

## Surgical Antibiotic Prophylaxis ABDOMINAL SURGERY

*Antibiotic prophylaxis is required for ALL abdominal surgery, including laparoscopic surgery*

Surgical Procedure	Antibiotic Prophylaxis
<p>Where there is a higher-risk of post-operative wound infection during</p> <ul style="list-style-type: none"> <li>• colorectal surgery</li> <li>• appendicectomy</li> <li>• upper gastrointestinal tract surgery</li> <li>• biliary surgery</li> </ul>	<p><b>cephazolin IV 1g</b> at the time of induction</p> <p><b>PLUS</b></p> <p><b>metronidazole IV 500mg</b> infusion ending at the time of induction</p> <p>Note: use 2 grams of cephazolin for patients with body weight greater than 80 kg</p>
<ul style="list-style-type: none"> <li>• endoscopic procedures including                             <ul style="list-style-type: none"> <li>- biliary tract procedures</li> <li>- sclerotherapy</li> <li>- ERCP</li> <li>- oesophageal dilation</li> </ul> </li> </ul> <p>Procedures in low-risk patients:</p> <ul style="list-style-type: none"> <li>• upper gastrointestinal surgery</li> <li>• biliary tract surgery and elective cholecystectomy</li> <li>• hernia repair, where there is mesh or prosthetic material</li> </ul>	<p>As a single agent at the time of induction:</p> <p><b>cephazolin IV 1g</b> at the time of induction</p> <p>Note: use 2 grams of cephazolin for patients with body weight greater than 80 kg</p>
<ul style="list-style-type: none"> <li>• hernia repair without prosthetic material</li> </ul>	<p>antibiotic prophylaxis NOT indicated</p>

If peritonitis, perforated viscus or soiling is detected or occurs during surgery, a full course of antibiotic therapy should be administered.  
(see *Therapeutic Guidelines: Antibiotic Version 13*, page 139)

*This table shows the surgical prophylaxis options preferred and approved by the Western Australian Therapeutics Advisory Group and the Western Australian Infectious Diseases Physician Group. For additional treatment options and information, please refer to Therapeutic Guidelines: Antibiotic Version 13, 2006, pages 190 to 192*

## Surgical Antibiotic Prophylaxis ORTHOPAEDIC SURGERY

*Pre-operative screening for MRSA may be appropriate for some patients undergoing orthopaedic surgery*

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>• prosthetic large joint replacement</li> <li>• insertion of prosthetic or transplant material</li> <li>• internal fixation of long bone fractures</li> </ul>	<p>As a single agent at the time of induction:</p> <p style="text-align: center;"><b>cephazolin IV 1g</b> OR <b>flucloxacillin IV 2g</b></p> <p>Note: 1) administration a second dose may be appropriate during long procedures (after 4 hours for cephalosporins, and after 3 hours for flucloxacillin) 2) use 2 grams of cephalosporins for patients with body weight greater than 80 kg</p>
<p>For procedures where</p> <ul style="list-style-type: none"> <li>• the patient is a proven or suspected MRSA carrier</li> <li>• re-operations</li> <li>• the patient is hypersensitive to penicillins or cephalosporins</li> </ul>	<p>As a single agent infused slowly over 1 hour, ending at the time of induction:</p> <p style="text-align: center;"><b>vancomycin IV 25 mg/kg up to 1.5g</b></p> <p>Note - approval of a Clinical Microbiologist or Infectious Diseases Physician may be required before use of vancomycin.</p>

Appropriate antibiotic therapy may be required for compound fractures, or where severe wound soiling, tissue damage and/or devitalised tissue are present.  
(see Therapeutic Guidelines: Antibiotic Version 13 pages 277 and 278 for details)

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## Surgical Antibiotic Prophylaxis CARDIAC SURGERY

*Pre-operative screening for MRSA may be appropriate for some patients undergoing cardiac surgery*

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>• valve replacement*</li> <li>• correction of septal and other cardiac anatomical defects</li> <li>• other procedures where presence of MRSA, or multi-resistant coagulase-negative staphylococci (MRSE)* is proven or suspected, or procedure is a re-operation</li> </ul> <p>* incidence of MRSE is high in WA tertiary hospitals</p>	<p>As a single agent infused slowly over 1 hour, ending at the time of induction: <b>vancomycin IV 25 mg/kg up to 1.5g</b></p> <p style="text-align: center;">PLUS</p> <p style="text-align: center;"><b>gentamicin IV 2 mg/kg</b> at the time of induction</p> <p>Note: approval of a Clinical Microbiologist or Infectious Diseases Physician may be required before use of vancomycin</p>
<ul style="list-style-type: none"> <li>• coronary artery bypass</li> <li>• cardiac transplant</li> <li>• insertion of a permanent pacemaker</li> </ul>	<p>As a single agent at the time of induction:</p> <p style="text-align: center;"><b>cephazolin IV 1g</b> and after 4 hours while procedure continues</p> <p>Note: use 2 grams of cephalosporin for patients with body weight greater than 80 kg</p>

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## Surgical Antibiotic Prophylaxis VASCULAR SURGERY

*For vascular surgery, there is some evidence for extending the duration of antibiotic prophylaxis for up to 48 hours post-operatively*

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>arterial reconstructive surgery                             <ul style="list-style-type: none"> <li>- involving                                     <ul style="list-style-type: none"> <li>- abdominal aorta</li> <li>- lower limb</li> <li>- groin incision</li> <li>- implantation of foreign material</li> </ul> </li> </ul> </li> </ul>	<p><b>cephazolin IV 1g</b> at the time of induction, then after 8 hours for a maximum of 48 hours</p> <p>Note: use 2 grams of cephalosporin for patients with body weight greater than 80 kg</p>
<p>For procedures where</p> <ul style="list-style-type: none"> <li>the patient is a proven or suspected MRSA carrier</li> <li>re-operations</li> <li>the patient is hypersensitive to penicillins or cephalosporins</li> </ul>	<p>As a single agent infused slowly over 1 hour, ending at the time of induction: <b>vancomycin IV 25 mg/kg up to 1.5g</b> <b>PLUS</b> <b>gentamicin IV 4 to 6 mg/kg</b> at the time of induction and 24 hours later</p> <p>Note: 1) approval of a Clinical Microbiologist or Infectious Diseases Physician may be required before use of vancomycin 2) adjust gentamicin dose according to renal function</p>
<ul style="list-style-type: none"> <li>lower limb amputation eg due to ischaemic leg</li> </ul>	<p><b>benzyl penicillin IV 1.2g</b> at the time of induction, then after 6 hours for 24 hours</p> <p><b>OR</b></p> <p><b>metronidazole IV 500mg</b> ending infusion at the time of induction, then after 12 hours for 24 hours</p>
<ul style="list-style-type: none"> <li>brachial or carotid artery procedures (not involving prosthetic material)</li> </ul>	antibiotic prophylaxis NOT indicated
<ul style="list-style-type: none"> <li>varicose veins</li> </ul>	antibiotic prophylaxis NOT indicated

*This table shows the surgical prophylaxis options preferred and approved by the Western Australian Therapeutics Advisory Group and the Western Australian Infectious Diseases Physician Group. For additional treatment options and information, please refer to Therapeutic Guidelines: Antibiotic Version 13, 2006, page 194, 196 and 197.*

## Surgical Antibiotic Prophylaxis NEUROSURGERY

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>• prolonged craniotomy procedures</li> <li>• re-explorations</li> <li>• microsurgery</li> <li>• insertion of prosthetic material</li> </ul>	<p>As a single agent at the time of induction:</p> <p style="text-align: center;"><b>cephazolin IV 1g</b></p> <p style="text-align: center;">OR</p> <p style="text-align: center;"><b>flucloxacillin IV 2g</b></p> <p>Note: use 2 grams of cephalosporin for patients with body weight greater than 80 kg</p>
<p>For procedures where</p> <ul style="list-style-type: none"> <li>• the patient is a proven or suspected MRSA carrier</li> <li>• re-operations</li> <li>• the patient is hypersensitive to penicillins or cephalosporins</li> </ul>	<p>As a single agent infused slowly over 1 hour, ending at the time of induction:</p> <p style="text-align: center;"><b>vancomycin IV 25 mg/kg up to 1.5g</b></p> <p>Note - approval of a Clinical Microbiologist or Infectious Diseases Physician may be required before use of vancomycin.</p>
<p>Insertion of</p> <ul style="list-style-type: none"> <li>• shunts</li> <li>• ventricular drains</li> <li>• pressure monitors</li> </ul>	<p>The benefit of routine antibiotic prophylaxis is unproven</p>
<p>CSF leakage following trauma</p>	<p>Antibiotic prophylaxis is NOT indicated</p>

*This table shows the surgical prophylaxis options preferred and approved by the Western Australian Therapeutics Advisory Group and the Western Australian Infectious Diseases Physician Group. For additional treatment options and information, please refer to Therapeutic Guidelines: Antibiotic Version 13, 2006, pages 194 and 195.*

## Surgical Antibiotic Prophylaxis HEAD, NECK and THORACIC SURGERY

Surgical Procedure	Antibiotic Prophylaxis
<p>For procedures involving</p> <ul style="list-style-type: none"> <li>• incision of mucosa</li> <li>• insertion of prosthetic material</li> <li>• stapedectomy</li> <li>• increased risk of infection eg. due to cancer of the head or neck</li> </ul>	<p>As a single agent at the time of induction:</p> <p style="text-align: center;"><b>cephazolin IV 1g</b></p> <p>Note: use 2 grams of cephalosporin for patients with body weight greater than 80 kg</p>

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## Surgical Antibiotic Prophylaxis OBSTETRIC & GYNAECOLOGICAL SURGERY

*Appropriate screening and treatment of infections prior to surgery reduces infectious complications*

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>vaginal hysterectomy</li> <li>abdominal hysterectomy</li> <li>vaginal operations &amp; repairs</li> <li>termination of pregnancy</li> </ul>	<p><b>cephazolin IV 1g</b> at the time of induction</p> <p><b>PLUS</b></p> <p><b>metronidazole IV 500mg</b> infusion ending at the time of induction</p> <p>Note: use 2 grams of cephalosporin for patients with body weight greater than 80 kg</p>
<ul style="list-style-type: none"> <li>Caesarean section</li> </ul>	<p><b>cephazolin IV 1g</b> after the cord is clamped</p>
<ul style="list-style-type: none"> <li>indwelling urinary catheters (manage with strict maintenance and early withdrawal of urinary catheter)</li> </ul>	<p>antibiotic prophylaxis NOT indicated</p>

*This table shows the surgical prophylaxis options preferred and approved by the Western Australian Therapeutics Advisory Group and the Western Australian Infectious Diseases Physician Group. For additional treatment options and information, please refer to Therapeutic Guidelines: Antibiotic Version 13, 2006, pages 195 and 196*

## Surgical Antibiotic Prophylaxis UROLOGICAL SURGERY

*Before surgery, check for presence of urinary tract infection and treat according to proven susceptibility*

Surgical Procedure	Antibiotic Prophylaxis
<ul style="list-style-type: none"> <li>prostatectomy</li> </ul>	As a single dose upon induction:  <b>gentamicin IV 2mg/kg</b>
<ul style="list-style-type: none"> <li>transrectal prostatic biopsy</li> </ul>	As a single dose, 1 hour before procedure:  <b>trimethoprim orally 300mg</b>
<ul style="list-style-type: none"> <li>post-operative and temporary indwelling urinary catheters (manage with strict maintenance and early withdrawal of urinary catheter)</li> </ul>	antibiotic prophylaxis NOT indicated

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