

# ANTIBIOTIC PROPHYLAXIS IN GYNAECOLOGICAL PROCEDURES

The aim of surgical prophylaxis is to reduce rates of surgical site and healthcare-associated infections and so reduce surgical morbidity and mortality. There is however growing evidence that aspects of prescribing practice may themselves be associated with health-care associated infections and antimicrobial resistance. The [Scottish Antimicrobial Prescribing Group \(SAPG\)](#), along with the Scottish Government, monitors antimicrobial prescribing including surgical prophylaxis in order to reduce the rates of *C.difficile* (CDI) and resistance. Principles of prophylaxis have also been outlined in this guidance, including timing and duration of antibiotic administration. In conjunction with the Gynaecology specialty within NHS Tayside the Antimicrobial Management Group has undertaken to review local prophylaxis policy and to formulate a uniform policy.

## Principles of Antibiotic Prophylaxis Policy

1. **Indication for prophylaxis** should comply with guideline i.e. when 'highly recommended', 'recommended' or 'considered' within this document
2. **Timing of antibiotic(s):**
  - Optimum timing is intravenous dose given or infusion completed  $\leq$  60 minutes prior to skin incision
  - Sub-optimal if >1 hour prior to skin incision or post-skin incision
3. **Recording of antibiotic** prescription in 'once only' section of medicine chart or stat dose on HEPMA to avoid multiple dosing
4. **Frequency of administration** should be single dose only unless:
  - > 1.5 litres intra-operative blood loss - re-dose following fluid replacement (see administration guidance table)
  - operation prolonged (see administration guidance table)
  - specifically stated in following guidelines
5. **Documentation in medical notes or electronic patient record** of reason for any deviation from guidance
6. **Choice of agent** should:
  - Use narrow spectrum agents when possible to minimise impact on resistance and CDI
  - Take into account local resistance patterns
  - Provision of alternatives for beta-lactam allergy
7. **Infection Prevention and Control** refer to [guidance](#)
8. **Complex individual prophylaxis** issues should be discussed with Microbiology or Infectious Diseases pre-operatively and recorded in medical records or electronic patient record

**IV Antibiotic Administration Guidance:**

Antibiotic	Dose	Administration	Prolonged Surgery	>1.5L blood loss redose after fluid replacement
Co-amoxiclav	1.2g	Bolus over 3-5 mins	Repeat original dose if surgery longer than 4 hours and repeat again after further 4 hours	Repeat original dose
Gentamicin	4mg/kg Use actual body weight (ABW) or ideal body weight (IBW) if ABW>20% over IBW IBW = (males:50kg females 45.5kg) +0.9kg for every cm >150cm	Bolus over at least 5 minutes or infusion. Can also be added to metronidazole infusion bag.	Give half original dose ONLY if surgery longer than 8 hours and eGFR>60ml/min	Give half original dose
Metronidazole	500mg	Infusion over 20 minutes	Repeat original dose if surgery longer than 8 hours	Repeat original dose

Gynaecology Procedure	NHS Tayside antimicrobial prophylaxis recommendation	Antibiotic(s) One off dose unless stated or meets criteria for prolonged surgery or blood loss in table above	Comments
<b>Hysterectomy (abdominal, vaginal, laparoscopic)</b>	<b>Recommended</b>	IV Gentamicin + IV Metronidazole	In <u>female patients transitioning to male</u> undergoing hysterectomy who require <b>Gentamicin</b> , use female calculation from dosing box above if <6 months of hormonal gender affirming therapy otherwise use male calculation above.  If patient is receiving dialysis, an eGFR <30mL/min or Cr>350 or acute kidney injury consider using co-amoxiclav instead. If patient has any renal issues, as above, and penicillin allergy please seek ID or Microbiology advice on choice of antibiotic prophylaxis.
<b>Colposuspension Abdominal sacro-colpopexy Abdominal sacro-hysteropexy Myomectomy Vulvectomy</b>	<b>Recommended</b>	IV Gentamicin + IV Metronidazole	If patient is receiving dialysis, an eGFR <30mL/min or Cr>350 or acute kidney injury consider using co-amoxiclav instead. If patient has any renal issues, as above, and penicillin allergy please seek ID or Microbiology advice on choice of antibiotic prophylaxis.

<b>Laparoscopic tubal/ovarian (adnexal) procedures if infection is suspected</b>	<b>Recommended</b>	IV Gentamicin + IV Metronidazole	If patient is receiving dialysis, an eGFR <30mL/min or Cr>350 or acute kidney injury consider using co-amoxiclav instead. If patient has any renal issues, as above, and penicillin allergy please seek ID or Microbiology advice on choice of antibiotic prophylaxis.
<b>Laparoscopic treatment of significant endometriosis (endometrial resection)</b>	<b>Recommended</b>	IV Gentamicin + IV Metronidazole	If patient is receiving dialysis, an eGFR <30mL/min or Cr>350 or acute kidney injury consider using co-amoxiclav instead. If patient has any renal issues, as above, and penicillin allergy please seek ID or Microbiology advice on choice of antibiotic prophylaxis.
<b>Any type of pelvic floor repair (with or without mesh) Sacrospinous colpopexy Sacrospinous hysteropexy Vault repair Mid urethral incontinence surgery of any type (retropubic tape, autologous fascial sling)</b>	<b>Recommended</b>	IV Gentamicin + IV Metronidazole	If patient is receiving dialysis, an eGFR <30mL/min or Cr>350 or acute kidney injury consider using co-amoxiclav instead. If patient has any renal issues, as above, and penicillin allergy please seek ID or Microbiology advice on choice of antibiotic prophylaxis.
<b>Uterine Artery Embolisation for fibroids</b>	<b>Locally recommended</b>	Refer to <a href="#">Interventional Radiology Prophylaxis Guidance</a>	

<b>Hysteroscopic procedures (diagnostic, operative, endometrial ablation)</b>			
<b>Diagnostic laparoscopy</b>			
<b>Laparoscopic tubal/ovarian (adnexal) procedures (if clean) – if infection suspected refer to section above</b>	<b>Not recommended</b>		
<b>Laparoscopic sterilisation</b>			
<b>Endometrial biopsy</b>			
<b>Hysterosalpingography</b>			
<b>Cervical tissue excision procedures e.g. large loop excision of transformation zone (LLETZ)</b>			
<b>Surgical termination of pregnancy</b>	Refer to <a href="#">Obstetrics surgical prophylaxis guidance</a>		
<b>Conservative management of incomplete miscarriage or incomplete medical termination</b>			
<b>IUCD insertion</b>			
<b>Cystoscopy</b>	Refer to <a href="#">Urology surgical prophylaxis guidance</a>		

Developed by: Gynaecology/Antimicrobial Team

Approved by: AMG Nov 2025

Review: Nov 2028

**References:**

1. Scottish Antimicrobial Prescribing Group [Guidance on Recommendations for Re-dosing Antibiotics for Surgical Prophylaxis](#) 2025 (Accessed Nov 2025)
2. SAPG [Good practice recommendations for surgical antibiotic prophylaxis in adults and children in NHS Scotland](#) 2025 (Accessed Nov 2025)
3. SAPG [Good practice recommendations for antimicrobial management teams on hospital antimicrobial stewardship in NHS Scotland](#) 2022 (Accessed Nov 2025)
4. Petousis, S et al. Prophylactic Antibiotics before Gynaecological Surgery: A Comprehensive Review of Guidelines. J. Pers. Med. 2024, 14, 327.
5. Monzer, A et al. Adult and Pediatric Antibiotic Prophylaxis during Vascular and IR Procedures. J Vasc Interv Radiol 2018; 29:1483-1501