



CLINICAL GUIDELINE

Antibiotic Prophylaxis for Urological Surgery and Procedures

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

NHS Greater Glasgow and Clyde recommendations for antibiotic prophylaxis in Urological surgery / procedures

Single dose, IV prophylaxis ≤ 60mins prior to skin incision/ intervention.

For antibiotic de-dosing at 4, 8 hours and for > 1500ml blood loss, see Principles of Surgical prophylaxis guidelines [principles-of-surgical-prophylaxis-1039.pdf \(scot.nhs.uk\)](https://www.scot.nhs.uk/principles-of-surgical-prophylaxis-1039.pdf)

For IV **gentamicin**[#] dose see surgical prophylaxis dosing tables, below.

If MRSA: decolonise prior to procedure as per NHS GGC infection control guidelines and discuss with microbiology antibiotic choice.

CPE carriers: If identified as Carbapenamase producing Enterobacteriales carriers contact microbiology

Procedure	Recommended antibiotic / comments	
<p><i>Endo-Urological procedure:</i></p> <ul style="list-style-type: none"> Endoscopic ureteric stone fragmentation/ removal Ureteric Stent insertion/change TURP 	<p>IV Gentamicin[#] OR ^Ciprofloxacin 750mg orally 1 hr prior to procedure</p>	<p>ALWAYS review previous microbiology results.</p> <p>Do not use gentamicin if previous gentamicin resistance, discuss with microbiology.</p>
<ul style="list-style-type: none"> TURBT Cystoscopy, Urodynamic examination Cystoscopic Stent removal Urethral Catheter Change 	<p>Not routinely recommended For TURBT if patient is considered high risk (based on burden of tumour, i.e. size, necrosis) consider IV Gentamicin[#]</p>	<p>Ensure that prophylaxis covers recent urinary tract isolates etc. If patient colonised or infected with resistant pathogens please contact on-call Microbiologist for further guidance.</p>
<p><i>Percutaneous procedure:</i></p> <ul style="list-style-type: none"> Percutaneous nephrolithotomy (PCNL) Extracorporeal shock wave lithotripsy (ESWL) Removal of Cystectomy Uroteric stents 	<p>IV Gentamicin[#] OR ^Ciprofloxacin 750 mg orally 1 hr prior to procedure</p>	
<p><i>Open, laparoscopic & robotic assisted operations):</i></p> <ul style="list-style-type: none"> Open operation or laparoscopic surgery involving opening the urinary tract with bowel segments: Prostatectomy Cystectomy 	<p>IV Amoxicillin 1 g + IV Metronidazole 500 mg + IV Gentamicin[#]</p> <p><i>If true penicillin/ beta-lactam allergy</i> Replace IV Amoxicillin with IV Teicoplanin 400 mg</p>	
<ul style="list-style-type: none"> Clean, open operation or laparoscopic surgery: Nephrectomy/Partial 	<p>IV Cefuroxime 1.5 g</p> <p><i>If true penicillin/ beta-lactam allergy or MRSA risk:</i></p>	

Nephrectomy Retroperitoneal lymph node dissection Nephroureterectomy Pyleoplasty	IV Teicoplanin~ 400 mg	
<i>Other procedures:</i> Urethroplasty (with or without free flap, buccal mucosal graft)	IV Co-amoxiclav 1.2 g + IV Gentamicin# <i>If true penicillin/ beta-lactam allergy or high MRSA risk replace IV Co-amoxiclav with IV Teicoplanin~ 400 mg + IV Metronidazole 500 mg</i>	
<i>Other procedures:</i> Implantation of prosthetic device Penile amputation/glans resurfacing with or without lymph node dissection	IV Flucloxacillin 2 g + IV Gentamicin# <i>If true penicillin/ beta-lactam allergy or high MRSA risk Replace IV Flucloxacillin with IV Teicoplanin~ 400 mg</i>	
Transrectal prostate biopsy	IV Gentamicin# OR ^Ciprofloxacin 750 mg orally 1 hr prior to procedure	
Transperineal Prostate Biopsy	Not routinely recommended	
Sacral Nerve Stimulation	IM Teicoplanin~ 400mg	

Prophylactic IV Gentamicin# Dosing Table

- Avoid gentamicin if CrCl < 20 ml/min: seek advice on alternative from microbiology.
- In renal transplant patients avoid gentamicin and seek advice from microbiology or renal team.
- Use GGC CrCl calculator to assess renal function. Do not use eGFR in patients at extremes of body weight.
- Use the patient's actual body weight and height to calculate the gentamicin dose, using table below. This prophylactic gentamicin dosing table is based on approximately 5 mg/kg actual body weight/ adjusted body weight.
- Doses of up to 600 mg gentamicin can be given undiluted by slow IV injection over 3 – 5 minutes, or diluted to 20 ml with 0.9 % saline and given slowly over 3-5 minutes, administer via large peripheral vein or central line.
- Monitor for signs of extravasation or infiltration e.g. swelling, redness, coolness or blanching at the cannula insertion site.

HEIGHT \ WEIGHT	30 - 39.9 kg	40 - 49.9 kg	50 - 59.9 kg	60 - 69.9 kg	70 - 79.9 kg	80 - 89.9 kg	90 - 99.9 kg	100 - 109.9 kg	110 - 119.9 kg	120 - 129.9 kg	130 - 139.9 kg	140 - 149.9 kg	150 - 159.9 kg	160 - 169.9 kg	170 - 179.9 kg	180 - 189.9 kg	≥190 kg
142 - 146 cm 4'8" - 4'9"	180 mg	200 mg	220 mg	240 mg	260 mg	280 mg	300 mg	320 mg	340 mg	360 mg							
147 - 154 cm 4'10" - 5'0"	180 mg	200 mg	240 mg	260 mg	280 mg	300 mg	320 mg	340 mg	360 mg	380 mg	400 mg						
155 - 164 cm 5'1" - 5'4"	180 mg	200 mg	260 mg	280 mg	300 mg	320 mg	340 mg	360 mg	380 mg	400 mg	420 mg	440 mg	480 mg				
165 - 174 cm 5'5" - 5'8"		200 mg	280 mg	300 mg	320 mg	340 mg	360 mg	380 mg	400 mg	420 mg	460 mg	480 mg	480 mg	520 mg	540 mg		
175 - 184 cm 5'9" - 6'0"		200 mg	280 mg	320 mg	360 mg	380 mg	400 mg	420 mg	440 mg	460 mg	480 mg	500 mg	520 mg	540 mg	560 mg	580 mg	600 mg
185 - 194 cm 6'1" - 6'4"			280 mg	320 mg	360 mg	400 mg	420 mg	440 mg	460 mg	480 mg	500 mg	540 mg	560 mg	580 mg	600 mg	600 mg	600 mg
≥195 cm ≥6'5"				320 mg	360 mg	420 mg	460 mg	480 mg	500 mg	520 mg	540 mg	560 mg	580 mg	600 mg	600 mg	600 mg	600 mg