

MANAGEMENT OF OPEN FRACTURES AND JOINTS

Additional Testing:

- Plain film imaging or advanced imaging will be obtained once patient is stabilized and appropriate
- Suspicions of open joint involvement with laceration should be discussed with orthopedics and if appropriate, joint challenge performed by the orthopedic team

Antibiotic Coverage:

- Suspected open fractures and open joints will receive appropriate antibiotic coverage within 30 minutes of arrival
- Consideration for antibiotics coverage for large degloving injuries or large soft tissue injuries

	Preferred Antibiotic Regimen	Gross Contamination With Soil or Farm Related Injury	Duration of Treatment
Type I Open fracture with skin wound < 1 cm in length and clean	< 120 kg: Cefazolin 2 g IV q8h* ≥ 120 kg: Cefazolin 3 g IV q8h*	Piperacillin/tazobactam 4.5 g IV ONCE over 30 minutes Followed by Piperacillin/tazobactam 4.5 g IV q8h*	24 Hours
Type II Open fracture with skin wound > 1 cm in length without extensive tissue damage, flaps, or avulsions	Severe cephalosporin allergy: Clindamycin 900 mg IV q8h	Severe penicillin allergy: Clindamycin 900 mg IV q8h + Gentamicin 5mg/kg IV q24h+	
Type III Open segmental fracture with > 10 cm wound with extensive soft tissue injury or a traumatic amputation	< 120 kg: Cefazolin 2 g IV q8h* ≥ 120 kg: Cefazolin 3 g IV q8h* + Gentamicin 5 mg/kg IV q24h+ Severe cephalosporin allergy: Clindamycin 900 mg IV q8h + Gentamicin 5mg/kg IV q24h+	Piperacillin/tazobactam 4.5 g IV ONCE over 30 minutes Followed by Piperacillin/tazobactam 4.5 g IV q8h* Severe penicillin allergy: Clindamycin 900 mg IV q8h + Gentamicin 5mg/kg IV q24h+	72 Hours Following Injury OR 24 Hours after soft tissue coverage has been achieved
For known MRSA colonization in all fracture types, utilize vancomycin 15 mg/kg IV ONCE*			

+Vancomycin and aminoglycosides (gentamicin) are pharmacist to dose per protocol

*Antibiotic may require dose adjustments based on renal function

^Alternate dosing regimen to adjust for antibiotic shortages or allergies should be discussed with pharmacy

Soft Tissue Management/Coverage:

- If joint challenge is performed by orthopedics, the orthopedics team will be responsible for closure of the laceration. If no joint challenge indicated, trauma/ED will be responsible for appropriate washout and closure of the laceration
- Soft tissue coverage of open fractures and joints should occur within 7 days. Plastic surgery and reconstructive surgery will be consulted for coverage requiring more extensive transfer of tissues within this time frame