

CEFUROXIME

Trade Name	Cefuroxime Actavis® or Cefuroxime AFT®																		
Class	Antibiotic - second generation cephalosporin.																		
Mechanism of Action	<p>Inhibition of bacterial cell wall synthesis through binding to essential proteins.</p> <p>Resistant to most β-lactamases and has activity against a wide range of gram-positive and gram-negative organisms including <i>H.influenzae</i>.</p>																		
Indications	<p>Broad-spectrum antibiotic indicated for empiric treatment of infection or where sensitivity is established.</p> <p>Biliary tract infection, meningitis, septicaemia, pneumonia, peritonitis, UTIs.</p> <p>Infection prophylaxis or treatment after surgery.</p>																		
Contraindications	Known hypersensitivity to cefuroxime or other cephalosporins. Caution in patients with a known penicillin allergy.																		
Supplied As	750mg powder vials																		
Dilution	<p>Cefuroxime Actavis</p> <table border="1"> <thead> <tr> <th>Vial</th> <th>Water Added</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>750mg</td> <td>7mL*</td> <td>7.5mL</td> <td>100mg/mL</td> </tr> </tbody> </table> <p>*Displacement value = 0.5mL</p> <p>Cefuroxime AFT</p> <table border="1"> <thead> <tr> <th>Vial</th> <th>Water Added</th> <th>Final Volume</th> <th>Concentration</th> </tr> </thead> <tbody> <tr> <td>750mg</td> <td>6.7mL*</td> <td>7.5mL</td> <td>100mg/mL</td> </tr> </tbody> </table> <p>*Displacement value = 0.8mL Reconstituted solution is pale yellow</p>			Vial	Water Added	Final Volume	Concentration	750mg	7mL*	7.5mL	100mg/mL	Vial	Water Added	Final Volume	Concentration	750mg	6.7mL*	7.5mL	100mg/mL
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Dosage	<p>Prophylaxis: 25mg/kg/dose</p> <p>Severe infection: 50mg/kg/dose</p>																		
Interval		<table border="1"> <thead> <tr> <th>Postnatal Age (days)</th> <th>Interval (hourly)</th> </tr> </thead> <tbody> <tr> <td>0-7</td> <td>12</td> </tr> <tr> <td>8-14</td> <td>8</td> </tr> <tr> <td>>14</td> <td>6</td> </tr> </tbody> </table>	Postnatal Age (days)	Interval (hourly)	0-7	12	8-14	8	>14	6									
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Administration	<p>IV: Slow push over 3-5 minutes</p> <p>IM: Not recommended in infants <1 month of age</p>																		

Compatible With	<p>In solution: sodium chloride 0.9%,, dextrose 5%, dextrose 10%, dextrose saline, lactated ringers, potassium chloride</p> <p>At terminal injection site above filter: aciclovir, adrenaline, amikacin*, amphotericin liposomal, atropine, benzyl penicillin, calcium gluconate, cefazolin, cefotaxime, ceftazidime, clindamycin, dexmedetomidine, digoxin, dopamine, ephedrine, erythromycin, flucloxacillin, frusemide gentamicin*, heparin, hydrocortisone, indomethacin, insulin, meropenem, methylprednisolone, metronidazole, morphine, noradrenaline, piperacillin,,potassium chloride, propofol, pyridoxine, ranitidine, ticarcillin, tobramycin*, vasopressin TPN. Lipid compatible at terminal injection site below filter.</p> <p>*Some sources suggest theoretical interaction between cephalosporins and aminoglycosides if possible separate administration by one hour.</p>
Incompatible With	Amoxicillin, calcium chloride, diazoxide, dobutamine, doxapram, fluconazole, ganciclovir, magnesium sulphate, midazolam, phenobarbital, phenytoin, sodium bicarbonate, sulphamethoxazole-trimethoprim, vancomycin (variable).
Monitoring	N/A
Stability	Discard remaining solution in vial after reconstitution Use a new vial for each dose Vials are not designed for multidosing
Storage	Room temperature for powder vials. Protect from light
Adverse Reactions	Thrombophlebitis may occur following IV injection. Hypersensitivity: rashes, pruritis and fever. Gastrointestinal: diarrhoea, nausea and vomiting. Neutropenia, susceptibility to fungal super infection Rarely: transient increase in LFTs.
Metabolism	33-50% protein bound. Cefuroxime does not undergo metabolism and 85-90% is excreted unchanged in urine (in first 24 hours). Half-life 1-6 hours depending on postnatal age
Comments	Modify dose in patients with severe renal impairment. Each 750mg vial of cefuroxime contains 1.8mmol of sodium.
References	<ol style="list-style-type: none"> 1. Shann F., Drug Doses, 11th edition. 2001. 2. Medicines for Children, 1999. 3. Paediatric Dosage Handbook, 8th edition. 2001-2002. 4. BNF March 2003, 45th edition. 5. Notes on Injectable Drugs, 4th edition. 6. Trissel LA, Handbook on Injectable Drugs, 12th Ed, 2003 7. www.medsafe.govt.nz 8. https://www.starship.org.nz/guidelines/cefuroxime-sodium/www.nzf.org.nz
Updated By	A Lynn, B Robertshawe, F Robertson May 2009 (new pumps) A Lynn, B Robertshawe June 2012 (re-order profile), Nov 2012 (discard vial) A Lynn, M Wallenstein, B Robertshawe May 2021 brands