

CEFAZOLIN

PRESCRIBING GUIDANCE in Adults

**Can only be prescribed after discussion with
ID or Microbiology**

Authorisation: Cefazolin is an '[Alert Antibiotic](#)' and its use **MUST BE AUTHORISED** by a member of the Infectious Diseases or Microbiology teams before it can be prescribed in NHS Tayside.

Licensed indications: Skin and soft tissue infections
Bone and Joint infections

Off label indications: *Staphylococcus aureus* bacteraemia (SAB) due to MSSA (including in renal dialysis patients)
Endocarditis
Urinary tract infections
Intra-abdominal infections
Respiratory tract infections

Specific advice for dialysis patients – renal team to discuss with ID/Micro if criteria below met:

- Haemodialysis patient with MSSA bacteraemia initially treated with flucloxacillin
 - MSSA will be cefazolin sensitive if reported as flucloxacillin sensitive
- Negative blood culture result following initial therapy
 - First blood culture taken after initiating antibiotics can be taken at 48-96 hours
- Investigations (minimum TTE) and source control complete as per [national guidance](#) for SABs
- Clinically stable and does not require ongoing inpatient care
- If appropriate replaced dialysis access (not temporary line)
- Rapid review is possible and patient will be able identify deterioration in their condition
- No contra-indications to cefazolin
- CDI risk has been considered

Route²: Cefazolin is only available for parenteral use - check specific package insert for product and [NHS Injectable Medicines Guide](#) for most up to date information

- IV injection: Doses up to 1g – slow injection over at least 3 -5 minutes
 - Rapid administration can precipitate seizures
- IV infusion: Doses ≥ 2g usually by IV infusion over 30-60 minutes
- IM injection: can be given IM but is painful
 - Maximum single dose 1g
 - Can be reconstituted with lidocaine hydrochloride 0.5%⁴

Dose: Usual dose:

- 1-2g TDS
- 2g TDS for SAB and deep seated infections
- 2g QDS in critically ill patients to compensate for augmented renal clearance⁵
- maximum 12g daily¹

Dosing in Obesity^{3,7,8}:

- Discuss with pharmacist
- Most literature relates to cefazolin use in surgical prophylaxis

- Consider upper limit of dosing for treatment – 2g every 6 hours has been suggested for patients who have BMI >35kg/m² or total body weight >120kg (and CrCl >40ml/min)

Renal impairment:

Renal function (CrCl ml/min)	Cefazolin dosing
> 40 ml/min	2 g 8 hourly
20 - 40 ml/min	2 g 12 hourly
< 20 ml/min	2 g 24 hourly

Acute dialysis¹:

- Depends on type and frequency of dialysis – d/w pharmacist
- SLED (ITU patients) – discuss with pharmacist

Chronic haemodialysis:

- given post dialysis 3 x week
- 2g/2g/3g (3g on the long dialysis gap)
- Infusion over 30 minutes after dialysis

OHPAT dose⁶ (not in renal patients):

- 2g OD + oral probenecid 1g OD (probenecid is unlicensed in UK)
- Probenecid reduces renal excretion of cefazolin
- Check for interactions with probenecid and patient's medicines
- Discuss with pharmacist

Allergy:

Cefazolin does not share side chains with any other beta-lactam antibiotic¹

- Risk of cross sensitivity is low
- Avoid in patients with documented anaphylaxis to a beta-lactam unless benefit outweighs risk and patient can be observed carefully

Antimicrobial Activity:

- Usually susceptible: MSSA, streptococci, and some aerobic gram negative bacilli
- Resistant: MRSA, enterococci, anaerobes

Clinical Notes:

- Penetrates well into inflammatory exudate⁵
- Monitor FBC/renal/hepatic function
- First generation cephalosporin reduced risk of CDI compared to other cephalosporins

References:

- The Sanford Guide to Antimicrobial Therapy 2019
- [Cefazolin SPC](#)
- Meng L et al. Comprehensive Guidance for Antibiotic Dosing in Obese Adults: 2022 Update. Pharmacotherapy 2023
- [BNF online](#)
- [Kucers' the use of Antibiotics online](#)
- Grayson et al; [Clinical Infectious Diseases](#), Volume 34, Issue 11, 1 June 2002, Pages 1440–1448
- Chung EK et al. Population pharmacokinetics and pharmacodynamics of cefazolin using total and unbound serum concentrations in patients with high body weight. International Journal of Antimicrobial Agents, 2023. Available at: <https://doi.org/10.1016/j.ijantimicag.2023.106751>
- Bindellini D et al. Evaluation of the need for dosing adaptations in obese patients for surgical antibiotic prophylaxis: a model-based analysis of cefazolin pharmacokinetics. British Journal of Anaesthesia, 2025; 134 (4): 1041 - 1049.