

**GUIDELINES FOR DRUG
PRESCRIBING AND MONITORING**

B. THERAPEUTIC GUIDELINES

5. ANTIMICROBIAL THERAPY

a) Antibiotic Prophylaxis in Surgical Patients

***Administer 60 - 15 minutes prior to incision.**

REPEAT DOSE only if surgery longer than 4 hours, or major blood loss

Surgical Procedure	Common Microorganisms	Antibiotic Regimen*	Alternative For Anaphylactic Reactions To Beta-Lactam
<p>Obstetrics/Gynecological⁵</p> <ul style="list-style-type: none"> - Hysterectomy, C-section, Urogynecology procedures including those involving mesh - Induced abortion, Dilation & Evacuation - Hysterosalpingogram, Chromotubation AND history of pelvic inflammatory disease (PID) 	<p>Gram-negative bacilli, group B <i>Streptococci</i>, <i>Enterococci</i>, anaerobes</p> <p>Gram-negative bacilli, group B <i>Streptococci</i>, <i>Enterococci</i>, anaerobes</p> <p>Gram-negative bacilli, group B <i>Streptococci</i>, <i>Enterococci</i>, anaerobes</p>	<p>< 75kg: Cefazolin 1g IV ≥ 75kg: Cefazolin 2g IV</p> <p>Doxycycline 100mg po 1h pre & 200mg po post procedure or Metronidazole 500mg po bid x 5 days if bacterial vaginosis, or Cefazolin 1-2g IV</p> <p>Doxycycline 100mg po x1 pre procedure; if dilated fallopian tubes continue 100mg po bid x 5 days post procedure</p>	<p>Clindamycin 600mg IV or Metronidazole 500mg IV x1 Plus Gentamicin 2mg/kg x1</p>
<p>Orthopedic</p> <ul style="list-style-type: none"> - Open reduction or internal fixation of fracture - Joint replacement - Laminectomy and spinal infusion - Lower extremity amputation for ischemia 	<p><i>Staphylococcus aureus</i>, <i>Staphylococcus epidermidis</i>, enteric gram-negative bacilli in complex infection</p> <p><i>S. aureus</i>, <i>S. epidermidis</i></p> <p><i>S. aureus</i>, <i>S. epidermidis</i></p> <p>Enteric gram-negative bacilli anaerobic bacteria</p>	<p>Cefazolin 1 g IV¹; add gentamicin 1.5 mg/kg if infection is complex¹</p> <p>Cefazolin 1g IV preop & q8h x 2 doses.²</p> <p>No proven benefit of prophylaxis Cefazolin 1g IV²</p> <p>Cefazolin 2g IV plus metronidazole 500mg IV</p>	<p>Vancomycin 1g IV³</p> <p>Vancomycin 1g IV preop & q12h x 1 dose</p> <p>Vancomycin 1g IV³</p>

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Head and Neck - Oropharyngeal surgery	<i>Viridans Streptococci</i> , <i>S. aureus</i> , enteric gram negative bacilli oral anaerobic bacteria such as <i>Peptostreptococci</i> or <i>Fusobacteria</i>	Gentamicin 1.5 mg/kg PLUS Clindamycin 600 mg IV or Cefazolin 1 g IV ¹	
Thoracic - Pulmonary resection (lobectomy & pneumonectomy)	<i>Staphylococci</i> , <i>Streptococcus pneumoniae</i> , enteric gram- negative bacilli, oral anaerobic bacteria	Cefazolin 1 g IV ¹	
Vascular - Procedures with or without prosthetic graft	<i>S. aureus</i> , <i>S. epidermidis</i> , enteric gram-negative bacilli	Cefazolin 1 g IV ¹	Vancomycin 1g IV ³
Cardiac - Valve and coronary artery bypass surgery (CABG) or other open heart surgery - Pacemaker insertion	<i>S. aureus</i> , <i>S. epidermidis</i> , enteric gram-negative bacilli <i>S. aureus</i> , <i>S. epidermidis</i>	< 75kg: Cefazolin 1 g IV ≥ 75kg: Cefazolin 2g IV Prophylaxis NOT indicated ¹	Vancomycin 1g IV ³
General - Gastric resection or percutaneous gastrostomy - Biliary tract surgery - Colon surgery - Appendectomy (non perforated) - Hernia repair	Enteric gram-negative bacilli, gram-positive cocci especially <i>Enterococci</i> , <i>Bacteriodes</i> species occasionally Enteric gram-negative bacilli, <i>Enterococci</i> , <i>Clostridia</i> Enteric gram-negative bacilli, anaerobic bacteria especially <i>Bacteroides</i> <i>fragilis</i> Enteric gram-negative bacilli anaerobic bacteria especially <i>B. fragilis</i> <i>S. aureus</i> , <i>S. epidermidis</i>	Cefazolin 1 g IV ¹ Cefazolin 1g IV ¹ Gentamicin 1.5 mg/kg PLUS Metronidazole 500 mg or Clindamycin 300 mg IV or Cefazolin 2g IV PLUS Metronidazole 500mg IV <u>Pediatrics:</u> Cefoxitin 40 mg/kg IV Cefazolin 1g IV PLUS Metronidazole 500mg IV or Gentamicin 1.5 mg/kg IV PLUS Metronidazole 500mg IV orClindamycin 300mg IV <u>Pediatrics:</u> Cefoxitin 40 mg/kg IV Cefazolin 1g IV ¹	Gentamicin 120 mg IV & Clindamycin 600 mg IV ³ Gentamicin 80 mg IV preop & q8h x3 doses ⁴

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Urologic - Prostate Surgery - Urethral dilatation	<i>Escherichia coli, Klebsiella, Enterococci, Pseudomonas</i>	Cefazolin 1g IV ¹ Prophylaxis not indicated ¹	Trimethoprim/Sulfamethoxazole 160 mg/800 mg po 1-2 hours pre-op ²
Neurosurgery - Craniotomy - Cerebrospinal fluid shunting operations	<i>S. aureus</i> <i>S. aureus</i>	Cefazolin 1g IV ² or Clindamycin 600 mg IV ³ or Vancomycin 1g IV PLUS Gentamicin 1.5mg/kg IV ¹ Trimethoprim 160mg IV with Sulfamethoxazole 800mg IV ¹	

References:

1. Committee on Antimicrobial Agents, Waddell TK, Rostein Ed, Antimicrobial Prophylaxis in Surgery. Can. Med Assoc J. 1994; 151(7): 925-31.
2. ASHP Therapeutic guidelines on antimicrobial prophylaxis in surgery. Clin Pharm 1992, 11; 483-513.
3. Medical Letter on Drugs and Therapeutics 1993; 35(96): 91-94.
4. Kernodle DS, Kaiser AB, Postoperative and Antimicrobial Prophylaxis In: Mandell GL, Bennett JE, Dolin R, eds. Principles and Practice of Infectious Disease. New York: Churchill Livingstone, 1995: 2742-2756.
5. ACOG Practice Bulletin in Obstetrics & Gynecology 2009 (May);113 (5): 1180-89.

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