

Musculoskeletal Infections



INFECTION	MOST LIKELY ORGANISMS	THERAPY CATEGORY	ANTIMICROBIALS	COMMENTS
ACUTE HEMATOGENOUS OSTEOMYELITIS OR SEPTIC ARTHRITIS - Less than 3 months - community-acquired	<i>Staph aureus</i> Group B strep <i>Enterobacteriales</i> <i>H. influenzae</i>	First line	Cefazolin 50 mg/kg/dose IV q8h (max. 12 g/DAY) AND Gentamicin* 7.5 mg/kg/dose IV q24h Refer to MCH formulary for neonatal dosages: For cefazolin For gentamicin OR If meningitis suspected: Cefotaxime 225-300 mg/kg/DAY IV DIVIDED q6-8h (max. 2 g/dose) AND Cloxacillin 100 mg/kg/DAY IV DIVIDED q6h (max. 2 g/dose) Refer to MCH formulary for neonatal dosages: For cloxacillin For cefotaxime	* Refer to Protocol for the Use and Therapeutic Drug Monitoring of Aminoglycosides at the Montreal Children's Hospital (MCH)
		Penicillin allergy	Same If meningitis suspected or cannot be excluded: Consult ID	
ACUTE HEMATOGENOUS OSTEOMYELITIS OR SEPTIC ARTHRITIS 3 months and above	<i>Staph aureus</i> <i>K. kingae</i> Group A strep <i>Strep pneumoniae</i> <i>H. influenzae</i>	First line	Cefazolin 50 mg/kg/dose IV q8h (max. 12 g/DAY) If sickle cell disease, also cover for <i>Salmonella</i>: Cefotaxime 150-200 mg/kg/DAY IV DIVIDED q8h (max. 12 g/DAY)	Switch to PO antibiotic when clinical and laboratory criteria for improvement met

community-acquired		Penicillin allergy	Same	
OSTEOMYELITIS OR SEPTIC ARTHRITIS - Post-surgical - Post traumatic	<i>Staph aureus</i> CoNS <i>Pseudomonas</i> (if puncture wound of foot through rubber shoe) <i>Enterobacteriaceae</i>	First line	Cefazolin 50 mg/kg/dose IV q8h (max. 3 g/DOSE) If contaminated traumatic wound and/or puncture wound through rubber shoe or in certain post-surgical cases (e.g., fecal contamination of surgical spinal wound), use instead: Piperacillin/tazobactam 300 mg/kg/DAY IV DIVIDED q6h (max. 16 g/DAY)	
		Penicillin allergy	Same If contaminated traumatic wound and/or puncture wound through rubber shoe or in certain post-surgical cases (e.g., fecal contamination of surgical spinal wound), use instead: Meropenem 40 mg/kg/dose IV q8h (max. 2 g/dose)	

REFERENCES:

Empiric Antimicrobial Therapy Guide: Version 9, May 2025