Western Health Emergency Department Management of Adult Fractures and Soft Tissue Injuries

Guideline code: Orthopaedics DG-CC4	Current version: date of this version
Previous version: 01/06/2022	Next review date: 3 years' time
Section: Connecting Care	Sub-Section: Care Assessment/Planning/Delivery

1. Overview

The purpose of this guideline is to promote consistency and facilitate appropriate management and follow-up of common adult musculoskeletal conditions seen in the Emergency Department (ED) at Western Health.
Appropriate primary management of orthopaedic injuries in the emergency department can reduce the risk of re-presentation and contributes to greater efficiency in the outpatient setting.
Orthopaedic management can vary between healthcare networks and therefore this guideline applies to patients managed at Western Health.

2. Applicability

This guideline relates to all staff managing patients suffering fractures or soft tissue injuries at any Western Health Emergency Department.

3. Responsibility

3.1 Departmental
It is the responsibility of all ED clinicians to ensure that this guideline is adhered to at all times.

3.2 ED Clinicians
It is the responsibility of ED clinicians to ensure that the staff they supervise are aware of this guideline and align their practice accordingly.

3.3 Updating and distributing
The ED Advanced Practice Physiotherapists will be responsible for updating, implementing and providing digital and electronic copies of this guideline to appropriate staff members.

4. Authority

The Orthopaedic, Plastic and Reconstructive Surgery teams, and ED Consultants have the authority to approve exceptions to the guideline. They have been consulted during the development of this guideline.

5. Associated Documentation

In support of this guideline, the following Manuals, Guidelines, Instructions, Guidelines, and/or Forms apply:

Code	Name
Orthopaedics DP-CC4	Western Health Weight Bearing Orders
OG-CC4	Guideline for the Management of Suspected and Confirmed Hip Fractures

6. Credentialing Requirements

Not applicable

7. Definitions and Abbreviations

Include here all definitions of terms or abbreviations used in the guideline. It is preferable that pre-existing definitions are used.

7.1 Definitions For purposes of this guideline, unless otherwise stated, the following definitions shall apply:

Term	Define term, including reference if there is a separate authoritative source of the definition

7.2 Abbreviations

For purposes of this guideline, unless otherwise stated, the following abbreviations shall apply:

Abbreviation	Expanded abbreviation, including reference if there is a separate authoritative source of the definition
DIPJ	Distal interphalangeal joint
ED	Emergency Department
GP	General practitioner
IPJ	Interphalangeal joint
MCPJ	Metacarpophalangeal joint
NWB	Non weight bearing
POSI	Position of safe immobilisation
PWB	Partial Weight Bearing
RICE	Rest, ice, compression, elevation
WBAT	Weight bear as tolerated
ZKS	Zimmer knee splint

8. Guideline Detail

8.1 Application

8.1.1 Indications for use

The following guidelines apply to adult patients attending Western Health ED with common fractures or soft-tissue injuries. This guideline is not exhaustive and should not replace clinical reasoning and any questions in regards to appropriate management should be directed to the relevant medical speciality.

8.1.2 Exclusions

Patients with the following presentation must be discussed with Orthopaedics/Plastics on the day of presentation:

- Neurovascular compromise
- Open fracture
- Potential compartment syndrome
- Urgent operative management required
- Dislocations that cannot be reduced
- Fractures with unacceptable position post reduction

8.2 Guidelines

Please refer to relevant tables for specific injury management guidelines:

8.3.1 Table 1: Lower limb fractures
8.3.2 Table 2: Lower limb soft-tissue injuries
8.3.3 Table 3: Upper limb fractures
8.3.4 Table 4: Upper limb soft-tissue injuries

9. Document History

Number of previous revisions: 1

Previous issue dates: 01/06/2022

10. References

Duke Orthopaedics. (2021). *Wheeless' Textbook of Orthopaedics*. Retrieved from: https://www.wheelessonline.com/

Lineage Medical, Inc. (2021). *Orthobullets*. Retrieved from: https://www.orthobullets.com/

Mcrae, R., & Esser, M. (2008). *Practical Fracture Treatment*. Churchill Livingstone.

Musculoskeletal Key. (2019). Rehabilitation and Splinting. Retrieved from: https://musculoskeletalkey.com/rehabilitation-and-splinting/

Radiopedia. (2015). Weber Classification of Ankle Fractures. Retrieved from: https://radiopaedia.org/images/12177901?case_id=35644

11. Sponsor

Mr Phong Tran, Head of Orthopaedics
Associate Professor Cheng Hean Lo, Head of Plastics

12. Authorisation Authority

Dr Andrew Jeffreys, Clinical Services Director Perioperative & Critical Care Services

Table 1: Lower limb fractures

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic Consult	Follow-Up
Pelvis/Hip	**Low energy pubic rami fracture (e.g. fall from standing height)**	Symptomatic management, gait aid to offload the affected limb	WBAT	Multiple fractures or fractures causing disruption to the pelvic ring. High energy injuries (ie MVA or MBA)	GP
	Pelvic avulsion fracture eg. ischial tuberosity or AIIS	Symptomatic management, gait aid to offload the affected limb	WBAT	Displacement of the bony fragment >1cm	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Neck of femur fracture	As per the *Western Health Management of Suspected Hip Fractures* Guideline	NWB	Discuss all	As per Orthopaedics
Knee	**Distal femur**	Significantly displaced/angulated fractures, apply 5lbs of skin traction. All other fractures can be managed in ZKS	NWB	Discuss all	As per Orthopaedics
	Patella fracture	ZKS, gait aid • Check ability to actively straight leg raise	WBAT	Unable to straight leg raise, severely comminuted, displaced >1mm	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Tibial plateau fracture	ZKS • High risk of compartment syndrome in displaced fractures	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Proximal fibula fracture	ZKS • Check motor and sensory components of common peroneal nerve • Clear ankle using full length tib-fib x-ray (e.g. to rule out Maisonneuve injury)	WBAT	Suspected posterolateral corner injury or tibiofemoral dislocation	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Fibula shaft fracture	CAM boot • Complete full length tib-fib x-rays with 3 ankle views	WBAT	Inability to weight bear, ankle pain	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Tibia shaft fracture	Above knee back slab & U slab (knee flexed and ankle in comfortable position) • High risk of compartment syndrome and/or open fracture • Repeat x-ray post slab	NWB	Discuss all	As per Orthopaedics
Ankle	**Lateral malleolus fracture**	**Avulsion -** CAM boot	WBAT		Orthopaedic Fracture/ VFRAC Emergency OP Referral
		Weber A - CAM boot	WBAT		
	See Appendix 1: Weber Ankle # Classification	**Weber B** - Back slab + U slab • Repeat x-ray post slab	NWB	Talar shift, significant displacement or angulation, or fracture/dislocation	
		Weber C - Back slab + U slab • Repeat x-ray post slab	NWB	Discuss all	
	Syndesmosis injury	Back slab & U Slab • Clear knee (e.g. Maisonneuve injury) • Repeat x-ray post slab	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic Consult	Follow-Up
	Medial malleolus	Back slab + U slab if talar shift • Clear knee via tib-fib xray (e.g. Maisonneuve injury) • Repeat x-ray post slab	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Tibial Plafond	Back slab & U slab • Repeat x-ray post slab	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
Foot	**Talus fracture**	Avulsion – CAM boot Body – Back slab	WBAT NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Calcaneal fracture	Body - Robert Jones bandage Avulsion – CAM boot Tongue type fracture – Well-padded front slab with ankle fully plantarflexed • If fall from height, screen for lumbar spine injury	NWB WBAT NWB	Severely comminuted or displaced, tongue type fractures (need to be admitted)	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Navicular fracture	Avulsion – CAM boot Body – Back slab with CT	WBAT NWB	Severely comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Cuboid fracture	Avulsion – CAM boot Body – Back slab with CT	WBAT NWB	Severely comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Cuneiform fracture	Back slab • Consider Lisfranc injury	NWB	Severely comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Lisfranc or suspected Lisfranc injury	Back slab • Consider weight bearing x-ray +/- CT • Check for plantar bruising	NWB	Dislocated fractures	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	1st metatarsal fracture	Back slab	NWB	Comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	2nd – 4th metatarsal fracture (shaft/neck)	Single – Post-op shoe/CAM boot • May prefer to weight bear through heel Multiple – Back slab	WBAT NWB	Comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	5th metatarsal fracture (Including Jones fracture)	Base – CAM boot Proximal Shaft – CAM boot Distal Shaft/ Neck- Post-op shoe	WBAT WBAT WBAT	Severely comminuted or displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Great toe phalanx	Post-op shoe or stiff soled shoe	WBAT	Severely comminuted or displaced, nail bed injury	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Lesser toe fracture	Buddy strapping +/- stiff-soled shoe (if severely painful)	WBAT	Severely comminuted or displaced, nail bed injury	GP: Undisplaced or minimally displaced Orthopaedic Fracture/ VFRAC Emergency OP Referral: All others

Table 2: Lower limb soft-tissue injuries

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic Consult	Follow-Up
Pelvis/Hip	**Greater trochanter pain syndrome***	Analgesia and education regarding aggravating activities and load management strategies **Gluteal tendinopathy or bursitis*	WBAT		GP – to refer to Physiotherapy in community
	Quadriceps strain / tear	**Grade 1 or 2:** Tubigrip, analgesia, education **Grade 3:** As per Orthopaedic plan	WBAT As per Ortho plan	Grade 3 injury	Grade 1 or 2: GP & Physiotherapy Grade 3: As per Orthopaedic plan
	Hamstrings strain / tear	**Grade 1 or 2:** Tubigrip, analgesia, education **Grade 3:** As per Orthopaedic plan	WBAT As per Ortho plan	Grade 3 injury	Grade 1 or 2: GP & Physiotherapy Grade 3: As per Orthopaedic plan
Knee	**Quadriceps tendon rupture**	ZKS • Often unable to straight leg raise	NWB	Discuss all	As per Orthopaedic plan
	Patella tendon rupture	ZKS • Often unable to straight leg raise	NWB	Discuss all	As per Orthopaedic plan
	Patella dislocation	Reduction, ZKS • X-ray to check for fractures • Consider skyline view	WBAT	Irreducible, unable to straight leg raise, large bony fragment on x-ray	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Acute knee soft tissue injury (undiagnosed)	Analgesia, education, tubigrip and gait aid as required • Clinical tests have reduced sensitivity and specificity in the acute setting	WBAT		GP for clinical reassessment in 1/52 +/- further imaging if required
	ACL rupture	ZKS only if required for comfort, education and gait aid as required • Clinical tests have reduced sensitivity and specificity in the acute setting	WBAT	Concurrent posterolateral corner injury or gross instability	Confirmed: Orthopaedic Consultant OP Referral Suspected: Orthopaedic Fracture/ VFRAC Emergency OP Referral
	PCL rupture	ZKS only if required for comfort, education and gait aid as required	WBAT	Gross instability *Chronic instability to be referred by GP to Orthopaedic clinic	Confirmed: Orthopaedic Consultant OP Referral Suspected: Orthopaedic Fracture/ VFRAC Emergency OP Referral
	LCL Injury	**Grade 1:** Tubigrip, analgesia, gait aid as required **Grade 2 or 3**: ZKS, tubigrip, analgesia, gait aid	WBAT NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
	MCL Injury	Tubigrip, analgesia, gait aid as required • Consider hinged knee brace for grade 3 injuries	WBAT		Orthopaedic Fracture/ VFRAC Emergency OP Referral

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic Consult	Follow-Up
	Grossly unstable knee	ZKS	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Posterolateral corner injury	ZKS	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Acute meniscus injury (<2 weeks)	Analgesia, tubigrip, gait aid as required • Joint line tenderness can be clinical sign for meniscal injury	WBAT	True locking, ongoing instability/ giving way, unable to extend knee past 30 degrees	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Chronic meniscus injury	Analgesia, tubigrip, gait aid as required • Joint line tenderness can be clinical sign for meniscal injury	WBAT	True locking	>55 years-old: GP <55 years-old: Orthopaedic Fracture/ VFRAC Emergency OP Referral
	True locked knee	Discuss with Orthopaedics	As per Ortho plan	Discuss all	As per Orthopaedic plan
	Chondral injury	ZKS only if required for comfort, education and gait aid as required	WBAT		Orthopaedic Consultant OP Referral
	Tibiofemoral dislocation (suspected or confirmed)	• Keep fasted • Refer to Orthopaedics immediately • Urgent CT angiography • Vascular referral if concomitant vascular injury	NWB	Discuss all	As per Orthopaedic plan
	Knee bursitis (eg. prepatellar)	Analgesia, tubigrip, gait aid as required	WBAT	Infective bursitis	GP – to refer to Physiotherapy in community
	Calf strain	Tubigrip, analgesia, education, consider 2 heel wedges for comfort	WBAT		GP – to refer to Physiotherapy in community
Ankle	**Achilles tendon rupture**	CAM boot with 3 heel wedges • Check for palpable defect in the tendon • Thompson-Simmonds Test	WBAT	Associated calcaneal fracture	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Achilles tendinopathy	Analgesia, gait aid as required, consider 2 heel wedges for comfort, activity modification	WBAT		GP – to refer to Physiotherapy in community
	Ankle soft tissue injury	Analgesia and tubigrip, gait aid as required	WBAT		GP – to refer to Physiotherapy in community
Foot	**Plantar fascitis**	Analgesia, gait aid as required, education	WBAT		GP – to refer to Podiatry in community

Table 3: Upper limb fractures

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic or Plastics consult on the day	Follow-Up
Shoulder	**Clavicle fracture**	Broad arm sling • Check for skin tenting	NWB	Skin tenting, severely comminuted or >100% displacement	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Scapula fracture	Broad arm sling • Chest x-ray to exclude pneumothorax	NWB	Severely displaced, comminuted or glenoid involvement	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Greater tuberosity fracture	Broad arm sling	NWB	Displaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Surgical/ Anatomical neck of humerus fracture	Collar & cuff • Consider referral to ACE for discharge supports	NWB	Moderately displaced, angulated or severely comminuted fractures	Orthopaedic Fracture/ VFRAC Emergency OP Referral
Arm/Elbow	**Humeral shaft fracture**	Collar & cuff • Ensure radial nerve is checked	NWB	Moderate - severely displaced, radial nerve palsy	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Medial or Lateral epicondyle fracture	Above elbow back slab & broad arm sling	NWB	Lateral condyle fracture	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Olecranon fracture	Above elbow back slab & broad arm sling	NWB	Any displacement	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Radial head/neck fracture	Broad arm sling • Pronation/supination often restricted or painful	NWB	Severely comminuted or displaced or fracture & dislocation	Orthopaedic Fracture/ VFRAC Emergency OP Referral
Forearm/ Wrist	**Monteggia fracture/ dislocation***	Reduction and above elbow back slab **Fracture of the proximal 1/3 of the ulna and dislocation of the radial head*	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Galeazzi fracture dislocation*	Above elbow back slab **Fracture of the distal 1/3 of the radius and dislocation of the distal radioulnar joint*	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Radial shaft fracture	Above elbow back slab & broad arm sling	NWB	Discuss all	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Ulna shaft fracture	Above elbow back slab & broad arm sling	NWB	Discuss unless completely undisplaced	Orthopaedic Fracture/ VFRAC Emergency OP Referral

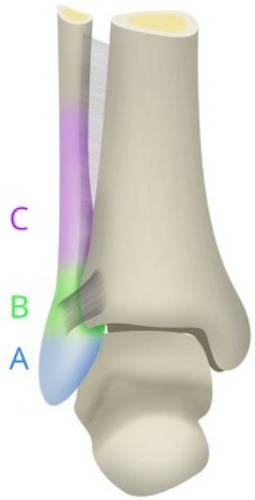
Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic or Plastics consult on the day	Follow-Up
	Distal radius fracture	Undisplaced, minimally displaced and greenstick – Charnley slab & broad arm sling Moderately displaced – reduction & charnley slab/sling	NWB	Moderate/severely displaced or unsatisfactory reduction	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Ulna styloid fracture	Below elbow blackslab or below elbow ulna gutter slab	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Scaphoid or suspected scaphoid fracture	Thumb spica (immobilise wrist) or below elbow volar back slab • If clinically suspicious, treat as a scaphoid fracture	NWB	Displaced fracture	Orthopaedic Fracture/ VFRAC Emergency OP Referral
Hand	**Chip/ avulsion fracture of carpal bone other than scaphoid**	Volar POSI splint • See Appendix 2 for position of POSI splint	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral – Proximal row Plastic & Reconstructive Surgery (PRS) Emergency OP Referral – Distal row
	Triquetral fracture	Volar POSI splint • See Appendix 2 for position of POSI splint	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Thumb metacarpal fracture	Thumb spica (immobilise wrist)	NWB	Fracture/dislocation, comminuted or severely displaced	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	5th metacarpal fracture	Ulna gutter slab • Neck/head of 5th metacarpal fractures are often punching injuries	NWB	Severely comminuted or displaced (eg > 50 degrees angulation MC neck)	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	2nd- 4th metacarpal fracture	Volar POSI splint • See Appendix 2 for position of POSI splint	NWB	Severely comminuted or displaced	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	Thumb phalanx fracture	Thumb spica (including IPJ)	NWB	Severely comminuted or displaced	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	2nd - 5th proximal phalanx fractures	Volar POSI splint • See Appendix 2 for position of POSI splint	NWB	Severely comminuted or displaced	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	2nd – 5th middle or distal phalanx fracture	Aluminium finger splint • Check for subungual haematoma and nail bed injury	NWB		Plastic & Reconstructive Surgery (PRS) Emergency OP Referral

Table 4: Upper limb soft-tissue injuries

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic or Plastics consult	Follow-Up
Shoulder	**Suspected rotator cuff tear**	Broad arm sling for comfort Physiotherapy referral	WBAT		If more significant injury suspected (eg. very poor ROM), assessment by GP at 1/52 post injury to rule out massive tear
	AC Joint Injury	Broad arm sling • Visible defect for high grade injuries and tender over the AC joint	Grade I & II: WBAT Grade III – VI: NWB	Grade IV – VI, or significant skin tenting	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Adhesive capsulitis / frozen shoulder	Analgesia Physiotherapy • Passive and active range of motion often limited on assessment	WBAT		GP – to refer to Physiotherapy in community, consideration of outpatient hydrodilatation with steroid in painful phase
	Shoulder dislocation – primary or recurrent	Reduction & broad arm sling Physiotherapy • Check axillary nerve function • For anterior dislocation, check enlocated on lateral view	NWB	Irreducible, axillary nerve compromise	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Long head of biceps rupture (proximal)	Broad arm sling • Normally conservative management	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
Elbow	**Distal biceps rupture**	Broad arm sling • Normally surgical management	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Elbow dislocation	Reduction, above elbow back slab & broad arm sling	NWB	Irreducible dislocation, gross instability or associated fractures	Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Lateral Epicondylalgia (tennis elbow)	Analgesia and RICE, activity modification, Physiotherapy	WBAT		GP – to refer to Physiotherapy in community
	Elbow collateral ligament injury	Grade I: Analgesia Grade II & III: Analgesia & above elbow back slab	NWB	Grade II- III injury	Orthopaedic Fracture/ VFRAC Emergency OP Referral
Wrist/Hand	**TFCC injury**	Off the shelf wrist splint or below elbow volar back slab • May be clinically tender over ulna aspect of the wrist	NWB		Orthopaedic Fracture/ VFRAC Emergency OP Referral
	Flexor tendon injury	Dorsal blocking splint • Wrist neutral, MCPJ > 70 flexion, IPJ extended • Splint extends to fingertips	NWB	All	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral

Body Region	Condition	Management	Weight Bearing Status	Indications for Orthopaedic or Plastics consult	Follow-Up
	Mallet finger (bony or soft tissue)	Mallet splint (stack splint) or dynacast finger splint with DIPJ in full extension • Advise patient not to flex during removal for hygiene (e.g. rest finger extended on table whilst taking splint on and off to prevent flexion of finger)	NWB		Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	Carpal tunnel syndrome	Below elbow back slab wrist extended or off the shelf wrist splint	WBAT		GP - recalcitrant cases can be referred to Plastics by GP
	PIPJ dislocation finger	Dorsal: reduction and aluminium finger splint holding PIPJ in 30 degrees flexion Volar: reduction and aluminium finger splint holding PIPJ in extension	NWB	Irreducible	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	DIPJ dislocation finger	Dorsal: reduction and aluminium finger splint holding DIPJ in 30 degrees flexion Volar: reduction and aluminium finger splint holding DIPJ in extension	NWB	Irreducible	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	Thumb dislocation MCPJ or IPJ	Reduction and thumb spica	NWB	Irreducible	Plastic & Reconstructive Surgery (PRS) Emergency OP Referral
	Gamekeeper's/ Skier's Thumb	Thumb spica • Assess ulna collateral stability of MCPJ. If concerns of Stener lesion, needs ultrasound and GP follow-up	NWB		GP GP to refer to Plastics as required (e.g. Stener lesion)

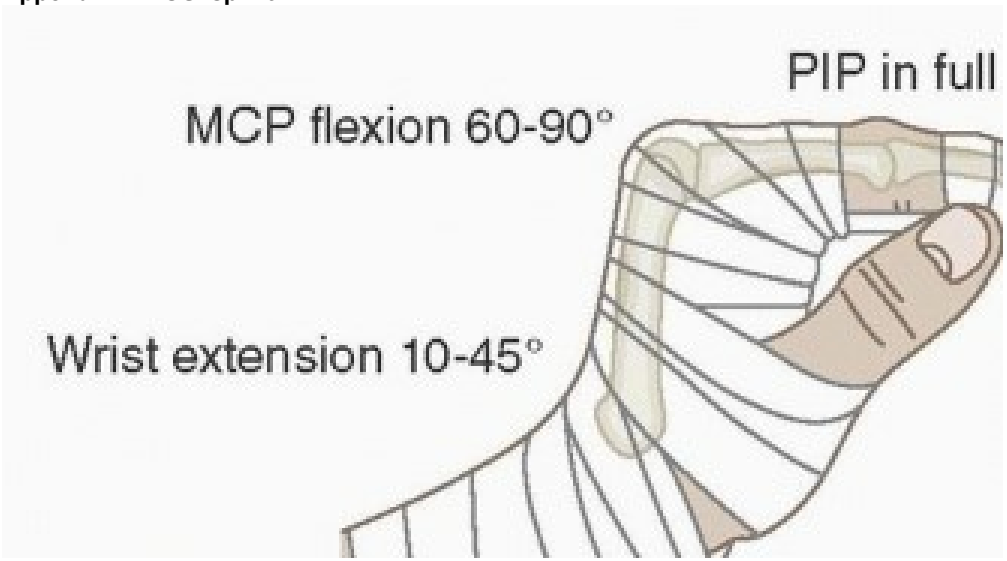
Appendix 1: Weber Ankle Fracture Classification



Weber A: Below the level of the syndesmosis
Weber B: Distal extent at the level of the syndesmosis, may extend proximally
Weber C: Above the level of the syndesmosis

(Radiopedia, 2015)

Appendix 2: POSI splint



(Musculoskeletal Key, 2019)

Appendix 3: Stiff-soled shoes

Post-op shoe
Examples of use: Great toe fractures, post-op wounds

Heel weight bearing post-op shoe
Examples of use: Forefoot wounds, distal metatarsal fractures who cannot tolerate post-op shoe