



MONOGRAPH

Cefazolin Monograph - Paediatric

Scope (Staff):	Medical, Pharmacy, Nursing
Scope (Area):	All Clinical Areas

Child Safe Organisation Statement of Commitment

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations. This is a commitment to a strong culture supported by robust policies and procedures to reduce the likelihood of harm to children and young people.

This document should be read in conjunction with this [DISCLAIMER](#)

QUICKLINKS

Dosage/Dosage Adjustments	Administration	Compatibility	Monitoring
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DRUG CLASS

Moderate spectrum cephalosporin.⁽¹⁾

INDICATIONS AND RESTRICTIONS

- Cefazolin is commonly used in surgical prophylaxis.⁽²⁾
- Cefazolin is indicated in the treatment of Staphylococcal and Streptococcal infections.⁽¹⁾

Oral: Unrestricted (green) antibiotic

This is not a restricted agent. Follow standard ChAMP guidelines where appropriate.

CONTRAINDICATIONS

- Hypersensitivity to cefazolin or any component of the formulation, or patients with a history of high [risk allergy](#) to cephalosporins.^(1, 3, 4)

PRECAUTIONS

- Cefazolin may be prescribed in selected patients with high risk allergy to another Beta-lactam sub-class (e.g. some penicillins, carbapenems) in discussion with immunology.^(1, 3)
- In patients with a previous [low risk reaction](#) to cefazolin or another cephalosporin (delayed rash [>1hr after initial exposure] without mucosal or systemic involvement) the risk of subsequent reaction is low. Re-challenge may be acceptable in discussion with immunology.⁽¹⁾

- Dose reduction may be required in renal impairment. Renal dysfunction increases the risk of neurotoxicity with high doses.⁽¹⁾
- Rapid infusion of high doses can result in seizures, the risk of this is further increased in patients with renal impairment.⁽¹⁾
- Each 1gram vial contains 48.3mg (2.1mmol) of sodium.^(1, 5)

FORMULATIONS

Listed below are products available at PCH, other formulations may be available, check with pharmacy if required:

- 1gram powder for injection vial

Imprest location: [Formulary One](#)

DOSAGE & DOSAGE ADJUSTMENTS

Neonates: [Refer to Neonatal Medication Protocols](#)

IV (≥4 weeks to 18 years):

- **Usual dose:** 25mg/kg/dose (to a maximum of 2grams) 8 hourly.^(1, 2, 6)
- **Severe infections (including bone/joint infections):** 50mg/kg/dose (to a maximum of 2grams) 8 hourly.^(1, 2, 6)
- **Surgical prophylaxis (other than cardiac surgery):** 30mg/kg (to a maximum of 2grams) as a single dose given within 0 to 60minutes of surgical incision. If the surgery is longer than 3 hours, repeat the dose intraoperatively at 3 hours.^(2, 6)
- **Cardiac Surgery:** 30mg/kg (to a maximum of 2grams) given within 0 to 60minutes of surgical incision. If the surgery is longer than 3 hours, repeat the dose intraoperatively at 3 hours. Continue the same dose 8 hourly for a total of 24 hours.⁽²⁾

Dosing in Overweight and Obese Children:

- Dose based on measured body weight.⁽⁷⁾
- Patients >120kg may require a higher dose cap of 3grams for surgical prophylaxis.⁽¹⁾

Renal impairment:

- [eGFR calculator](#)
- **Note:** For a single dose for surgical prophylaxis, dose adjustment is not required.
- eGFR ≥50mL/minute: normal dosing
- eGFR ≥30 to <50mL/minute: 100% dose given 12 hourly
- eGFR ≥10 to <30mL/minute: 100% dose given 24 hourly
- eGFR <10mL/minute: 100% dose given 48 hourly.⁽⁸⁾

Hepatic impairment:

- No dosage adjustment is required in hepatic impairment.⁽³⁾

RECONSTITUTION & ADMINISTRATION

- Reconstitute each vial with the volume of water for injection in the table below. Further dilution with a compatible fluid may be required.⁽⁵⁾

Vial strength	Volume of water for injection required ^(5, 9)	Resulting concentration
500mg (AFT brand)	4.8mL (powder volume 0.2mL)	100mg/mL
1 gram (AFT, Alphapharm and Kefzol)	9.5mL (powder volume 0.5mL)	100mg/mL
2 grams (Alphapharm brand)	19mL (powder volume 1mL)	100mg/mL

IV injection:

- Dilute to a final concentration of 100mg/mL or weaker with water for injection and give via slow intravenous injection over 3 to 5 minutes.^(5, 8)

IV infusion:

- Dilute to a final concentration of between 5mg/mL and 20mg/mL with a compatible fluid and infuse over 10 to 60 minutes.^(5, 8, 10)

Continuous infusion:

- May be given over 24 hours by continuous [Baxter™ infusion](#).⁽⁵⁾

COMPATIBILITY (LIST IS NOT EXHAUSTIVE)

Compatible fluids:

- Glucose 5% and 10%
- Glucose/sodium chloride solutions
- Sodium chloride 0.9%
- Hartmann's
- Ringers⁽⁵⁾

Compatible at Y-site:

[Compatibilities of IV drugs](#) must be checked when two or more drugs are given concurrently.

MONITORING

- Renal, hepatic and haematological function should be monitored weekly with prolonged therapy (i.e. longer than 7 days).^(1, 3, 8)

ADVERSE EFFECTS

Common: diarrhoea, nausea, vomiting, abdominal pain, reduced appetite, eosinophilia, leucopenia, pain and inflammation at injection site, rash, headache, dizziness, *Clostridioides difficile*-associated disease.^(1, 11)

Infrequent: anaphylactic reaction, angioedema⁽¹¹⁾

Rare: neurotoxicity (e.g. confusion, seizures, encephalopathy) particularly with high doses and/or renal impairment, blood dyscrasias (e.g. neutropenia, thrombocytopenia, agranulocytosis), renal impairment, severe cutaneous adverse reactions (SCARs).^(1, 11)

STORAGE

- Store the powder for injection vial below 25°C and protect from light.⁽⁵⁾
- Products prepared by Pharmacy Compounding Service (PCS) should be stored between 2°C and 8°C.⁽⁵⁾
- Small crystals may form when the solution is refrigerated any crystals should be redissolved by shaking the vial and warming the vial in hands.⁽⁵⁾

INTERACTIONS

This medication may interact with other medications; consult PCH approved references (e.g. [Clinical Pharmacology](#)), a clinical pharmacist or PCH Medicines Information Service on extension 63546 for more information.

Please note: The information contained in this guideline is to assist with the preparation and administration of cefazolin. Any variations to the doses recommended should be clarified with the prescriber prior to administration

Related CAHS internal policies, procedures and guidelines

[Antimicrobial Stewardship Policy](#)

[ChAMP Empiric Guidelines and Monographs](#)

[KEMH Neonatal Medication Protocols](#)

References

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