

Baylor Scott & White Health – Adult Guidelines for Antimicrobial Prophylaxis in Surgery

BSWH Formulary Approved Antibiotics Last Update: 7/05/2016

Procedure	Recommended Prophylaxis	Alternative Prophylaxis ⁽²⁾ For use if patient beta-lactam allergic
Cardiac: Heart surgery (re-dose cefazolin when the patient comes off bypass) <i>Consider a 5 day preoperative mupirocin regimen for cardiac and orthopedic surgeries in patients known to be colonized with MRSA.</i> Pacemaker or AICDs insertion / revision, lead revisions, upgrades, replacements, repositioning & insertion of pacing leads & pocket revision.	Cefazolin ⁽³⁾ OR Vancomycin ⁽¹⁾ + Cefazolin ⁽⁴⁾ Cefazolin OR Vancomycin ⁽¹⁾	Vancomycin ⁽¹⁾ ± Gentamicin ⁽⁵⁾ or Clindamycin ± Gentamicin ⁽⁵⁾ Clindamycin, OR Vancomycin ⁽¹⁾
Vascular: Aortic reconstruction, prosthetic graft insertion, leg procedures involving a groin incision, lower extremity amputation for ischemia, vascular access for hemodialysis	Cefazolin	Clindamycin OR Vancomycin ⁽¹⁾
Thoracic: lung resection	Cefazolin	Clindamycin
Biliary Tract, including lap chole: HIGH-RISK only – Age 70yr or older , acute cholecystitis, obstructive jaundice, common duct stones, non-functional gallbladder	Cefazolin OR Cefoxitin	Clindamycin + Gentamicin OR Clindamycin + Quinolone ⁽⁹⁾
Esophageal / gastroduodenal: PEG placement / revision / conversion to other feeding tube(s) OR other HIGH-RISK conditions including: morbid obesity, obstruction, decreased motility or decreased gastric acidity (H2 blocker or proton pump inhibitor use)	Cefazolin, OR Cefoxitin	Clindamycin + Gentamicin OR Vancomycin ⁽¹⁾ + Gentamicin
Colorectal Surgery: including appendectomy or ruptured viscus	Cefoxitin OR Ceftriaxone + Metronidazole	Clindamycin + Gentamicin OR Metronidazole + Gentamicin OR Metronidazole + Quinolone ⁽⁹⁾
Principal Procedure Code of Hysterectomy with Another Procedure Code of Colon Surgery	Use Hysterectomy antibiotics	Clindamycin + Gentamicin OR Clindamycin + Quinolone ⁽⁹⁾ OR Metronidazole + Gentamicin OR Metronidazole + Quinolone
Gynecologic and Obstetric: Vaginal, abdominal or laparoscopic hysterectomy Cesarean section: Synthetic pubovaginal sling	Cefazolin OR Cefoxitin Cefazolin single dose ⁽⁷⁾ OR Cefoxitin OR Quinolone ^(5, 9) Cefazolin OR Cefoxitin OR Quinolone ^(5, 9)	Clindamycin + Gentamicin OR Clindamycin + Quinolone ⁽⁹⁾ OR Metronidazole + Gentamicin Clindamycin + Gentamicin ⁽⁷⁾ OR Clindamycin + Levofloxacin Metronidazole + Gentamicin OR Clindamycin + Gentamicin
Head and neck: Incision through the oral or pharyngeal mucosa, lower jaw fracture, removal of esophagus pouch For procedures involving the sinuses, naso/oropharynx	Cefazolin Clindamycin OR Ampicillin/Sulbactam	Clindamycin + Gentamicin OR Vancomycin ⁽¹⁾ Clindamycin ± Vancomycin ⁽¹⁾
Neurosurgery: Craniotomy, shunt placement/revision, spinal infusion pump insertion	Cefazolin	Clindamycin OR Vancomycin ⁽¹⁾
Orthopedic / Podiatric: Internal fixation of fractures; insertion/removal of hardware, implants or grafts; arthrodesis, osteotomy, laminectomy, discectomy, foraminotomy, spinal fusion, joint replacement, knee revision, hammertoe and bunion procedures	Cefazolin OR Vancomycin ⁽¹⁾	Clindamycin OR Vancomycin ⁽¹⁾
Genitourinary: Prostate biopsy Prostate biopsy, transrectal approach Penile prosthesis insertion/removal/revision Removal of epididymis or epididymal lesion Cystourethroscopy with manipulation (biopsy, fulguration, urethral dilation, urethrotomy, TURBT, TURP; ureteroscopy)	Quinolone ^(6,9) OR Cefazolin OR Cefoxitin Refer to colorectal guidelines Cefazolin + Gentamicin Cefazolin Quinolone ⁽⁹⁾ OR Gentamicin + Ampicillin	Gentamicin Clindamycin + Gentamicin OR Vancomycin ⁽¹⁾ + Gentamicin Clindamycin OR Vancomycin ⁽¹⁾ Gentamicin

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Generic Drug	Trade Name	Antibiotic initiated within ____hour(s) of incision	Minimum Infusion Time (minutes)	Re-dosing Interval ⁽¹⁰⁾ in hours	Weight-based Dose for ADULTS with NORMAL RENAL FUNCTION (8) For gentamicin, use adjusted body weight to calculate dose if BMI > 30 m ² /kg Contact pharmacy for recommendations in patients less than 40kg. ¹⁰
Ampicillin	n/a	1	10	2	2 gram
Ampicillin/Sulbactam	UNASYN	1	30	2	3 gram
Cefazolin	ANCEF	1	3	4	2 gram, for ≥ 120kg use 3 gram
Cefoxitin	MEFOXIN	1	3	2	2 gram
Ceftriaxone	ROCEPHIN	1	3	N/A	2 gram
Ciprofloxacin	CIPRO	2	60	N/A	400 mg
Clindamycin	CLEOCIN	1	30	6	900 mg
Gentamicin	GARAMYCIN	1	30	N/A	5mg/kg single dose
Levofloxacin	LEVAQUIN	2	60	N/A	500 mg
Metronidazole	FLAGYL	1	30	N/A	500 mg
Vancomycin	n/a	2	60	N/A	15 mg/kg

Footnotes

The duration of antibiotic prophylaxis is not to exceed 24H (48H in cardiac procedures) regardless of the placement of indwelling catheters or drains. Antibiotics with short infusions (< 30 minutes) should be completed prior to incision. Antibiotics with longer infusions (≥ 30 minutes) such as vancomycin should be initiated > 30 minutes prior to incision. For prolonged procedures, or those with major blood loss, additional doses should be given according to the redosing-interval guidelines in the table above. The routine use of prophylactic post-operative antimicrobials is not recommended, as there is no benefit after wound closure (exception: cardiac surgery) and complications are increased (pseudomembranous colitis or antibiotic resistance).

- Rationale for vancomycin use must be documented PRE-OPERATIVELY in the medical record per SCIP guidelines.
 - Beta-lactam (penicillin or cephalosporin) allergy
 - MRSA colonization or infection
 - High-risk due to acute inpatient hospitalization within the last year, nursing home or extended care facility setting within the last year prior to admission
 - Increased methicillin-resistant staphylococcus rates (including MRSA and Coagulase-negative staphylococcus) either facility-wide or operation-specific
 - Chronic wound care or dialysis
 - Continuous inpatient stay more than 24 hours prior to the principal procedure
 - Undergoing valve surgery
 - Patient transferred from another inpatient hospitalization after a 3-day stay (Data Element Name: Vancomycin - Version 3.0, pg 1-440)
- Alternative prophylaxis is appropriate if allergy or intolerance exists to a Recommended Prophylaxis drug. Cephalosporins (cefazolin, cefoxitin) may be given for prior MINOR penicillin reactions ((nausea, vomiting, diarrhea, mild rash, itching), but should not be given for prior MAJOR reactions, such as hives, shortness of breath, wheezing, edema, or anaphylaxis.
- For patients not at high-risk for MRSA infections.
- For patients at high-risk of methicillin-resistant staphylococcus infections (including MRSA and coagulase-negative staphylococcus), including presumed or known staphylococcal colonization; the institutional presence of a “high incidence of MRSA”; patients susceptible to colonization (hospitalized longer than 3 days, transfer from other inpatient facility, already receiving antibiotics), or procedures which involve insertion of a prosthetic valve or vascular graft. Due to a lack of gram-negative activity, **Vancomycin should not be used alone for prophylaxis** and should be used for only 1 to 2 doses.
- Consider addition of gentamicin (or cefazolin if no β- lactam allergy) to vancomycin or clindamycin if high risk for gram negative organisms, e.g. cardiac surgeries with groin incision.
- The only operations for which oral antibiotics alone are acceptable are the prostate biopsy and pubovaginal sling procedures. Refer to colorectal prophylaxis guidelines for trans-rectal approach prostate biopsy.
- ACOG 116, Number 3, September 2010.
- Bratzler, Dale E., et al, Am J Health-Syst Pharm. 2013; 70:195-283
- Quinolone choices are ciprofloxacin (Cipro®), levofloxacin (Levaquin®).
- Pharmacist to use clinical judgement in reducing doses including consideration of patient age, renal function, functional status and/or other co-morbidities.