



NEONATAL

MEROPENEM




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

Restricted: Requires Microbiologist review within 24 hours of initiation

Presentation	Vial: 500mg																																						
Classification	Bactericidal carbapenem antibiotic. Acts by interfering with bacterial cell wall synthesis. It is active against a broad spectrum of aerobic and anaerobic bacteria.																																						
Indication	Treatment of severe infections including intra-abdominal infections, meningitis and other infections where multi-resistant infections are suspected or proven.																																						
Dose	<p><u>Intra-abdominal and NON-CNS infections</u></p> <p>IV:</p> <table border="1"> <thead> <tr> <th><i>Corrected gestational age</i></th> <th><i>Postnatal age</i></th> <th><i>Dose</i></th> <th><i>Frequency</i></th> </tr> </thead> <tbody> <tr> <td><32 weeks</td> <td><14 days</td> <td>20mg/kg/dose</td> <td>12 hourly</td> </tr> <tr> <td><32 weeks</td> <td>≥14 days</td> <td>20mg/kg/dose</td> <td>8 hourly</td> </tr> <tr> <td>≥32 weeks</td> <td><14 days</td> <td>20mg/kg/dose</td> <td>8 hourly</td> </tr> <tr> <td>≥32 weeks</td> <td>≥14 days</td> <td>30mg/kg/dose</td> <td>8 hourly</td> </tr> </tbody> </table> <p><u>Meningitis</u></p> <p>IV:</p> <table border="1"> <thead> <tr> <th><i>Corrected gestational age</i></th> <th><i>Postnatal age</i></th> <th><i>Dose</i></th> <th><i>Frequency</i></th> </tr> </thead> <tbody> <tr> <td><32 weeks</td> <td><14 days</td> <td>40mg/kg/dose</td> <td>12 hourly</td> </tr> <tr> <td><32 weeks</td> <td>≥14 days</td> <td>40mg/kg/dose</td> <td>8 hourly</td> </tr> <tr> <td>≥32 weeks</td> <td>All ages</td> <td>40mg/kg/dose</td> <td>8 hourly</td> </tr> </tbody> </table>			<i>Corrected gestational age</i>	<i>Postnatal age</i>	<i>Dose</i>	<i>Frequency</i>	<32 weeks	<14 days	20mg/kg/dose	12 hourly	<32 weeks	≥14 days	20mg/kg/dose	8 hourly	≥32 weeks	<14 days	20mg/kg/dose	8 hourly	≥32 weeks	≥14 days	30mg/kg/dose	8 hourly	<i>Corrected gestational age</i>	<i>Postnatal age</i>	<i>Dose</i>	<i>Frequency</i>	<32 weeks	<14 days	40mg/kg/dose	12 hourly	<32 weeks	≥14 days	40mg/kg/dose	8 hourly	≥32 weeks	All ages	40mg/kg/dose	8 hourly
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Dose Adjustment	Dose and frequency adjustment may be required in cases of impaired renal function.
Monitoring	Renal function – urea and electrolytes. Full blood count with long term use.
Guidelines & Resources	WNHS Policy: Antimicrobial Stewardship
Compatible Fluids	Sodium chloride 0.9% (preferred) Glucose 5%
Preparation	<p>IV: Available from CIVAS (KEMH & PCH).</p> <p><u>Dilution for 50mg/mL Concentration</u> Add 10mL of a suitable diluent to 500mg vial of meropenem Concentration is 500mg/10mL Final concentration is <u>50 mg/mL</u></p> <p><u>Dilution for 25mg/mL Concentration</u> Add 20mL of a suitable diluent to 500mg vial of meropenem Concentration is 500mg/20mL Final concentration is <u>25mg/mL</u></p> <p>Discard reconstituted solution immediately after use</p>
Administration	<u>IV Infusion:</u> Infuse over 30 minutes
Adverse Reactions	Common: diarrhoea, nausea, vomiting, thrombophlebitis, rash, pruritus Infrequent: urticaria, eosinophilia, thrombocytopenia, neutropenia, abnormal liver function tests Rare: seizures
Storage	Store vials at room temperature – below 25°C and protect from light
Notes	Cross reactivity may occur in patients with a history or hypersensitivity reactions to penicillins, carbapenems or cephalosporins. Each 1g of meropenem contains 3.92 mmol (90.2mg) of sodium

References	<p>Takemoto CK, Hodding JH, Kraus DM. Pediatric & neonatal dosage handbook with international trade names index: a universal resource for clinicians treating pediatric and neonatal patients. 24th ed. Hudson (Ohio): Lexicomp; 2401. 2, p1292.</p> <p>Lilley L, Legge D. Paediatric injectable guidelines. 5th ed. Melbourne (Victoria): The Royal Children's Hospital; 2016.</p> <p>Australian Medicines Handbook. Meropenem. In: Australian Medicines Handbook [Internet]. Adelaide (South Australia): Australian Medicines Handbook; 2019 [cited 2019 September]. Available from: https://amhonline.amh.net.au/</p> <p>MIMS Australia. DBL Meropenem for Injection. In: MIMS Online [Internet]. St Leonards (New South Wales): MIMS Australia; 2019 [cited 2019 September]. Available from: https://www.mimsonline.com.au</p> <p>Truven Health Analytics. Meropenem. In: NeoFax [Internet]. Greenwood Village (CO): Truven Health Analytics; 2017 [cited 2019 September]. Available from: https://neofax.micromedexsolutions.com/</p> <p>Society of Hospital Pharmacists of Australia. Meropenem. In: Australian Injectable Drugs Handbook [Internet]. [St Leonards, New South Wales]: Health Communication Network; 2017 [cited 2019 September]. Available from: http://aidh.hcn.com.au</p> <p>Paediatric Formulary Committee. BNF for Children: 2019. London: BMJ Group Pharmaceutical Press; 2019.</p>
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