

Surgical antibiotic prophylaxis: Therapeutic Guidelines summary tables



<u>Abdominal procedures</u>	<u>Assisted reproductive technology and infertility diagnostic procedures</u>	<u>Breast procedures</u>	<u>Cardiac implantable electronic device insertion</u>
<u>Cardiac surgical procedures</u>	<u>Ear, nose and throat procedures</u>	<u>Emergency exploratory laparotomy</u>	<u>Gastrointestinal endoscopic procedures</u>
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Summarised advice is not provided for burns surgery; see [Therapeutic Guidelines](#) for discussion.

Surgical antibiotic prophylaxis: abdominal procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for abdominal procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a gastrointestinal tract procedure, regardless of whether surgical antibiotic prophylaxis is required – see [Therapeutic Guidelines](#) for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
Gastroduodenal and oesophageal procedures			
endoscopic procedures	NO		
nonendoscopic procedures that do not enter the gastrointestinal tract lumen	ONLY IF the patient has risk factors for postoperative infection	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	Risk factors for postoperative infection include morbid obesity; gastric outlet obstruction; reduced gastric acidity or motility; and gastrointestinal bleeding, malignancy or perforation.
nonendoscopic procedures that enter the gastrointestinal tract lumen	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	
Biliary procedures, including laparoscopic procedures			
laparoscopic procedures	ONLY IF the patient has risk factors for postoperative infection	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	Risk factors for postoperative infection include age older than 70 years, diabetes, obstructive jaundice, common bile duct stones, acute cholecystitis, and nonfunctioning gallbladder.
open cholecystectomy	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	If the patient is being treated with antibiotic therapy for acute cholecystitis, additional surgical antibiotic prophylaxis may not be required – see Therapeutic Guidelines for discussion.

Small intestinal procedures			
endoscopic procedures	NO		
nonendoscopic procedures	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if the small intestine is obstructed</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	If the patient is being treated with antibiotic therapy for an acute intra-abdominal infection, additional surgical antibiotic prophylaxis may not be required – see Therapeutic Guidelines for discussion.
Colorectal procedures			
endoscopic procedures	NO		
nonendoscopic procedures	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	If the patient is being treated with antibiotic therapy for an acute intra-abdominal infection, additional surgical antibiotic prophylaxis may not be required – see Therapeutic Guidelines for discussion.
Appendicectomy			
appendicectomy, including laparoscopic appendicectomy	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	If the patient is being treated with antibiotic therapy for appendicitis, additional surgical antibiotic prophylaxis is not required – see Therapeutic Guidelines for discussion.
Hernia repair			
hernia repair with or without prosthetic material	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if entry into the bowel lumen is expected</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	

GFR = glomerular filtration rate

Surgical antibiotic prophylaxis: assisted reproductive technology and infertility diagnostic procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for assisted reproductive technology and infertility diagnostic procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
hysterosalpingography hysterosalpingo-contrast sonography laparoscopic dye test (chromotubation)	ONLY IF the patient has a recent history of PID or tubal dilatation, or tubal damage is noted on visualisation, and STIs not investigated, and treated as indicated, before the procedure	doxycycline 100 mg orally, 12-hourly for 5 days. The first dose should be given before the procedure	
oocyte retrieval (donor or recipient)	NO		

PID = pelvic inflammatory disease; STI = sexually transmissible infection

Surgical antibiotic prophylaxis: breast procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for breast procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimen	Notes
repeat or revision procedures	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.
axillary lymph node clearance		PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	
biopsy	NO		This advice applies for diagnostic excisional and stand-alone sentinel node biopsies. Surgical antibiotic prophylaxis is required for repeat or revision procedures – see Therapeutic Guidelines for discussion.
breast augmentation surgery	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara. Postoperative prophylactic doses can be considered, but prophylaxis should not continue beyond 24 hours – see Therapeutic Guidelines for discussion.
breast reconstruction surgery, including autologous, and prosthetic breast reconstruction with or without an acellular dermal matrix		PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	

lumpectomy	NO		This advice applies to lumpectomy with or without needle or wire localisation. Surgical antibiotic prophylaxis is required for repeat or revision procedures – see Therapeutic Guidelines for discussion.
nipple surgery	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin 15 mg/kg intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.
reduction mammoplasty			
simple mastectomy			
wide local excision			

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: cardiac implantable electronic device insertion

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for cardiac implantable electronic device insertion. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
insertion of cardiac implantable electronic devices other than a ventricular assist device (VAD)	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>Examples of cardiac implantable electronic devices include permanent pacemaker device, cardioverter defibrillator and cardiac resynchronisation device.</p> <p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p> <p>An absorbable, antibiotic-eluting envelope may be considered for patients undergoing pocket or lead revision, generator replacement, system upgrade, or an initial cardiac resynchronisation therapy defibrillator (CRT-D) implantation.</p>
insertion of a ventricular assist device (VAD)	YES	Refer to local protocols or seek expert advice	Choice of prophylaxis should be guided by local microbiology. The optimal duration of prophylaxis is unclear.

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: cardiac surgical procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for cardiac surgical procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Repeat intraoperative doses are often necessary because of the long duration of cardiac surgical procedures – see [Therapeutic Guidelines](#) for discussion.

For cardiac surgical procedures, there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. Postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
all cardiac procedures other than TAVI	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>Cardiac procedures include valve replacement, coronary artery bypass surgery and cardiac transplant.</p> <p>For insertion of a ventricular assist device (VAD), see Therapeutic Guidelines for discussion.</p> <p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>
TAVI	YES	Seek expert advice	The optimal prophylactic regimen for TAVI is not known. The prophylactic antibiotic regimens recommended for other cardiac surgical procedures may need to be modified for TAVI according to the organisms causing infection within the institution and their susceptibility patterns.

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*; TAVI = transcatheter aortic valve implantation

Surgical antibiotic prophylaxis: ear, nose and throat procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for ear, nose and throat procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
adenoidectomy	NO		Infective endocarditis prophylaxis is required for patients with specific cardiac conditions who are undergoing an adenoidectomy – see Therapeutic Guidelines for indications and regimens.
complex septorhinoplasty	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	This prophylactic regimen is appropriate for most patients. If the procedure is contaminated or dirty or undertaken in the setting of current or recent infection, the optimal prophylactic regimen is uncertain. The choice of prophylaxis should be guided by recent culture and susceptibility test results – seek expert advice. For stratification of surgical wounds, see Therapeutic Guidelines .
hearing implant procedures, including cochlear implant	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.

laryngectomy (primary or salvage)	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p> <p>Postoperative prophylactic doses can be considered, but prophylaxis should not continue beyond 24 hours – see Therapeutic Guidelines for discussion.</p>
major ear surgery	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	<p>This prophylactic regimen is appropriate for most patients. If the procedure is contaminated or dirty or undertaken in the setting of current or recent infection, the optimal prophylactic regimen is uncertain. The choice of prophylaxis should be guided by recent culture and susceptibility test results – seek expert advice. For stratification of surgical wounds, see Therapeutic Guidelines.</p>
otoplasty	NO		
revision sinus surgery	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	<p>This prophylactic regimen is appropriate for most patients. If the procedure is contaminated or dirty or undertaken in the setting of current or recent infection, the optimal prophylactic regimen is uncertain. The choice of prophylaxis should be guided by recent culture and susceptibility test results – seek expert advice. For stratification of surgical wounds, see Therapeutic Guidelines.</p>
septoplasty			
stapedectomy	NO		
tonsillectomy	NO		<p>Infective endocarditis prophylaxis is required for patients with specific cardiac conditions who are undergoing a tonsillectomy – see Therapeutic Guidelines for indications and regimens.</p>

tympanomastoid surgery	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g PLUS metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision	
uncomplicated ear surgery	NO		
uncomplicated nose or sinus surgery, including endoscopic procedures			
GFR = glomerular filtration rate; MRSA = methicillin-resistant <i>Staphylococcus aureus</i>			

Surgical antibiotic prophylaxis: emergency exploratory laparotomy

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for emergency exploratory laparotomy. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
emergency exploratory laparotomy	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if hollow visceral perforation is suspected</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, as a single dose</p>	<p>If the patient is being treated with antibiotic therapy for suspected infection, additional surgical antibiotic prophylaxis may not be required – see Therapeutic Guidelines for discussion.</p>

GFR = glomerular filtration rate

Surgical antibiotic prophylaxis: gastrointestinal endoscopic procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for gastrointestinal endoscopic procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a gastrointestinal endoscopic procedure, regardless of whether surgical antibiotic prophylaxis is required – see [Therapeutic Guidelines](#) for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
Routine gastrointestinal endoscopy			
routine gastrointestinal endoscopy (upper or lower)	NO		
Endoscopic retrograde cholangiopancreatography (ERCP)			
ERCP involving transpapillary or transmural drainage of pseudocysts	YES	The choice of prophylaxis should be guided by local microbiological data. If data are not available: gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg	Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use. For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.
ERCP with evidence of biliary tract obstruction	ONLY IF complete biliary drainage may not be achieved	The choice of prophylaxis should be guided by local microbiological data. If data are not available: gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure	Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.
ERCP procedures not listed above	ONLY IF the patient has communicating pancreatic cysts or pseudocysts	gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg	For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.

Endoscopic ultrasound (EUS)

diagnostic EUS	NO		
EUS-FNA of solid lesions not thought to be infected			
EUS-FNA of mediastinal cystic lesions	YES	<p>cefazolin intravenously, within the 60 minutes before the procedure</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before the procedure</p>	

Gastrostomy or jejunostomy tube insertion

PEG or PEJ tube insertion	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p>	<p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>
PRG or PRJ tube insertion		<p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	

CrCl = creatinine clearance; ERCP = endoscopic retrograde cholangiopancreatography; EUS = endoscopic ultrasound; EUS-FNA = endoscopic ultrasound-guided fine-needle aspiration; GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*; PEG = percutaneous endoscopic gastrostomy; PEJ = percutaneous endoscopic jejunostomy; PRG = percutaneous radiologic gastrostomy; PRJ = percutaneous radiologic jejunostomy

Surgical antibiotic prophylaxis: gynaecological procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for gynaecological procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a gynaecological procedure, regardless of whether surgical antibiotic prophylaxis is required – see [Therapeutic Guidelines](#) for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
autologous mid-urethral sling procedures	NO		
cervical tissue excision procedures, including LLETZ, cone biopsy and endocervical curettage			
dilation and curettage, except surgical abortion			
endometrial biopsy or ablation			
gynaecological laparotomy procedures	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS metronidazole 500 mg intravenously, within the 120 minutes before surgical incision	
gynaecological-oncological procedures			
hysterectomy			
hysterosalpingography	ONLY IF the patient has a recent history of PID or tubal dilatation, or tubal damage is noted on visualisation, and STIs not investigated, and treated as indicated, before the procedure	doxycycline 100 mg orally, 12-hourly for 5 days. The first dose should be given before the procedure	

hysteroscopy (operative or diagnostic)	NO		
insertion of an intrauterine device			
labioplasty			
laparoscopic procedures that do not enter the bowel, vagina or uterine cavity			
laparoscopic procedures that enter the bowel, vagina or uterine cavity	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS metronidazole 500 mg intravenously, within the 120 minutes before surgical incision	
medical (pharmacological) abortion	NO		
pelvic organ prolapse procedures	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS metronidazole 500 mg intravenously, within the 120 minutes before surgical incision	
stress urinary incontinence procedures			
surgical abortion	YES if not investigated for STIs, and treated as indicated, before the procedure	azithromycin 1 g orally, within the 120 minutes before the procedure	
synthetic mid-urethral sling procedures	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS metronidazole 500 mg intravenously, within the 120 minutes before surgical incision	

GFR = glomerular filtration rate; LLETZ = large loop excision of the transformation zone; PID = pelvic inflammatory disease; STI = sexually transmissible infection

Surgical antibiotic prophylaxis: head and neck procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for head and neck procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 to 48 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 to 48 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
debulking or reconstructive surgery for malignancy	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	Postoperative prophylactic doses can be considered, but prophylaxis should not continue beyond 24 to 48 hours – see Therapeutic Guidelines for discussion.
extensive neck dissection for malignancy		PLUS for incisions through mucosal surfaces metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision	
parotidectomy	NO		
procedures involving insertion of prosthetic material	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g PLUS for incisions through mucosal surfaces metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision	
simple lymph node excision, including submandibular lymph node excision	NO		
thyroidectomy			
clean procedures not listed above	NO		For stratification of surgical wounds, see Therapeutic Guidelines .

clean-contaminated procedures not listed above	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS for incisions through mucosal surfaces</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	For stratification of surgical wounds, see Therapeutic Guidelines .
GFR = glomerular filtration rate			

Surgical antibiotic prophylaxis: neurosurgery

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for neurosurgery. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
craniotomy	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara. Vaccinate patients scheduled for intracranial shunt insertion against <i>Streptococcus pneumoniae</i> , ideally before the procedure – see the Australian Immunisation Handbook for further information.
external ventricular drain insertion			
intracranial shunt insertion			
microsurgery			
pressure monitor insertion			
procedures involving insertion of prosthetic material			
re-exploration procedures			

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: obstetric procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for obstetric procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
assisted vaginal delivery	YES	amoxicillin+clavulanate 1+0.2 g intravenously, as a single dose as soon as possible after assisted vaginal delivery	The efficacy of prophylaxis administered to patients less than 36 weeks gestation or more than 6 hours after delivery is not known.
bakri balloon in situ	NO		
caesarean section (elective or nonelective)	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	For patients receiving intrapartum prophylaxis against <i>Streptococcus agalactiae</i> (group B streptococcus) or treatment for intra-amniotic infection (chorioamnionitis), surgical antibiotic prophylaxis is also required, unless the antibiotic regimen has activity against the organism(s) most likely to cause postoperative infections. See Therapeutic Guidelines for more information. Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.
cervical cerclage without bulging membranes or open cervix	NO		
cervical cerclage with bulging membranes or open cervix	YES	cefazolin intravenously, within the 60 minutes before the procedure adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g	
manual removal of placenta	YES		

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: ophthalmic procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for ophthalmic procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
procedures that do not result in penetration or disruption of the ocular surface (eg laser procedures)	NO		Active conjunctivitis, dacryocystitis or blepharitis must be treated and resolved before surgery.
procedures that result in penetration or disruption of the ocular surface (eg cataract surgery)	YES	cefuroxime 1 mg/0.1 mL intracamerally, as a single dose at the end of surgery	Active conjunctivitis, dacryocystitis or blepharitis must be treated and resolved before surgery.

Surgical antibiotic prophylaxis: oral maxillofacial surgery

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for oral maxillofacial surgery. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing an oral maxillofacial surgical procedure for which surgical antibiotic prophylaxis is not required – see [Therapeutic Guidelines](#) for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

For a small minority of procedures (see Notes column), there are inadequate data to show that a single dose of surgical antibiotic prophylaxis is as effective as 24 hours of prophylaxis. For these procedures, postoperative doses can be considered but prophylaxis should not continue beyond 24 hours.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
cleft lip and palate repairs	YES	Incision through the oral mucosa only	Postoperative doses can be considered following orthognathic surgery, but prophylaxis should not continue beyond 24 hours – see Therapeutic Guidelines for discussion.
intraoral bone grafting procedures		benzylpenicillin 1.2 g (child: 30 mg/kg up to 1.2 g) intravenously, within the 60 minutes before surgical incision	
open reduction and internal fixation of mandibular fractures or midfacial fractures		Incision through the oral mucosa and skin	
orthognathic surgery (major jaw realignment surgery)		cefazolin intravenously, within the 60 minutes before the procedure adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	
procedures involving insertion of prosthetic material other than dental implants		PLUS metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision	
procedures involving insertion of dental implants	NO		
clean or clean-contaminated procedures not listed above	NO		For stratification of surgical wounds, see Therapeutic Guidelines .

GFR = glomerular filtration rate

Surgical antibiotic prophylaxis: orthopaedic procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for orthopaedic procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
internal fixation of fractures of large bones	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara. For specific considerations for joint arthroplasty, see Therapeutic Guidelines . Postoperative prophylactic doses can be considered following total knee and hip arthroplasty, but prophylaxis should not continue beyond 24 hours – see Therapeutic Guidelines for discussion.
procedures involving insertion of prosthetic or allograft material		PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence	
prosthetic large joint replacement		vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	
routine arthroscopy procedures not involving insertion of prosthetic material or avascular tissue	NO		

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: skin and soft tissue procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for skin and soft tissue procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a skin and soft tissue procedure, regardless of whether surgical antibiotic prophylaxis is required – see [Therapeutic Guidelines](#) for indications and regimens.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
ablative laser facial resurfacing procedures	CONSIDER perioperative antiviral prophylaxis, particularly for patients who have had previous orofacial HSV infection	If indicated, start prophylaxis the morning of the procedure aciclovir 400 mg orally, 12-hourly for 10 days OR famciclovir 250 mg orally, 12-hourly for 10 days OR valaciclovir 500 mg orally, daily for 10 days	
blepharoplasty	NO		
breast procedures	see specific section in Therapeutic Guidelines		
head and neck procedures	see specific section in Therapeutic Guidelines		
oral maxillofacial surgery	see specific section in Therapeutic Guidelines		
rhytidectomy	NO		
clean or clean-contaminated procedures not listed above	NO		For stratification of surgical wounds, see Therapeutic Guidelines . This advice also applies to procedures that breach the oral mucosa.

HSV = herpes simplex virus

Surgical antibiotic prophylaxis: spinal surgery

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for spinal surgery. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most spinal surgeries. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
spinal surgery	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: thoracic surgery

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for thoracic surgery. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
aneurysm repair	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.
brachiocephalic procedures not involving insertion of prosthetic material	NO		Brachiocephalic procedures include carotid endarterectomy and brachial artery repair.
intercostal catheter insertion	NO		For intercostal catheter insertion in trauma patients with penetrating injuries – see Therapeutic Guidelines for discussion.
procedures involving insertion of prosthetic material thromboendarterectomy vein bypass video-assisted thoracoscopic surgery (VATS) procedures associated with an increased risk of infection other than those listed above	YES	cefazolin intravenously, within the 60 minutes before surgical incision adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)	Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.

GFR = glomerular filtration rate; MRSA = methicillin-resistant *Staphylococcus aureus*

Surgical antibiotic prophylaxis: urological procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for urological procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

Infective endocarditis prophylaxis may be required for patients with specific cardiac conditions who are undergoing a urological procedure, regardless of whether surgical antibiotic prophylaxis is required – see [Therapeutic Guidelines](#) for indications and regimens.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
endoscopic intrarenal and ureteric stone procedures (eg percutaneous nephrolithotomy, pyeloscopy for ureteric or kidney stones)	YES	gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before surgical incision adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg	Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use. For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.
extracorporeal shock-wave lithotripsy	NO		
micturating cystourethrogram	YES	Start oral antibiotic prophylaxis the day before the test – see Therapeutic Guidelines	

<p>open or laparoscopic urological procedures in which the urinary tract is entered, or where prosthetic material is implanted (eg penile prosthesis, artificial urinary sphincters, mesh)</p>	<p>YES</p>	<p>If entry into the bowel lumen is not expected</p> <p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before surgical incision</p> <p>adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg</p> <p>In cases of inadvertent rectal injury, add immediately to the above regimen</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, as a single dose</p> <hr/> <p>If entry into the bowel lumen is expected</p> <p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	<p>Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.</p> <p>For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.</p>
<p>open or laparoscopic urological procedures in which the urinary tract is not entered and prosthetic material is not implanted</p>	<p>NO</p>		<p>Examples of open or laparoscopic urological procedures in which the urinary tract is not entered are vasectomy, scrotal surgery and varicocele ligation.</p>
<p>prostate biopsy</p>	<p>YES</p>	<p>For the transperineal route</p> <p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <hr/> <p>For the transrectal route</p> <p>ciprofloxacin 500 mg orally, 120 minutes before surgical incision</p>	
<p>prostate fiducial marker insertion</p>	<p>YES</p>	<p>If placed via the transperineal route</p> <p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <hr/> <p>If placed via the transrectal route</p> <p>ciprofloxacin 500 mg orally, 120 minutes before surgical incision</p>	

transurethral resection of the prostate	YES	<p>gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before surgical incision</p> <p>adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg</p>	<p>Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.</p> <p>For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.</p>
uncomplicated cystoscopic diagnostic procedures	ONLY IF there are risk factors for postoperative infection	<p>gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure</p> <p>adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg</p>	<p>Risk factors for postoperative infection include urinary tract obstruction or abnormalities, urinary stones, and indwelling or externalised catheters.</p> <p>Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.</p> <p>For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.</p>
ureteroscopy procedures	YES	<p>gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure</p> <p>adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg</p>	<p>Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.</p> <p>For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.</p>
urodynamic studies	NO		
endoscopic procedures other than those listed above	ONLY IF there are risk factors for postoperative infection	<p>gentamicin or tobramycin intravenously over 3 to 5 minutes, within the 60 minutes before the procedure</p> <p>adult: 3 mg/kg (lean body weight) up to 280 mg child: 5 mg/kg (actual body weight) up to 480 mg</p>	<p>Risk factors for postoperative infection include urinary tract obstruction or abnormalities, urinary stones, and indwelling or externalised catheters.</p> <p>Do not use an aminoglycoside for surgical prophylaxis in adults with a CrCl less than 20 mL/min; seek expert advice. For children with kidney impairment, seek expert advice on aminoglycoside use.</p> <p>For adults with obesity, use lean body weight or adjusted body weight to calculate the aminoglycoside dose. For children with obesity, use adjusted body weight or fat-free mass.</p>

CrCl = creatinine clearance; GFR = glomerular filtration rate

Surgical antibiotic prophylaxis: vascular procedures

This table summarises information in *Therapeutic Guidelines* about the indications and first-line regimens for surgical antibiotic prophylaxis for vascular procedures. See [Therapeutic Guidelines](#) for additional information, including adjustment of antibiotic choice, dosing and timing based on specific patient factors.

If surgical antibiotic prophylaxis is indicated, a single preoperative dose of antibiotic(s) is sufficient for most procedures. In specific circumstances, intraoperative redosing may be required – see [Therapeutic Guidelines](#) for discussion.

This table should be used in conjunction with **clinical judgement**. Prescribers should consider the **harm–benefit profile** of a drug in each patient (eg consider potential drug interactions).

Procedures	Is prophylaxis indicated?	Surgical antibiotic prophylaxis regimens	Notes
angiography	NO		
angioplasty			
bare metal stent insertion in any peripheral artery or vein			
embolisation (eg coils, glue, foam)	YES	organ and procedure specific – seek expert advice	
endograft or covered stent	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>The type of prosthetic material used (eg bovine, Dacron) does not alter the indication for prophylaxis – see Therapeutic Guidelines for discussion.</p> <p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>
inferior vena cava filter placement or removal	NO		

limb amputation	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p> <p>PLUS for amputation of an ischaemic limb</p> <p>metronidazole 500 mg (child: 12.5 mg/kg up to 500 mg) intravenously, within the 120 minutes before surgical incision</p>	<p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>
mechanical atherectomy, thrombolysis or thrombectomy	NO		
open or hybrid surgery involving either the abdominal aorta or lower limbs	YES	<p>cefazolin intravenously, within the 60 minutes before surgical incision</p> <p>adult less than 120 kg: 2 g adult 120 kg or more with GFR more than 40 mL/min: 3 g adult 120 kg or more with GFR 40 mL/min or less: 2 g child: 30 mg/kg up to 2 g</p> <p>PLUS if patient colonised or infected with MRSA or from an area of high MRSA prevalence</p> <p>vancomycin (adult and child) 15 mg/kg up to 2 g intravenously, started within the 120 minutes before surgical incision (recommended rate 10 mg/minute)</p>	<p>The type of prosthetic material used (eg bovine, Dacron) does not alter the indication for prophylaxis – see Therapeutic Guidelines for discussion.</p> <p>Areas of high MRSA prevalence include the Northern Territory; remote communities in northern Queensland; regions north of metropolitan Perth in Western Australia, especially the Kimberley and Pilbara.</p>
open or hybrid surgery involving insertion of prosthetic material			
open or hybrid surgery involving the upper limbs or neck and not involving insertion of prosthetic material	NO		
varicose vein procedures, including endovenous procedures			
GFR = glomerular filtration rate; MRSA = methicillin-resistant <i>Staphylococcus aureus</i>			