

CLINICAL GUIDELINE

Antibiotic Prophylaxis Interventional Radiology Procedures, Adults

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.

Version Number:	7
Does this version include changes to clinical advice:	Yes
Date Approved:	15 th February 2024
Date of Next Review:	30 th November 2026
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Approval Group:	Antimicrobial Utilisation Committee

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 Interventional Radiology procedures

<u>Single dose, IV prophylaxis</u> ≤ 60mins prior to skin incision/ intervention. For advice on repeat dosing of antibiotics for operations lasting longer than 4 hours or > 1500 ml blood loss see <u>Principles of</u> <u>Surgical Prophylaxis (1039) | Right Decisions (scot.nhs.uk)</u>

Gentamicin

- See Appendix 1 for gentamicin prophylactic dosing table
- If subsequent treatment using gentamicin is required, measure gentamicin concentration 6-14 hours post theatre gentamicin dose, and follow GGC guidance on staffnet for gentamicin dosing. Calculate the subsequent gentamicin dose using the online calculator. Discuss with pharmacy if further advice is required (or if out of hours, the on call pharmacist)
- Teicoplanin and gentamicin are incompatible when mixed directly and must not be mixed before injection.

Teicoplanin

- Give 400 mg **teicoplanin** by slow intravenous injection over 3-5 minutes.
- Teicoplanin and gentamicin are incompatible when mixed directly and must not be mixed before injection.

MRSA: decolonise prior to procedure as per NHS GGC infection control guidelines and discuss with microbiology re antibiotic choice. **CPE carriers**: If identified as Carbapenamase producing Enterobacteriales carriers contact microbiology.

Obesity BMI > 30 Kg/m²

Consider increasing the dose of antibiotic as below:

	Weight > 100 Kg								
Co-amoxiclav	Add 1 g IV amoxicillin to 1.2 g Co-amoxiclav								

Procedure	Recommended antibiotic / comments						
Arterial interventions Angiography, angioplasty, thrombolysis, arterial closure device placement, uncovered stent placement	No prophylaxis required						
Covered stent placement Endograft placement Abdominal or Thoracic Endovascular Aortic Aneurysm Repair (EVAR / TEVAR)	Flucloxacillin 2g IV or in penicillin allergy Teicoplanin IV 400mg						
Transarterial Chemoembolisation (TACE) Uterine Artery Embolisation Pulmonary arterial venous malformation embolisation	Co-amoxiclav 1.2g IV or in penicillin allergy Teicoplanin IV 400mg + Gentamicin (see surgical prophylaxis dosing table below)						
Venous Interventions Port-a-cath insertion Venous stent placement Haemodialysis access interventions including mechanical thrombectomy Varicocoele embolisation Lower-extremity superficial venous	No prophylaxis required						
insufficiency treatment IVC filter placement and retrieval Tunnelled central venous catheter insertion*	* In "over the wire" CV catheter exchange give Teicoplanin IV 400mg						
Gastrointestinal Interventions Per oral gastrostomy	Co-trimoxazole 960mg oral suspension (10ml 480 mg/ 5 ml) deposit in the PEG tube immediately post PEG insertion. or in co-trimoxazole allergy Co-amoxiclav 1.2g IV						
Direct balloon gastrostomy & Gastrostomy replacement (existing track)	No prophylaxis required						
Percutaneous cholangiogram (PTC) Biliary drainage procedures	Continue current antibiotics and do not give further additional antibiotic as prophylaxis. If no antibiotic therapy give Gentamicin IV (see surgical prophylaxis dosing table below)						
Transjugular Intrahepatic Porto-systemic Shunt (TIPSS) insertion, reduction and occlusion Percutaneous Ablation (liver)	Co-amoxiclav 1.2g IV or in penicillin allergy Teicoplanin IV 400mg + ^Gentamicin IV (see surgical prophylaxis dosing table below)						

Antimicrobial Management Team and Interventional Radiologists Revised Nov 2023, Updated Jan 2024
Review Nov 2026

Urological Interventions Review previous microbiology and if no resistance to recommended antibiotics give as recommended. If previous resistance to these antibiotics contact microbiology. Percutaneous nephrolithotomy (PCNL) New Percutaneous nephrostomy insertion New Ureteric stent insertion Radiofrequency Ablation (Renal)	△If decompensated liver disease, do not use gentamicin, give oral co-trimoxazole 960mg 60 min prior to skin incision/ intervention Gentamicin IV (see surgical prophylaxis dosing table below) Or Ciprofloxacin 750mg oral 60 minutes prior to procedure
Routine Nephrostomy or Ureteric stent exchanges	Antibiotics required only if symptoms suggestive of UTI If inpatient on IV antibiotics discuss with microbiology
Abscess Drainage	Discuss/ agree with referring clinician. May require targeted antibiotic therapy following aspiration
Musculoskeletal Interventions Vertebroplasty / Cementoplasty	Flucloxacillin 2g IV or in penicillin allergy Teicoplanin 400mg IV

Appendix 1 Prophylactic IV Gentamicin Dosing Table

(See Principles of Surgical Prophylaxis (1039) | Right Decisions (scot.nhs.uk)

- Avoid gentamicin if CrCl < 20 ml/min: seek advice on alternative from microbiology.
- o 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.
- o 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.
- o Monitor for signs of extravasation or infiltration e.g. swelling, redness, coolness or blanching at the cannula insertion site.

HEIGHT	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