



**ANTIBIOTIC PROPHYLAXIS: GUIDELINES/ STANDARD OPERATING  
PROTOCOLS**

1. Preoperative prophylaxis<sup>¶†1-4</sup>: -

Single dose of Injection Cefuroxime 1.5 gm IV just before incision/during induction

2. Postoperative prophylaxis<sup>†5,6</sup>: -

- Closed fracture: Injection Cefuroxime 1.5 gm IV BD x 2 days
- Open fracture (GA grade I and II): Injection Cefuroxime 1.5 gm IV BD x 2 days + Tablet Cefuroxime 500 mg BD x 3 days
- Open fracture (GA grade III<sub>a</sub>): Injection Cefuroxime 1.5 gm IV BD x 2 days + Tablet Cefuroxime 500 mg BD x 3 days + Injection Amikacin 500 mg OD IV x 5 days/24h after wound closure (whichever is earlier)
- Open fracture (GA grade III<sub>b</sub>): Injection Cefuroxime 1.5 gm IV BD x 2 days + Tablet Cefuroxime 500 mg BD x 3 days + Injection Amikacin<sup>#</sup> 500 mg OD IV x 5 days/wound closure (whichever is earlier) + Injection Metronidazole 500 mg TDS IV x 5 days/24h after wound closure (whichever is earlier)
- Arthroplasty/Megaprosthesis: Injection Cefuroxime 1.5 gm IV BD x 2 days + Tablet Cefuroxime 500 mg BD x 3 days
- Arthroscopy: Injection Cefuroxime 1.5 gm IV BD x 2 days
- Limb Salvage (Fixation): Injection Cefuroxime 1.5 gm IV BD x 2 days
- Spine: Injection Cefuroxime 1.5 gm IV BD x 2 days

3. Intra-operative prophylaxis: Antibiotic dose to be repeated if duration exceeds 4 hrs/Blood loss > 1.5L<sup>3</sup>

¶ In cases where tourniquet is not used: - Approximately 30-60 minutes prior to incision<sup>1,3</sup>

In cases where tourniquet is used: - At least 10 minutes prior to tourniquet inflation<sup>2,3</sup>

† Paediatrics: Injection Cefuroxime 30mg/kg IV BD

# After baseline Kidney function tests



4. Acute Osteomyelitis/Septic Arthritis<sup>7,8</sup>: -

Causative micro-organism – Staphylococcus aureus (MSSA/MRSA); Streptococcus pyogenes; Gram negative bacilli; Enterobacteriaceae

Empirical antibiotics	Alternate antibiotics	Comments
MSSA: - Injection Oxacillin 2g IV TDS  MRSA <sup>s</sup> : - Injection Vancomycin 1g IV BD (Slow IV infusion)	Injection Piperacillin + Tazobactam 4.5 g IV TDS/ Injection Cefoperazone + Sulbactam 3g IV BD AND Injection Clindamycin 600 mg IV BD	Empirical treatment converted to definite treatment based on Blood/Synovial fluid/Soft tissue/ Bone Culture  Orthopaedic consultation for surgical debridement  Duration of treatment: - 4-6 weeks from initiation of antibiotic therapy/last major debridement

5. Chronic Osteomyelitis/ Synovitis<sup>7,8</sup>: -

Causative micro-organism – Staphylococcus aureus (MSSA/MRSA); Streptococcus pyogenes; Gram negative bacilli; Enterobacteriaceae

Empirical antibiotics	Alternate antibiotics	Comments
-	-	Definite treatment based on Blood/Synovial fluid/Soft tissue/ Bone Culture  Orthopaedic consultation for surgical debridement  Duration of treatment: - At least 6 weeks (Depends on the joint afflicted as well as nature of microorganism)  Rule out Atypical bacterial, TB and Fungal infections

6. Prosthetic Joint infection (PJI)<sup>9</sup>: -

Causative micro-organism - Staphylococcus aureus (MSSA/MRSA); Coagulase negative Staphylococci; β-haemolytic Streptococci; Enterococci; Propionibacterium acnes; Gram



negative bacilli; Enterobacteriaceae

Empirical antibiotics	Alternate antibiotics	Comments
<p>MSSA: - Injection Ceftriaxone 2g IV OD</p> <p>MRSA<sup>§</sup>: - Injection Vancomycin 1g IV BD (Slow IV infusion)</p>	-	<p>1. Staph PJI: -</p> <p>MSSA: - Injection Ceftriaxone 2g IV OD + Tablet Rifampicin 300-450 mg BD</p> <p>MRSA: - Injection Vancomycin 1g IV BD (Slow IV infusion) + Tablet Rifampicin 300-450 mg BD</p> <p>Duration: - Minimum 4-6 weeks. Can extend up to 3 months (Total Hip /Total Elbow/Total shoulder Arthroplasty) and 6 months for Total Knee Arthroplasty</p> <p>2. Non-Staph PJI: -</p> <p>Culture-specific IV antibiotics</p> <p>Duration: - Minimum 4-6 weeks. Can extend up to 3 months (Total Hip /Total Elbow/Total shoulder Arthroplasty) and 6 months for Total Knee Arthroplasty</p>

§- Regions where prevalence of community acquired MRSA > 10%/ initial clinical presentation and laboratory markers are markedly elevated.



**References:**

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