

Orthopaedic Trauma for NPs/PAs
Common Pediatric Fractures (SCH, BBFx, Femur)
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SCH Fx

- I. Type I fractures – nondisplaced. Cast for 3 weeks
- II. Type II fractures – posterior cortex intact, distal fragment extended
 - a. Operative versus Nonoperative – dealer’s choice (Age, swelling, comminution)
 - i. Coronal malalignment needs surgery
 - ii. Closed reduction and cast successful in 72% (Parikh, et al JPO 2004)
 - 1. Repeat XR in cast in 1 week
 - 2. Anterior humeral line must cross capitellum
- III. Type III fractures – Completely displaced
 - a. Operative treatment
 - b. High risk of neurovascular injury (12% nerve injury, 5% pulseless – Garg et al JPO 2014)
 - c. Assess soft tissue injury – swelling, ecchymoses, puckering – these signs are associated with neurologic injury, pulselessness as well as a deterioration of exam overnight). This is more of a factor than the XR in deciding urgency of treatment.
 - d. Careful serial exams if you admit for surgery the next morning

BBFx

- I. Most common fracture in children, want to restore full forearm rotation
- II. Remodelling
 - a. Closer to the Physis = More Remodelling
 - b. Rotation does not remodel
 - c. Sagittal plan deformity remodels more than AP deformity

	Age <8yo	Age >8yo
Proximal	<10deg	<5deg
Midshaft	<20deg	<15deg
Distal	<45deg	<20deg

- III. Reduction Principles
 - a. Longitudinal traction, Recreate the deformity
 - b. Use intact periosteum on concave side
 - c. Interosseous mold, straight ulnar border, 3 point mold
- IV. Weekly XR in cast first 2-3 weeks! Let family know that you may need to wedge or replace the cast

Femur

- I. General Principles
 - a. <2yo – Think Nonaccidental Trauma
 - b. High energy injury – Trauma eval
 - c. Check AP Pelvis XR
 - d. Timing not important
 - e. Buck’s traction for comfort, can help with length
- II. 0-6 mo age- Pavlik vs Spica, consider Nonaccidental Trauma
- III. <5yo – Spica cast, Valgus mold
- IV. > 5 – Dealer’s choice for some type of implant