<table>
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<th>MONOGRAPH</th>
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<tr>
<td>Cefalexin (Cephalexin) Monograph - Paediatric</td>
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| Scope (Staff): | Medical, Nursing, Pharmacy |
| Scope (Area):  | Perth Children’s Hospital (PCH) |

This document should be read in conjunction with this DISCLAIMER

### DESCRIPTION
- Cefalexin is a bactericidal, first generation, moderate spectrum cephalosporin.
- It interferes with bacterial cell wall peptidoglycan synthesis by binding to penicillin-binding proteins resulting in cell lysis.\(^1\)\(^-\)\(^3\)

### INDICATIONS AND RESTRICTIONS
- Cefalexin is active against some streptococci and staphylococci infections and is also active against certain Gram-negative bacteria including *Escherichia coli* and most *Klebsiella* species.\(^3\)

Oral: Unrestricted (green) antibiotic
- This is not a restricted agent. Follow standard ChAMP guidelines where appropriate.

### CONTRAINDICATIONS
- Cefalexin is generally contraindicated in patients with a history of high risk allergy to cephalosporins.\(^1\),\(^2\),\(^4\)-\(^7\)

### PRECAUTIONS
- Cefalexin 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.
- In patients with a previous low risk reaction to cephalexin or another cephalosporin (delayed rash [\(>1\)hr after initial exposure] without mucosal or systemic involvement) the risk of subsequent reaction is low. Re-challenge may be acceptable in discussion with immunology.

### FORMULATIONS

Available at PCH:
- 250mg/5mL powder for oral suspension
- 250mg and 500mg capsules

Other formulations:
- 125mg/5mL and 250mg/5mL powder for oral suspension (multiple generic brands available)
- 250mg and 500mg capsules (multiple generic brands available)
## DOSAGE

- The doses listed below fall within the standard range.
- Higher doses may be prescribed for certain situations in consultation with an infectious diseases or clinical microbiology consultant.

### Neonates (less than 30 days old):

- Please refer to neonatal clinical care drug protocols

### Children (>1 month to 18 years):

**Oral:**

- **Usual dose:** 20mg/kg/dose (to a maximum of 750mg) every 8 hours.\(^{(2)}\)
- **Severe infections:** 40mg/kg/dose (to a maximum of 1.5 grams) 8 hourly. \(^{(2, 3, 6, 8, 9)}\)
- **UTI prophylaxis:** 12.5mg/kg/dose (to a maximum of 250mg) given once daily at night. \(^{(2, 3, 6)}\)

### DOSAGE ADJUSTMENT

**Dosage adjustment required in renal impairment:**

- Dosage adjustment may be required in cases of impaired renal function (with creatinine clearance of less than 50mL/min).\(^{(5)}\)
- To calculate the estimated glomerular filtration rate (eGFR) use the following formula:

\[
\text{eGFR (mL/min/1.73m}^2) = \frac{36.5 \times \text{height (in cm)}}{\text{Serum creatinine (micromol/L)}}
\]

- CrCl ≥50mL/minute: normal dose
- CrCl ≥30 to <50mL/minute: 10mg/kg/dose given 8 hourly
- CrCl ≥10 to <30mL/minute: 10mg/kg/dose given 12 hourly
- CrCl <10mL/minute: 10mg/kg/dose given 24 hourly.\(^{(5)}\)
- For severe infections, higher doses may be required, contact pharmacy for advice.

**Dosage adjustment required in hepatic impairment:**

- No dosage adjustment is required in hepatic impairment.\(^{(5)}\)

### RECONSTITUTION

**Oral Cefalexin 250mg/5mL:**

- Reconstitute with water as follows: tap bottle until all powder flows freely; add approximately half the total volume of water as per the manufacturer’s instructions for reconstitution and shake vigorously to suspend powder.
- Add remainder of the water and again shake vigorously. This will result in 100mL of suspension. Store reconstituted suspension in the refrigerator and discard after 14 days.
- Refer to product packaging for reconstitution instructions for
## ADMINISTRATION

**Oral:**
- When using the oral suspension, shake the bottle well before measuring each dose.\(^4\)
- Cefalexin may be given without regard to food intake.\(^1\)

## MONITORING

- Renal, hepatic and haematological function should be monitored with prolonged therapy (i.e. longer than 7 days).\(^{1, 2, 7, 10}\)

## ADVERSE EFFECTS

**Common:** generally very well tolerated

**Rare:** diarrhoea, nausea, vomiting, abdominal pain, urticaria, rash, headache, dyspepsia, dizziness, *Clostridium difficile*-associated disease, cholestatic hepatitis, neurotoxicity (e.g. confusion, seizures, encephalopathy), blood dyscrasias, allergy, bleeding, rash, erythema multiforme, Stevens-Johnson syndrome, toxic epidermal necrolysis, arthritis, interstitial nephritis.\(^{1, 2, 4, 6}\)

## COMPATIBLE FLUIDS

- Not applicable

## STORAGE

- Store the capsules below 25 °C
- Store the un-reconstituted powder below 30°C, after reconstituting, store in the refrigerator between 2°C and 8°C and discard after 14 days.\(^4\)

## INTERACTIONS

Cefalexin may interact with other medications; please consult PCH approved references (e.g. *Clinical Pharmacology*), your ward pharmacist or Pharmacy on extension 63546 for more information.

- Probenecid inhibits excretion of cephalosporins which may increase cefalexin levels and increase the risk of seizures in certain patients.\(^{1, 4}\)
- Cefalexin may affect the clotting process and increase the effect of anticoagulants (e.g. warfarin), close monitoring is required.\(^{1, 5}\)

## COMMENTS

- **Note:** Some texts recommend a lower standard dose of cefalexin. At PCH doses <12.5mg/kg/dose are rarely given except for dose adjustment in renal failure.

## MANUFACTURER SAFETY DATA SHEET (SDS)

To access to the Manufacturer SDS for this product, use the following link to [ChemAlert](https://www.chemalert.com).

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**Please note:** The information contained in this guideline is to assist with the preparation and administration of *cefalexin*. Any variations to the doses recommended should be clarified with the prescriber prior to administration**
### Related CAHS internal policies, procedures and guidelines

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<td>Antimicrobial Stewardship Policy</td>
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<tr>
<td>ChAMP Empiric Guidelines and Monographs</td>
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<td>KEMH Neonatal Medication Protocols</td>
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### References and related external legislation, policies, and guidelines

7. Micromedex 2.0 [Internet]. Truven Health Analytics. 2015 [cited 17/02/2016].
### Cefalexin Monograph - Paediatric

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<tr>
<td>Document Owner:</td>
<td>Head of Department – Infectious Diseases</td>
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<td>Children’s Antimicrobial Management Program Pharmacist</td>
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**Standards Applicable:**
- NSQHS Standards: 🍃🌱🍃
- NSMHS: N/A
- Child Safe Standards: N/A

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**Healthy kids, healthy communities**

[Logo: Compassion, Excellence, Collaboration, Accountability, Equity, Respect]

Neonatology | Community Health | Mental Health | Perth Children’s Hospital