## Prophylactic Antibiotic Regimen Selection for Surgery

**Courtesy, Outpatient Surgery Magazine**

February, 2010

<table>
<thead>
<tr>
<th>Surgical Procedure</th>
<th>Approved Antibiotics</th>
</tr>
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<tbody>
<tr>
<td><strong>Cardiac (Pacemakers or AI CDs) or Vascular</strong></td>
<td></td>
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</tbody>
</table>
| | Cefazolin, Cefuroxime or Vancomycin*  
If β-lactam allergy: Vancomycin* or Clindamycin |
| **Orthopedic/ Podiatry** | |
| | Cefazolin or Cefuroxime or Vancomycin*  
If β-lactam allergy: Vancomycin* or Clindamycin |
| **Genitourinary** | |
| Transrectal prostate biopsy | Quinolone†  
or 2nd Generation Cephalosporin  
or 3rd Generation Cephalosporin  
or Aminoglycoside + Metronidazole  
or Aminoglycoside + Clindamycin  
or Aztreonam + Metronidazole  
or Aztreonam + Clindamycin |
| Penile prosthesis insertion, removal, revision | Ampicillin/Sublactam or Ticarcillin/Clavulanate or Piperacillin/Tazobactam  
or Aminoglycoside + 1st Generation Cephalosporin  
or Aminoglycoside + 2nd Generation Cephalosporin  
or Aminoglycoside + Vancomycin*  
or Aminoglycoside + Clindamycin  
or Aztreonam + 1st Generation Cephalosporin  
or Aztreonam + 2nd Generation Cephalosporin  
or Aztreonam + Vancomycin*  
or Aztreonam + Clindamycin |
| **Gastric/ Biliary** | |
| PEG placement, PEG revision | Cefazolin or Cefuroxime,  
Cefoxitin or Cefotetan  
or Ampicillin/Sublactam or Cefazolin or Cefuroxime + Metronidazole  
If β-lactam allergy: Clindamycin + Aminoglycoside  
or Clindamycin + Quinolone  
or Vancomycin* + Aminoglycoside |
| **Colon** | |
| | Cefotetan, Cefoxitin, Ampicillin/Sublactam or Ertapenem†  
OR Cefazolin or Cefuroxime + Metronidazole  
If β-lactam allergy: Clindamycin + Aminoglycoside  
or Clindamycin + Quinolone  
or Clindamycin + Aztreonam  
OR Metronidazole with Aminoglycoside  
or Metronidazole + Quinolone |
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<th><strong>Gynecological</strong></th>
<th><strong>Prophylactic Regimen</strong></th>
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<tr>
<td><strong>Hysterectomy</strong></td>
<td>Cefotetan, Cefazolin, Cefoxitin, Cefuroxime, or Ampicillin/Sulbactam&lt;br&gt;<strong>If β-lactam allergy:</strong> Clindamycin + Aminoglycoside&lt;br&gt;or Clindamycin + Quinolone&lt;br&gt;or Clindamycin + Aztreonam&lt;br&gt;<strong>OR</strong> Metronidazole + Aminoglycoside&lt;br&gt;or Metronidazole + Quinolone</td>
</tr>
<tr>
<td><strong>Laparoscopically-assisted hysterectomy; Vaginal hysterectomy</strong></td>
<td>Cefazolin, Cefuroxime, Cefoxitin, Cefotetan or Ampicillin/Sulbactam&lt;br&gt;<strong>If β-lactam allergy:</strong> Metronidazole + Aminoglycoside&lt;br&gt;or Metronidazole + Quinolone&lt;br&gt;or Clindamycin + Aminoglycoside&lt;br&gt;or Clindamycin + Quinolone</td>
</tr>
<tr>
<td><strong>Pubovaginal sling</strong></td>
<td>1st Generation cephalosporin&lt;br&gt;or 2nd Generation cephalosporin&lt;br&gt;or Ampicillin/Sulbactam&lt;br&gt;or Quinolone&lt;br&gt;<strong>If β-lactam allergy:</strong> Aminoglycoside + Clindamycin&lt;br&gt;or Aminoglycoside + Metronidazole&lt;br&gt;or Aztreonam + Clindamycin&lt;br&gt;or Aztreonam + Metronidazole</td>
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| **Head and Neck** | Cefazolin or Cefuroxime<br>or Clindamycin ± Aminoglycoside |

| **Neurological** | Nafcillin or Oxacillin<br>Cefazolin or Cefuroxime<br>Vancomycin* or Clindamycin |

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<th><strong>Special Considerations</strong></th>
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*For cardiac, orthopedic and vascular surgery, if the patient is allergic to β-lactam antibiotics, Vancomycin or Clindamycin are acceptable substitutes.*

*Vancomycin is acceptable with a physician/APN/PA/pharmacist documented justification for its use (see data element *Vancomycin)*

† A single dose of ertapenem is recommended for colon procedures.

†† The only operations for which oral antibiotics alone are acceptable are the transrectal prostate biopsy and pubovaginal sling procedures.

"β-lactam" refers to antibiotics in the penicillin and cephalosporin classes.

1st Generation cephalosporin is cefazolin.

2nd Generation cephalosporins include cefoxitin, cefotetan and cefuroxime.

3rd Generation cephalosporins include ceftiraxone, cefotaxime and ceftazidime.

Quinolones include levofloxacin (used most frequently), ciprofloxacin, moxifloxacin and gatifloxacin.

Aminoglycosides include gentamicin, tobramycin and amikacin.