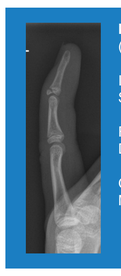
Government of **Western Australia**
**Child and Adolescent Health Service**

Perth Children's Hospital

# Basic Fracture Treatment - Quick Reference

All open injuries and/or injuries with neurovascular compromise need discussion with appropriate team (Ortho or Plastics)

## Finger/Hand



**Tip of distal phalanx non-displaced (tuft fracture)**

Immobilisation:
Aluminium finger splint for protection

Follow up:
GP follow up

Other:
If open (nail bed injury or pulp laceration), needs Plastics opinion

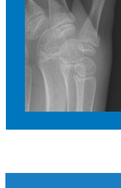


**Mallet finger**
(avulsion fracture may be present)

Immobilisation:
Stax splint/mallet splint

Follow up:
D/W Plastics

Other:
Must wear splint at all times



**Volar plate avulsion fracture**

Immobilisation:
Dorsal blocking splint for stable volar plate fractures (<1/3 of articulation surface involved)

Follow up:
Plastics clinic 1-2 days



**Uncomplicated phalangeal fractures – distal and middle phalanx**

- No rotational deformity
- Not involving articular surface
- No displacement or angulation

Immobilisation:
Buddy strap and volar slab

Follow up:
Plastics clinic 1-2 days

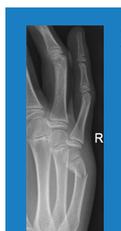


**Uncomplicated proximal phalanx fracture**

- No rotational deformity
- Not involving articular surface
- No displacement or angulation

Immobilisation:
Buddy strap and volar slab

Follow up:
Plastics clinic 1-2 days



**Complicated phalangeal fractures - rotational deformity**

D/W ED Consultant/ Plastics regarding possible reduction in ED



**Uncomplicated metacarpal fracture**

- No rotational deformity
- Not involving articular surface
- No displacement or angulation

Immobilisation:
Volar slab

Follow up:
Plastics clinic 1-2 days



**Complicated metacarpal fracture (angulation / multiple fractures)**

D/W ED Consultant/Plastics regarding reduction in ED



**Uncomplicated thumb and/or 1st metacarpal fracture**

- No rotational deformity
- Not involving articular surface
- No displacement or angulation

Immobilisation:
Thumb spica cast

Follow up:
Plastics clinic 1-2 days



**Complicated thumb and/or 1st metacarpal fracture**

D/W ED Consultant/Plastics regarding possible reduction in ED

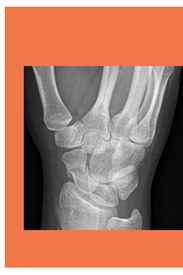
## Wrist



**Non-displaced scaphoid fracture**

Immobilisation:
Below elbow backslab

Follow up:
Fracture clinic 7-10 days



**Displaced scaphoid fracture**

D/W Ortho
- likely need fixation

**? Scaphoid fracture child < 10yrs (Clinically suspected on senior review)**

Immobilisation:
Buckle splint

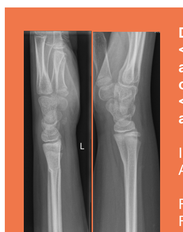
Follow up:
No follow up needed
Scaphoid fractures are extremely unlikely in this age group



**? Scaphoid fracture child > 10yrs (Clinically suspected on senior review)**

Immobilisation:
Buckle splint

Follow up:
Fracture clinic 7-10 days



**Simple dorsal buckle fracture**

- Dorsal angulation (<15 degrees)
- No cortical breach
- Distal 3rd of radius
- Can have associated ulnar buckle fracture

Immobilisation: Buckle splint

Follow up: No follow up needed

Other:
Wear splint for 3 weeks



**Undisplaced distal radius fracture**

Immobilisation:
Below elbow cast

Follow up:
Fracture clinic 1 week

Other:
Plaster is needed if there is a breach in the cortex or involvement of the volar aspect



**Undisplaced distal radius and ulnar fracture**

Immobilisation:
Above elbow cast

Follow up:
Fracture clinic 1 week



**Distal radius fracture < 20 degrees dorsal angulation or < 10 degrees volar angulation**

Immobilisation:
Above elbow cast

Follow up:
Fracture clinic 1 week



**Distal radius fracture clinical deformity or > 20 degrees dorsal angulation or > 10 degrees volar angulation**

D/W Ortho regarding reduction
Apply below elbow resting slab



**Galeazzi fracture dislocation**

Urgent Ortho review
Apply below elbow resting slab

## Elbow

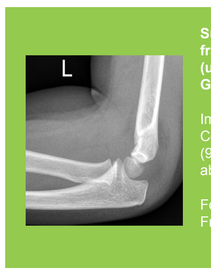


**Positive fat pad, no fracture seen**

Immobilisation:
Collar and cuff for 3 weeks

Follow up:
Fracture clinic 1 week

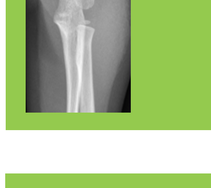
Other:
Collar & cuff > 90 degrees



**Supracondylar fracture (undisplaced), Gartland type 1**

Immobilisation:
Collar and cuff (90 degrees) or above elbow cast

Follow up:
Fracture clinic 1 week



**Supracondylar fracture (displaced), posterior cortex intact, Gartland type 2**

D/W ED Consultant/Ortho regarding possible treatment options:
1. High collar & cuff
2. High collar & cuff and re x-ray
3. MUA

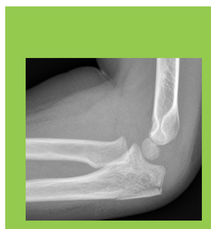
**Other:** If applying high collar & cuff in ED:
- Consider giving IN fent and/or nitrous oxide
- Check radial pulse post application



**Supracondylar fracture (off ended), Gartland type 3**

Urgent Ortho referral (high risk of N/V compromise)

Other: Needs resting slab if theatre is delayed. Plaster arm in current position, **DO NOT** flex elbow



**Lateral condyle fracture (all fractures)**

D/W Ortho - generally unstable and needs internal fixation



**Medial condyle fracture (undisplaced)**

Immobilisation:
Above elbow cast at 90 degrees

Follow up:
Fracture clinic 1 week



**Medial condyle fracture (displaced)**

D/W Ortho regarding management



**Olecranon fracture (uncomplicated)**

- Non-displaced
- Not involving joint

Immobilisation:
Above elbow cast at 90 degrees

Follow up:
Fracture clinic 1 week



**Olecranon fracture (displaced)**

D/W Ortho -
may need fixation, apply above elbow resting cast

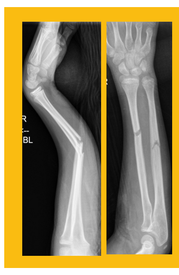
## Forearm



**Undisplaced mid-shaft radius/ulna fracture**

Immobilisation:
Above elbow cast

Follow up:
Fracture clinic 1 week



**Mid-shaft radius/ulna fracture, clinical deformity**
**> 20 degrees dorsal angulation**
**> 10 degrees volar angulation**

D/W Ortho regarding fracture reduction
- apply above elbow resting cast

**Monteggia fracture dislocation**

D/W Ortho regarding fracture reduction
- Apply above elbow resting cast

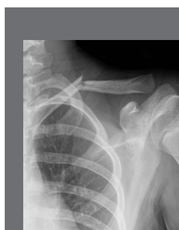
## Upper arm



**Proximal humerus fracture < 50% displacement**

Immobilisation:
Collar and cuff at 90 degrees

Follow up:
Fracture clinic 1 week



**Proximal humerus > 50% displacement**

D/W Ortho regarding management



**Humeral shaft fracture < 10 degrees angulation**

Immobilisation:
Collar and cuff at 90 degrees

Follow up:
Fracture clinic 1 week

## Clavicle



**Clavicle fracture middle 3rd**

Immobilisation:
Broad arm (clavicle sling) for 3 weeks

Follow up:
GP follow up
7-10 days



**Clavicle fracture displaced lateral/medial 3rd**

D/W Ortho regarding management

## Ankle



**Undisplaced Salter Harris 1 distal fibula (tender distal fibula physis with no fracture seen)**

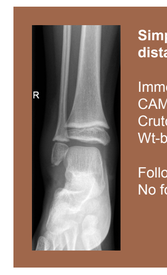
Immobilisation:
CAM boot 3-4 weeks
Crutches
Wt-bear as tolerated

Follow up:
No formal follow up required

**Undisplaced Salter Harris 2 fracture distal fibula**

Immobilisation:
CAM boot 3-4 weeks
Crutches
Wt-bear as tolerated

Follow up:
GP in 7-10 days for repeat x-ray



**Simple avulsion fracture of distal fibula**

Immobilisation:
CAM boot 3-4 weeks
Crutches
Wt-bear as tolerated

Follow up:
No follow up needed



**Isolated undisplaced fracture of fibula epiphysis (no talar shift)**

Immobilisation:
CAM boot
Crutches 3-4 weeks
Wt-bear as tolerated

Follow up:
GP in 7-10 days for repeat x-ray

## Foot



**Avulsion fracture base of 5th metatarsal**

Immobilisation:
CAM boot
Wt-bear as tolerated

Follow up:
Fracture clinic 1 week



**Base of 5th metatarsal fracture (proximal diaphysis/ Jones fracture)**

Immobilisation:
Below knee plaster
Non-wt bearing

Follow up:
Fracture clinic 1 week



**Metatarsal fracture (non-displaced)**

Immobilisation:
CAM Boot
Crutches
Wt-bear as tolerated

Follow up:
Fracture clinic 1 week



**Multiple metatarsal fractures (non-displaced)**

Immobilisation:
CAM Boot
Crutches
Wt-bear as tolerated

Follow up:
Fracture clinic 1 week



**Displaced metatarsal fracture**

D/W Ortho regarding management

Other:
When applying below plaster, ensure the plaster extends beyond the toes



**Lisfranc fracture**

Disruption of the articulation surface of medial cuneiform and base of 2nd metatarsal

D/W Ortho - unstable injury, will likely need CT and fixation



**Humeral shaft fracture > 10 degrees angulation**

D/W Ortho regarding management

Other:
If applying U-slab, the plaster must extend past the fracture site



**Simple navicular avulsion fracture**

Immobilisation:
CAM Boot
Wt-bear
as tolerated

Follow up:
GP in 7-10 days

## Clavicle

## Toes



**Undisplaced toe fracture (excluding big toe)**

Immobilisation:
Buddy strap
Darco walking shoe or stiff-soled shoe

Follow up:
No follow up needed



**Big toe fracture (distal phalanx/tuft fracture)**

Immobilisation:
Buddy strap
Darco walking shoe or stiff-soled shoe

Follow up:
No follow up needed



**Big toe fracture (proximal phalanx)**

Immobilisation:
Darco walking shoe
Non-wt bearing

Follow up:
Fracture clinic 1 week

## Tibia



**Undisplaced oblique tibial shaft fracture (Toddler's fracture)**

Immobilisation:
CAM boot
Wt bearing as tolerated

Follow up:
Fracture clinic 1 week



**Displaced/angulated tibial shaft fracture**

D/W Ortho regarding management



**? Toddler's fracture (post injury, non-WB, no # seen on X-ray)**

Immobilisation:
CAM boot for comfort if required

Follow up:
GP follow-up 7 days
- Repeat x-ray if still non-WB

Other:
D/W ED Consultant regarding possible alternative diagnosis

Created by: Simon Green (Nurse Practitioner, PCH ED) Last Updated: June 2020

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