• Available in fast track stores room out of hours



5 Thermoplastic middle phalanx extension finger splint
• Available by contacting ED CCT OT within hours



6 Zimmer middle phalanx extension splint
• Available in fast track stores room out of hours



7 Buddy strap
• Insert some gauze for padding between fingers to prevent pressure sores.
• Strap with tape middle phalanges together and proximal phalanges together.



8 Volar backslab
• 70° metacarpal flexion
• 30° wrist extension



9 4th & 5th MC neck fractures thermoplastic splint
• Available from ED CCT OT within hours
• Only available for undisplaced or minimally displaced neck fractures
• Consult with CCT OT team



10 Ulnar gutter backslab
• 70° metacarpal flexion
• 30° wrist extension



11 Thumb spica backslab
• 30° wrist extension
• The thumb should be maintained in a slightly flexed and abducted position as if holding a narrow cup



Treatment and intervention