

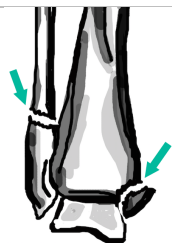
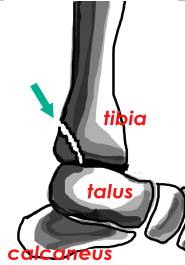


PV Card: Ankle and Hindfoot Fractures

Quick Reference on Acute Orthopedic Management

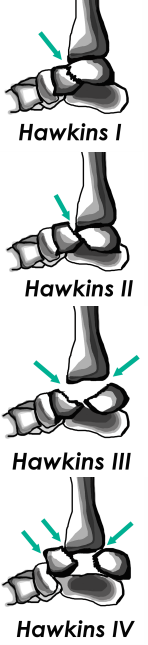
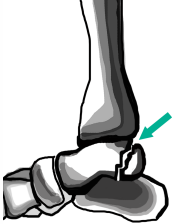
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Images by Mary Haas, MD

Injury	Graphic	XRay Views	Acute Management	F/U Timing*	Notes
Medial malleolus fracture, isolated		AP, Lateral, Mortise	Non-displaced or avulsion fx: Short leg walking cast or cast boot. WBAT. Displaced fx or talar shift: Short-leg posterior splint with stirrups. Will eventually need ORIF. NWB.	1-2 weeks, although operative injuries may need sooner F/U.	Short-leg posterior splint is ok if walking cast or boot unavailable
Lateral malleolus fracture, isolated		AP, Lateral, Mortise	Minimally displaced (<3 mm) or avulsion fx: Short leg walking cast or cast boot. WBAT. Operative fx: (Displaced ≥ 3 mm, talar shift, or associated syndesmosis injury): Short-leg posterior splint with stirrups. NWB.	1-2 weeks, although operative injuries may need sooner F/U.	Displaced fractures should be reduced before splinting.
Medial and lateral malleolar fracture (bi-malleolar)		AP, Lateral, Mortise	Short-leg posterior splint with stirrups. Will eventually need ORIF. NWB.	Within 1 week	Displaced fractures should be reduced before splinting.
Posterior malleolar fracture		AP, Lateral, Mortise	Non-operative fx: Short leg walking cast or cast boot. WBAT. Operative fx (>25% articular surface involved, >2 mm articular step-off, or syndesmotic injury): Short-leg posterior splint with stirrups. NWB.	1-2 weeks, although operative injuries may need sooner F/U.	

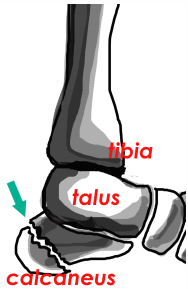
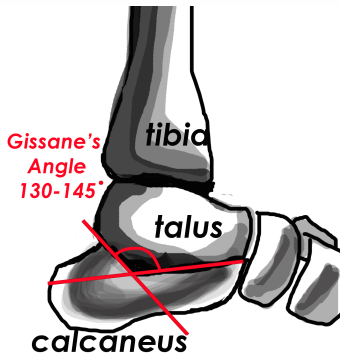
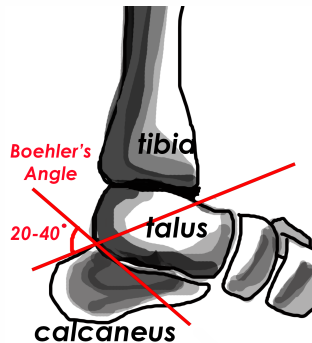
Ankle and Hindfoot Fractures

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Injury	Graphic	XRay Views	Acute Management	F/U Timing*	Notes
Talus neck fracture <i>(comprises 50% of all talar fractures)</i>	 <p>Hawkins I</p> <p>Hawkins II</p> <p>Hawkins III</p> <p>Hawkins IV</p>	AP, Lateral, Canale (Canale view also known as Talar Neck, Kelly, or Modified AP view)	Emergent reduction if evidence of displacement (avascular necrosis risk) Immobilization: Well-padded, short-leg posterior splint (expect more swelling in this high-mechanism fracture). NWB. ORIF indications: All displaced fractures, or Hawkins type II-IV	≤1 week	Hawkins Classification: I: Non-displaced II: Subtalar III: Subtalar & tibiotalar dislocation IV: Subtalar, tibiotalar, & talonavicular dislocation
Talus non-neck fracture		AP, Lateral, Canale (Canale view also known as Talar Neck, Kelly, or Modified AP view)	Immobilization: Well-padded, short-leg posterior splint or bulky compression splint (e.g. bulky Jones) because more swelling is expected in this high-mechanism fracture. NWB. ORIF indications: Any displacement ≥2 mm	1-2 weeks, although operative injuries may need sooner F/U.	

Ankle and Hindfoot Fractures

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Injury	Graphic	XRay Views	Acute Management	F/U Timing*	Notes
Calcaneus fracture		AP, Lateral, Oblique Gold standard: CT	Emergent consultation: If suspect compartment syndrome or calcaneal tuberosity fracture ("tongue-type") due to potential skin necrosis. Immobilization: Bulky compression splint (e.g. bulky Jones). NWB. Percutaneous pinning or ORIF indications: Any displacement, extra-articular involvement, or Achilles tendon injury.	1-2 weeks, although operative injuries may need sooner F/U.	Lateral view findings: Reduced Bohler angle, increased Gassane angle, varus tuberosity deformity, or calcaneal shortening
			Gissane's Angle: Formed by the downward and upward slopes of the calcaneal superior surface		Boehler's Angle: Intersection of line #1 (connecting highest points of the posterior articular facet and posterior tuberosity) with line #2 (connecting highest points of the posterior and anterior articular facets)

* There is no gold standard for timing of orthopedic follow-up. Check your institutional practice guidelines.

Fx: Fracture

F/U: Follow up

NWB: Non-weight bearing

ORIF: Open reduction and internal fixation

WBAT: Weight bear as tolerated

REFERENCES:

Orthobullets (<http://OrthoBullets.com>)

American Academy of Orthopaedic Surgeons (<http://orthoinfo.aaos.org>)