

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

### GENERAL PRINCIPLES

1. The goal of antimicrobial surgical prophylaxis is to achieve serum and tissue antibiotic concentrations that exceed the minimum inhibitory concentrations (MICs) of the majority of organisms likely to be encountered, at the time of the incision and for the duration of the procedure. To achieve this:
  - a. Preoperative doses should be given within 60 minutes before incision. For exceptions and administration details, see Table 1.
  - b. Intraoperative repeat dosing is recommended if prolonged surgical procedure (> 2 half-lives of the antimicrobial), or major blood loss (> 1.5L). See Table 2 for redosing interval.
2. Recommended adult doses for patients with normal weight and renal function. Refer to Table 1 for more information.
3. **CEPHALOSPORIN ALLERGY/SEVERE PENICILLIN ALLERGY** – the patient is considered to have a true allergy if they have at least one of: respiratory difficulty, hypotension, or hives. In the absence of these findings, cefazolin can be used as surgical prophylaxis.
4. **Postoperative doses for prophylaxis are not routinely indicated.** If the surgery is contaminated, it should be indicated that the postoperative antibiotic orders are for treatment.
5. The practice of continuing antimicrobials started as prophylaxis until all drains/catheters are removed cannot be supported due to lack of evidence, the development of drug-resistant organisms, superinfections, and drug toxicity.
6. For patients with known methicillin resistant *S. aureus* (MRSA) colonization or infection, consider adding vancomycin to the surgical prophylaxis regimen for cardiac, spinal, and orthopedic procedures involving implantation: complex fractures / fractures with internal fixation, joint arthroplasties. Vancomycin alone is less effective than cefazolin for preventing surgical site infections due to methicillin susceptible *S. aureus* (MSSA).
7. The safety and efficacy of topical antimicrobials\* (irrigations, pastes, washes) have not been established, except for ophthalmic procedures, therefore routine use of topical antimicrobials is not recommended in any other surgical procedure.  
\* This does not include topical antiseptics, e.g. chlorhexidine, isopropyl alcohol.

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**Table 1: Pre-Op Antibiotic Administration**

Timely administration (within 60 minutes before initial skin incision) of antibiotic prophylaxis can significantly decrease the incidence of postoperative infections. The goal is to achieve optimal serum and tissue antibiotic concentrations at the time of the initial skin incision and for the duration of the procedure. To best achieve this, antibiotics can be given in the operating room (OR) by the anaesthetist at induction of anaesthesia, but depending on the circumstances of the procedure may also be given in the holding area, or on the patient care unit if prolonged infusion is necessary. Administering antibiotics “on call to the OR” is not recommended as it often results in suboptimal antibiotic concentrations due to surgery schedule changes or transport delays.

Prophylactic Antibiotic	Recommended Adult Dose	Recommended Administration
Cefazolin	2g*	IV push
Cefuroxime	1.5g	IV push
Ceftriaxone	1-2g	IV push
Ciprofloxacin PO	500mg	Administer 1-2 hours pre-op
Clindamycin	600mg	Administer over 30 minutes just prior to procedure
Co-trimoxazole PO	1 DS tablet	Administer 1-2 hours pre-op
Gentamicin	1.5mg/kg** or 5mg/kg**	Administer over 30 minutes just prior to procedure  Administer over 60 minutes just prior to procedure
Metronidazole	500mg	Administer over 20 minutes just prior to procedure
Vancomycin	15mg/kg***	Administer ≤1g over at least 60 minutes, > 1g- 1.5g over at least 90 minutes, and > 1.5g over 120 minutes just prior to procedure

\* For adult patients with total body weight ≥ 120kg, cefazolin 3g IV is recommended by IDSA guidelines but is based on expert opinion. Available evidence suggests 3g is not necessary regardless of body mass index (BMI).

\*\* Use 5mg/kg single pre-op dose if: post-op doses are indicated to provide ~24 hours of antimicrobial prophylaxis, or anticipated duration of surgery is greater than 5 hours. Gentamicin dose should be based on ideal body weight (IBW), or dosing weight (DW) if patient's actual body weight is > 20% above IBW, rounded to the nearest 20mg.

\*\*\* Vancomycin dose should be based on total body weight, rounded to the nearest 250mg and to a maximum of 2g/dose.

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**Table 2: Intraoperative Antibiotic Administration**

Intraoperative repeat dosing is recommended if:

- prolonged surgical procedure (> 2 half-lives of the antimicrobial), or
- major blood loss (> 1.5L).

<b>Prophylactic Antibiotic</b>	<b>Recommended intraoperative redosing interval (from time of administration of pre-op dose):</b>
Cefazolin	q4h
Cefuroxime	q4h
Clindamycin	q4h
Metronidazole	q8h
Vancomycin	q8h

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<b>GENERAL</b>			
<b>Gastroesophageal endoscopy</b> Low risk <hr style="border-top: 1px dashed black;"/> High risk: • esophageal dilatation • variceal sclerotherapy		<b>Prophylaxis not routinely indicated</b>	
		• cefazolin 2g IV x 1 dose	• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose
<b>Gastroduodenal surgery</b> <b>Duodenal/gastric resections for ulcers/ cancer</b> <b>Percutaneous endoscopic gastrostomy (PEG)</b> <b>Perforated ulcer procedures</b> <b>Pancreatic duodenectomy</b> <b>Bariatric surgical procedures</b> (gastric bypass, gastric banding, gastroplasty, biliopancreatic diversion) <b>Gastroplasty – high risk only:</b> <i>gastric outlet obstruction, decreased gastric acidity or motility, morbid obesity, hemorrhage</i>	• Enterobacteriaceae • Gram positive cocci	• cefazolin 2g IV x 1 dose	• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose

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<b>GENERAL</b>			
<b>Hepatobiliary surgery</b> <b>High risk:</b> <i>open cholecystectomy, emergency laparoscopic cholecystectomy, insertion of prosthetic device, acute cholecystitis, biliary obstruction, obstructive jaundice or common bile duct stones, non-functioning gallbladder, recent (within 1 month) biliary surgery, &gt; 70 yrs old, diabetes, pregnancy, immunosuppression</i> <b>ERCP</b> if biliary obstruction or known pancreatic pseudocyst <b>Liver resection</b> <hr style="border-top: 1px dashed black;"/> <b>Low risk:</b> <ul style="list-style-type: none"> <li>• elective laparoscopic cholecystectomy</li> <li>• liver biopsy</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Enterococcus spp</li> <li>• Clostridium spp</li> <li>• Streptococcus spp</li> <li>• Staphylococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose or</li> <li>• gentamicin 1.5mg/kg IV + metronidazole 500mg IV x 1 dose</li> </ul>
		<b>Prophylaxis not routinely indicated</b>	
<b>Bowel surgery</b> Small intestine - nonobstructed	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> </ul>

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<b>GENERAL</b>			
<b>Bowel surgery</b> <b>Elective colorectal surgery</b> <b>Appendectomy</b> <b>Emergency bowel surgery</b> <b>Bowel obstruction</b> <b>Fistulas/Discontinuous bowel segments</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV + metronidazole 500mg IV x 1 dose</li> <li>or if increased risk of resistance, such as E. coli cefazolin susceptibility &lt; 80%, prolonged hospitalization, antibiotic therapy in last 6 months, recent international travel, consider:</li> <li>• ceftriaxone 2g IV + metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> <li>or</li> <li>• gentamicin 1.5mg/kg IV + metronidazole 500mg IV x 1 dose</li> </ul>
<b>Perforated viscus, gangrene, peritonitis, or abscess</b> <i>Institute treatment rather than prophylaxis (considered contaminated)</i>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> <li>• Enterococcus spp</li> </ul>	See Adult Empiric Therapy Recommendations - Peritonitis	

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<b>GENERAL</b>			
<b>Anal surgery</b> <b>Low risk:</b> <ul style="list-style-type: none"> <li>• fissurectomy</li> <li>• fistulectomy/fistulotomy</li> <li>• hemorrhoidectomy-ligation/banding</li> <li>• sphincterotomy</li> </ul> <hr style="border-top: 1px dashed black;"/> <b>High risk:</b> <ul style="list-style-type: none"> <li>• sphincteroplasty</li> <li>• rectovaginal fistula closure/repair</li> <li>• proctocolectomy</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
		<ul style="list-style-type: none"> <li>• cefazolin 2g IV + metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> <li>or</li> <li>• gentamicin 1.5mg/kg IV + metronidazole 500mg IV x 1 dose</li> </ul>
<b>Herniorrhaphy (suture repair)</b> <b>Hernioplasty (mesh insertion)</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> </ul>

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<b>OBSTETRICAL/GYNECOLOGICAL</b>			
<b>Therapeutic termination of pregnancy</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> <li>• Group B Streptococci</li> <li>• Enterococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• doxycycline 100mg PO 1h pre-op + 200mg PO 1/2 h post-op or</li> <li>• azithromycin 1g PO x 1 dose pre-op</li> </ul>	
<b>Caesarean section</b> <i>elective</i> <i>non-elective</i>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> <li>• Group B Streptococci</li> <li>• Enterococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul> NB: Dosing prior to skin incision more effective than dosing after cord clamping.	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> </ul>
<b>Hysterectomy</b> <i>abdominal</i> <i>laparoscopic</i> <i>vaginal</i> <b>Adnexal procedures that enter uterus or vagina</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> <li>• Group B Streptococci</li> <li>• Enterococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV +/- metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose or</li> <li>• gentamicin 1.5mg/kg IV + metronidazole 500mg IV x 1 dose</li> </ul>
<b>Endometrial ablation</b>		<b>Prophylaxis not routinely indicated</b>	
<b>Dilatation and curettage</b> <ul style="list-style-type: none"> <li>• postpartum</li> <li>• menorrhagia</li> </ul>		<b>Prophylaxis not routinely indicated</b>	
<b>Laparoscopic procedures that do not enter uterus and/or vagina</b>		<b>Prophylaxis not routinely indicated</b>	



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<b>UROLOGY</b>			
Note: If positive urine culture, institute treatment according to culture and susceptibility results.			
<b>Open or laparoscopic procedures</b> <ul style="list-style-type: none"> <li>• entry into urinary tract</li> <li>• entry into vagina</li> <li>• percutaneous renal surgery</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Enterococcus spp</li> <li>• Staphylococcus spp</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> </ul>
<b>Open or laparoscopic procedures</b> <ul style="list-style-type: none"> <li>• placement of prosthetic material</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Enterococcus spp</li> <li>• Staphylococcus spp</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV ± gentamicin 1.5mg/kg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV + gentamicin 1.5mg/kg IV x 1 dose</li> </ul>
<b>Adrenalectomy Nephrectomy</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> </ul>

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<b>UROLOGY</b>			
Note: If positive urine culture, institute treatment according to culture and susceptibility results.			
<b>Cystoscopy</b> <b>Urethral dilatation</b>  <b>Low risk</b>  <hr style="border-top: 1px dashed black;"/> <b>High risk:</b> <ul style="list-style-type: none"> <li>• prolonged indwelling catheter</li> <li>• neutropenia</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Pseudomonas spp</li> <li>• Enterococcus spp</li> </ul>	<p><b>Prophylaxis not routinely indicated</b></p>	<p>Oral regimens: (give 1-2 h pre-op)</p> <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO</li> <li>or</li> <li>• co-trimoxazole 1 DS tablet PO</li> <li>or</li> </ul> <p>Parenteral regimens:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> <li>or if increased risk of resistance, such as E. coli cefazolin susceptibility &lt; 80%, prolonged hospitalization, antibiotic therapy in last 6 months, recent international travel, consider:</li> <li>• ceftriaxone 1g IV x 1 dose</li> </ul>
			<p>Oral regimens: (give 1-2 h pre-op)</p> <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO</li> <li>or</li> <li>• co-trimoxazole 1 DS tablet PO</li> <li>or</li> </ul> <p>Parenteral regimen:</p> <ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV x 1 dose</li> </ul>

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<b>UROLOGY</b>			
Note: If positive urine culture, institute treatment according to culture and susceptibility results.			
<b>Shock-wave lithotripsy, no risk factors</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Pseudomonas spp</li> <li>• Enterococcus spp</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
<b>Shock-wave lithotripsy with risk factors:</b> <ul style="list-style-type: none"> <li>• advanced age</li> <li>• anatomical abnormalities of urinary tract</li> <li>• immunodeficiency/chronic corticosteroid use</li> <li>• prolonged hospitalization</li> <li>• externalized catheter</li> <li>• poor nutritional status</li> <li>• smoking</li> <li>• prolonged indwelling catheter</li> </ul> <b>Ureteroscopy</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Pseudomonas spp</li> <li>• Enterococcus spp</li> </ul>	Oral regimens: (give 1-2 h pre-op) <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO</li> <li>or</li> <li>• co-trimoxazole 1 DS tablet PO</li> </ul> or Parenteral regimens: <ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul> or if increased risk of resistance, such as E. coli cefazolin susceptibility < 80%, prolonged hospitalization, antibiotic therapy in last 6 months, recent international travel, consider: <ul style="list-style-type: none"> <li>• ceftriaxone 1g IV x 1 dose</li> </ul>	Oral regimens: (give 1-2 h pre-op) <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO</li> <li>or</li> <li>• co-trimoxazole 1 DS tablet PO</li> </ul> or Parenteral regimen: <ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV x 1 dose</li> </ul>

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<b>UROLOGY</b>			
Note: If positive urine culture, institute treatment according to culture and susceptibility results.			
<b>Transrectal prostatic biopsy</b> <b>Prostatectomy:</b> <ul style="list-style-type: none"> <li>- transurethral (TURP)</li> <li>- perineal</li> <li>- suprapubic</li> </ul>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Pseudomonas spp</li> <li>• Enterococcus spp</li> </ul>	Oral regimens: (give 1-2 h pre-op) <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO x 1 dose</li> </ul> or <ul style="list-style-type: none"> <li>• co-trimoxazole 1 DS tablet PO x 1 dose</li> </ul> If risk factors (antibiotic therapy in last 6 months, diabetes mellitus, chronic obstructive pulmonary disease, recent international travel, recent hospitalization, healthcare worker, previous sepsis following prostate biopsy), consider adding: <ul style="list-style-type: none"> <li>• ceftriaxone 1g IV x 1 dose</li> </ul> or <ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV x 1 dose</li> </ul>	Oral regimens: (give 1-2 h pre-op) <ul style="list-style-type: none"> <li>• ciprofloxacin 500mg PO x 1 dose</li> </ul> or <ul style="list-style-type: none"> <li>• co-trimoxazole 1 DS tablet PO x 1 dose</li> </ul> If risk factors (antibiotic therapy in last 6 months, diabetes mellitus, chronic obstructive pulmonary disease, recent international travel, recent hospitalization, healthcare worker, previous sepsis following prostate biopsy), consider adding: <ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV x 1 dose</li> </ul>
<b>Ileal conduit/urinary diversion</b> <b>Cystectomy</b> <b>Radical prostatectomy</b>	<ul style="list-style-type: none"> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> <li>• Staphylococcus spp</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV + metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• gentamicin 1.5mg/kg IV + clindamycin 600mg IV x 1 dose</li> </ul>
<b>Vasectomy</b>		<b>Prophylaxis not routinely indicated</b>	

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<b>CARDIAC</b>			
<p>- Preoperative assessment of nasal culture for <i>S. aureus</i> carriage should be considered.</p> <ul style="list-style-type: none"> <li>• If nasal <i>S. aureus</i> (MSSA or MRSA) carrier, suggest intranasal mupirocin 2% bid-tid for 3-5 days prior to surgery.</li> </ul> <p><b>NB:</b> No evidence of benefit if not nasal <i>S. aureus</i> carrier.</p> <p>- The safety and efficacy of topical antibiotics applied to the sternum has not been established and is currently not recommended.</p> <p>- For patients with <u>known</u> MRSA colonization or infection, consider adding vancomycin to surgical prophylaxis regimen.</p>			
<b>Open heart surgery</b> <b>Prosthetic valve</b> <b>Coronary artery bypass</b> <b>Other open heart surgery</b>	<ul style="list-style-type: none"> <li>• <i>S. aureus</i></li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• <i>Corynebacterium</i> spp</li> <li>• Enterobacteriaceae</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op + 2g IV q8h x 24h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV pre-op + 15mg/kg IV q12h x 24h post-op</li> <li>• If patient hospitalized <math>\geq</math> 3 days prior to surgery, or saphenous vein procedure, add gentamicin 5mg/kg IV pre-op x 1 dose</li> </ul>
<b>Placement of electrophysiologic devices</b> (e.g. pacemaker, implantable cardioverter-defibrillator (ICD), ventricular assist devices, ventriculoatrial shunts, arterial patches)	<ul style="list-style-type: none"> <li>• <i>S. aureus</i></li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• <i>P. acnes</i></li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Cardiac catheterization including angioplasty +/- stenting</b> <b>Transesophageal echocardiogram</b>		<b>Prophylaxis not routinely indicated</b>	

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<b>THORACIC</b>			
<b>Esophageal resection</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> <li>• Oral anaerobes</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV + metronidazole 500mg IV</li> </ul> <p>Post-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV q8h + metronidazole 500mg IV q12h x 24h</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV + gentamicin 5mg/kg IV x 1 dose</li> </ul> <p>Post-op:</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV q8h x 24h</li> </ul>
<b>Pneumonectomy</b> <b>Lobectomy, complete or partial</b> <b>Thoracotomy</b> <b>Thoracoscopy, including video-assisted thorascopic surgery (VATS)</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> <li>• Oral anaerobes</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV or</li> <li>• cefuroxime 1.5g IV</li> </ul> <p>Post-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV q8h until chest tubes removed to maximum of 24h or</li> <li>• cefuroxime 1.5g IV q8h until chest tubes removed to maximum of 24h</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• [vancomycin 15mg/kg IV or clindamycin 600mg IV] +/- gentamicin* 5mg/kg IV x 1 dose</li> </ul> <p>Post-op:</p> <ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV q12h or clindamycin 600mg IV q8h until chest tubes removed to maximum of 24h</li> </ul> <p>* Consider adding gentamicin if:</p> <ul style="list-style-type: none"> <li>• patient hospitalized <math>\geq</math> 3 days prior to surgery.</li> <li>• chronic obstructive pulmonary disease with Gram negative colonization.</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>THORACIC</b>			
Chest tube insertion for spontaneous pneumothorax Thoracentesis		Prophylaxis not routinely indicated	
Closed chest tube insertion for chest trauma with hemo/pneumothorax	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> </ul>	Pre-op: <ul style="list-style-type: none"> <li>• cefazolin 2g IV</li> </ul> Post-op (OPTIONAL): <ul style="list-style-type: none"> <li>• cefazolin 2g IV q8h to maximum of 24h</li> </ul>	Pre-op: <ul style="list-style-type: none"> <li>• clindamycin 600mg IV +/- gentamicin 5mg/kg IV x 1 dose</li> </ul> Post-op (OPTIONAL): <ul style="list-style-type: none"> <li>• clindamycin 600mg IV q8h to maximum of 24h</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>VASCULAR</b>			
<b>Arterial surgery involving the abdominal aorta or a groin incision</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Enterobacteriaceae</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV</li> </ul> <p>Post-op (OPTIONAL):</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV q8h to maximum of 24h</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV + gentamicin 5mg/kg IV x 1 dose</li> <li>or</li> <li>• vancomycin 15mg/kg IV + gentamicin 5mg/kg IV x 1 dose</li> </ul> <p>Post-op (OPTIONAL):</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV q8h to maximum of 24h</li> <li>or</li> <li>• vancomycin 15mg/kg IV q12h to maximum of 24h</li> </ul>
<b>Arterial surgery involving placement of prosthetic material</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Enterobacteriaceae</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV</li> </ul> <p>Post-op (OPTIONAL):</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV q8h to maximum of 24h</li> </ul>	<p>Pre-op:</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> <li>or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul> <p>Post-op (OPTIONAL):</p> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV q8h to maximum of 24h</li> <li>or</li> <li>• vancomycin 15mg/kg IV q12h to maximum of 24h</li> </ul>



## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>VASCULAR</b>			
<b>Carotid endarterectomy</b> <b>Brachial artery repair</b> <b>Endovascular stenting</b> <b>Low risk</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
<b>High risk:</b> <ul style="list-style-type: none"> <li>• Placement of prosthetic material</li> </ul>		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Renal access procedures</b> <ul style="list-style-type: none"> <li>• native AV fistula</li> <li>• artificial AV graft</li> </ul>		Optional: <ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	Optional: <ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose or</li> <li>• clindamycin 600mg IV x 1 dose</li> </ul>
		Pre-op: <ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul> NB: <ol style="list-style-type: none"> <li>1. Post-op dose not required if creatinine clearance &lt;10 mL/min.</li> <li>2. If on continuous renal replacement therapy give one post-op dose of cefazolin 2g IV 12 hours after pre-op dose.</li> <li>3. If intermittent hemodialysis planned within 24 hours post procedure, give cefazolin 2g IV post hemodialysis.</li> </ol>	Pre-op: <ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul> NB: Post-op vancomycin dose not required generally. or Pre-op: <ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> </ul> Post-op: <ul style="list-style-type: none"> <li>• clindamycin 600mg IV q8h x 2 doses. NB: Clindamycin does not require dose adjustment for renal dysfunction.</li> </ul>
<b>Peritoneal dialysis</b> <ul style="list-style-type: none"> <li>• catheter placement</li> </ul>		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose or</li> <li>• clindamycin 600mg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>PLASTICS</b>			
<b>Clean procedures</b> <b>Low risk:</b> <ul style="list-style-type: none"> <li>• dermatologic</li> <li>• facial bone fracture</li> <li>• tumor excision</li> <li>• simple rhinoplasty/ septoplasty</li> <li>• simple lacerations</li> <li>• flexor tendon injury</li> <li>• hand surgery</li> </ul> <hr style="border-top: 1px dashed black;"/> <b>High risk:</b> <ul style="list-style-type: none"> <li>• placement of prosthetic material</li> <li>• skin irradiation</li> <li>• procedures below waist</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Clean-contaminated procedures</b> <ul style="list-style-type: none"> <li>• involving contaminated skin/mucosa/intertriginous areas (oral cavity, upper respiratory tract, axilla, groin, perineum)</li> <li>• wedge excision lip/ear</li> <li>• flaps on nose/head/neck</li> <li>• grafts</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> <li>• P. aeruginosa</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>PLASTICS</b>			
<b>Breast surgery</b> <b>Low risk:</b> <ul style="list-style-type: none"> <li>• reduction &amp; simple reconstructive (no prosthetic material) mammoplasty</li> </ul> <hr style="border-top: 1px dashed black;"/> <b>High risk:</b> <ul style="list-style-type: none"> <li>• placement of prosthetic material</li> <li>• morbid obesity (&gt;100kg)</li> <li>• breast cancer procedures (axillary lymph node dissection, primary nonreconstructive surgery)</li> <li>• skin irradiation</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Autologous breast reconstruction</b> <ul style="list-style-type: none"> <li>• deep inferior epigastric perforators (DIEP) flap</li> <li>• transverse rectus-abdominus myocutaneous (TRAM) flap</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op x 1 dose +/-</li> <li>• cefazolin 2g IV q8h to maximum of 24h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV pre-op x 1 dose +/-</li> <li>• clindamycin 600mg IV q8h to maximum of 24h post-op or</li> <li>• vancomycin 15mg/kg IV pre-op x 1 dose +/-</li> <li>• vancomycin 15mg/kg IV q12h to maximum of 24h post-op</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>PLASTICS</b>			
<b>Reconstructive surgery</b> <b>Tissue flaps</b> <b>Panniculectomy</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Reconstructive limb surgery</b> <b>Traumatic/crush hand</b> <b>injuries</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> <li>• Anaerobes</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op x 1 dose +/-</li> <li>• cefazolin 2g IV q8h to maximum of 24h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV pre-op x 1 dose +/-</li> <li>• clindamycin 600mg IV q8h to maximum of 24h post-op or</li> <li>• vancomycin 15mg/kg IV pre-op x 1 dose +/-</li> <li>• vancomycin 15mg/kg IV q12h to maximum of 24h post-op</li> </ul> <p>If contamination suspected, consider adding:</p> <ul style="list-style-type: none"> <li>• gentamicin 5mg/kg IV pre-op x 1 dose to above regimens</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>PLASTICS</b>			
<b>Carpal tunnel</b>  <b>Low risk</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> </ul>	<b>Prophylaxis not routinely indicated</b>	
<hr style="border-top: 1px dashed black;"/> <b>High risk:</b> <ul style="list-style-type: none"> <li>• morbid obesity (&gt; 100kg)</li> <li>• immunocompromised</li> </ul>		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>ORTHOPEDIC</b>			
Diagnostic or operative arthroscopy		<b>Prophylaxis not routinely indicated</b>	
Fractures with internal fixation (nails, plates, screws, wires)	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> </ul>	- For patients with <u>known</u> MRSA colonization or infection, <u>add</u> vancomycin to surgical prophylaxis regimen.	
		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Joint replacement</b> - hip - knee - elbow - ankle - shoulder	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	- Preoperative assessment of nasal culture for S. aureus carriage should be considered. <ul style="list-style-type: none"> <li>• If nasal S. aureus (MSSA or MRSA) carrier, suggest intranasal mupirocin 2% bid-tid for 3-5 days prior to surgery.</li> </ul> <b>NB:</b> No evidence of benefit if not nasal S. aureus carrier.	
		- For patients with <u>known</u> MRSA colonization or infection, <u>add</u> vancomycin to surgical prophylaxis regimen. - Insufficient evidence to routinely recommend use of antibiotic-impregnated bone cement in primary arthroplasties.	
		<ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op +/- 2g IV q8h to maximum of 24h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV pre-op +/- 600mg IV q8h to maximum of 24h post-op or</li> <li>• vancomycin 15mg/kg IV pre-op +/- 15mg/kg IV q12h to maximum of 24h post-op</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>ORTHOPEDIC</b>			
<b>Fractures, complex (open)</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Enterobacteriaceae</li> </ul>	<p>- For patients with known MRSA colonization or infection, <u>add</u> vancomycin to surgical prophylaxis regimen.</p> <ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op + 2g IV q8h x 24-48h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV pre-op + 600mg IV q8h x 24-48h post-op</li> <li style="text-align: center;">or</li> <li>• vancomycin 15mg/kg IV pre-op + 15mg/kg IV q12h x 24-48h post-op</li> </ul> <p>If heavily soiled/contaminated (Grade III), add:</p> <ul style="list-style-type: none"> <li>• gentamicin 5mg/kg IV pre-op x 1 dose</li> </ul>
<b>Amputation of lower limb</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Enterobacteriaceae</li> <li>• Clostridium spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV +/- metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV + gentamicin 1.5mg/kg IV x 1 dose</li> </ul>
<b>Fasciotomy</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> <li style="text-align: center;">or</li> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>SPINAL SURGERY</b>			
<ul style="list-style-type: none"> <li>- Preoperative assessment of nasal culture for <i>S. aureus</i> carriage should be considered.                             <ul style="list-style-type: none"> <li>• If nasal <i>S. aureus</i> (MSSA or MRSA) carrier, suggest intranasal mupirocin 2% bid-tid for 3-5 days prior to surgery.</li> </ul> </li> <li><b>NB:</b> No evidence of benefit if not nasal <i>S. aureus</i> carrier.</li> <li>- For patients with known MRSA colonization or infection, add vancomycin to surgical prophylaxis regimen.</li> </ul>			
<b>Laminectomy</b> <b>Microdiscectomy</b>	<ul style="list-style-type: none"> <li>• <i>S. aureus</i></li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Spinal fusion</b> <b>Insertion of foreign material</b>	<ul style="list-style-type: none"> <li>• <i>S. aureus</i></li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV pre-op +/- 2g IV q8h to maximum of 24h post-op</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV pre-op +/- vancomycin 15mg/kg IV q12h to maximum of 24h post-op</li> </ul>



## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>NEUROSURGERY</b>			
<b>Craniotomy Stereotactic brain biopsy/procedure</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>Cerebrospinal fluid shunting operations</b> NB: Antimicrobial-impregnated devices are not recommended.	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose</li> </ul>
<b>External ventricular drain (EVD) Intracranial pressure (ICP) monitor</b> NB: Evidence for antibiotic prophylaxis inconclusive. Antimicrobial-coated EVD catheters not recommended.	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose pre-insertion</li> </ul>	<ul style="list-style-type: none"> <li>• vancomycin 15mg/kg IV x 1 dose pre-insertion</li> </ul>
<b>Contaminated procedures</b> <ul style="list-style-type: none"> <li>• compound skull fractures</li> <li>• open scalp lacerations</li> <li>• CSF fistulae</li> </ul>		<b>Institute treatment rather than prophylaxis</b>	

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>HEAD AND NECK SURGERY</b>			
<p><b>Clean procedures</b> (no incision through oral/nasal/pharyngeal mucosa, no insertion of prosthetic material) e.g. Thyroidectomy, Lymph node excision and/or</p> <p><b>Low risk, e.g.</b></p> <ul style="list-style-type: none"> <li>• Septoplasty</li> <li>• Tonsillectomy</li> <li>• Adenoidectomy</li> <li>• Tympanoplasty/ear surgery</li> <li>• Mastoidectomy</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> <li>• Oral anaerobes</li> </ul>	<p><b>Prophylaxis not routinely indicated</b></p>	
<p>-----</p> <p><b>High risk:</b></p> <ul style="list-style-type: none"> <li>• Insertion of prosthetic material</li> </ul>		<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>HEAD AND NECK SURGERY</b>			
<p><b>Clean contaminated procedures with incision through oral/nasal/pharyngeal mucosa</b></p> <p><b>Low risk</b></p> <hr style="border-top: 1px dashed black;"/> <p><b>High risk:</b></p> <ul style="list-style-type: none"> <li>• Head and neck cancer                             <ul style="list-style-type: none"> <li>○ Radical/bilateral neck dissection</li> <li>○ Reconstructive surgery with myocutaneous flaps or microvascular free flaps</li> </ul> </li> <li>• Mandibular surgery if tobacco/alcohol/illicit drug use</li> </ul>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Streptococcus spp</li> <li>• Oral anaerobes</li> <li>• Enterobacteriaceae</li> </ul>	<ul style="list-style-type: none"> <li>• cefazolin 2g IV x 1 dose</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• cefazolin 2g IV + metronidazole 500mg IV x 1 dose</li> </ul>	<ul style="list-style-type: none"> <li>• clindamycin 600mg IV x 1 dose</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• clindamycin 600mg IV + gentamicin 1.5mg/kg IV x 1 dose</li> </ul>

## AHS RECOMMENDED DRUG REGIMENS FOR SURGICAL PROPHYLAXIS IN ADULT PATIENTS

SURGERY	COMMON PATHOGENS	REGIMEN(S) OF CHOICE (See General Principles)	ALTERNATIVE REGIMENS FOR CEPHALOSPORIN ALLERGY or SEVERE PENICILLIN ALLERGY/ ANAPHYLAXIS (See General Principles)
<b>OPHTHALMOLOGY</b> <b>NB: Pre-op disinfection with povidone-iodine 5 or 10% solution recommended. Chlorhexidine 0.05% is alternative for iodine-allergic patients. Higher chlorhexidine concentrations are associated with corneal toxicity. Avoid leakage of either povidone-iodine or chlorhexidine into the anterior chamber.</b>			
<b>Cataract extraction</b> <b>Corneal transplant</b> <b>Retinal detachment</b> <b>Vitrectomy</b> <b>Dacryocystorhinostomy</b> <b>Eyelid Surgery</b> <b>Enucleation</b>	<ul style="list-style-type: none"> <li>• S. aureus</li> <li>• Coagulase negative staphylococcus (CoNS)</li> <li>• Streptococcus spp</li> <li>• Enterobacteriaceae</li> <li>• Pseudomonas spp</li> </ul>	<p>Eye drops every 5-15 minutes for 5 doses within 1 hour prior to start of procedure*:</p> <ul style="list-style-type: none"> <li>• moxifloxacin or</li> <li>• polymyxin B - gramicidin</li> </ul> <p>+/-</p> <p><u>At end of procedure:</u></p> <p>Intracameral injection**:</p> <ul style="list-style-type: none"> <li>• cefazolin 1-2.5mg or</li> <li>• cefuroxime 1mg</li> </ul> <p>or</p> <p>Subconjunctival injection:</p> <ul style="list-style-type: none"> <li>• cefazolin 100mg or</li> <li>• cefuroxime 50mg</li> </ul> <p>* The necessity of continuing topical antimicrobials postoperatively has not been established.</p> <p>**Intracameral antibiotics may be more effective than subconjunctival antibiotics.</p>	