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|  | | Type: Drug Guideline | Document reference: 2938 | Manual Classification: Waikato DHB Drug Guidelines |
| Title: Meropenem for Neonates | | | Effective date: 21 October 2020 | |
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BRIEF ADMINISTRATION GUIDE

For detailed information refer to [The Australasian Neonatal Medicines Formulary meropenem guideline](#)



Critical Note: there are minor variations between the ANMF and Waikato DHB best practice within this drug guideline – see **yellow shaded text**

Indications:

- Severe infections (e.g. sepsis, meningitis) caused by susceptible Gram-negative organisms which are resistant to other conventional antibiotics e.g. ESBL

Route:

Intravenous

- Injection supplied as meropenem 500 mg, powder for reconstitution
 - pH of meropenem 7.3 to 8.3

Dose:

Standard dosing (non-CNS and non-Pseudomonas sepsis):

| CGA (weeks) | Postnatal age (days) | Dose (mg/kg) | Dosing Interval (hours) |
|-------------|----------------------|--------------|-------------------------|
| < 32 | 0 to 13 | 20 | 12 |
| | 14+ | 20 | 8 |
| ≥ 32 | 0 to 13 | 20 | 8 |
| | 14+ | 30 | 8 |

Meningitis and Pseudomonas Sepsis

40mg/kg every 8 hours (for all age groups)

Note: Dose reduction (or increased interval) may be necessary in renal impairment


Preparation and administration

Intravenous Injection

- Dilute 500mg vial with 9.6mL of water for injection to make final concentration **50 mg/mL**.
- Shake vial vigorously, as soon as diluent is added, to dissolve powder and check for absence of particulate matter
- Draw up the required volume for the prescribed dose and if desired dilute further with compatible fluid (glucose 5%, glucose 10%, sodium chloride 0.9%, glucose and sodium chloride combination)
- Infuse over 30 minutes using syringe driver with Guardrails profiling (when available)
- Flush before and after the dose with compatible fluid

Monitoring

- Monitor temperature and other parameters appropriate to the condition
- Monitor renal function regularly
- Monitor hepatic and hematologic function at baseline and periodically during treatment
- Assess IV site for signs of inflammation
- Observe for change in bowel frequency

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Storage and Stability

- Reconstituted solution in the vial and solutions diluted further with sodium chloride 0.9% are stable for up to 8 hours at room temperature (below 25°C) and for 24 hours when refrigerated (2 to 8 °C).
- Solutions diluted with glucose are stable for **2 hours** at room temperature (below 25°C) and for **8** hours when refrigerated (2 to 8 °C).

Guardrails Information

Meropenem is Guardrail profiled on the CC pump for NICU. Following are the Guardrail limits:

| Guardrails Drug Name Pump | Meropenem* CC | | | |
|-------------------------------|------------------|-------|-------|-------|
| | 0.4-1kg | 1-2kg | 2-3kg | 3-5kg |
| Concentration (mg/ml) | | | | |
| Minimum | 5 | 12.5 | 25 | 37.5 |
| Maximum | 50 | 50 | 50 | 50 |
| Dose rate (mg/kg/hour) | | | | |
| Default | 40 | 40 | 40 | 40 |
| Soft minimum | 39 | 39 | 39 | 39 |
| Soft maximum | 80 | 80 | 80 | 80 |
| Hard max | 160 | 160 | 160 | 160 |

Competency for Administration

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Waikato DHB Generic Medicine Management and IV certification plus Guardrails competency (if administering IV) as well as Neonatal specific competency NCV/NAC (if administering via CVAD).

References

- Australian Neonatal Medicines Formulary. Meropenem Drug Guideline, 2017. Available from: https://www.seslhd.health.nsw.gov.au/sites/default/files/groups/Royal_Hospital_for_Women/Neonatal/Neomed/neomed17meropenemfull.pdf
- Meropenem Ranbaxy datasheet, Douglas Pharmaceuticals, 2018. Available from <https://www.medsafe.govt.nz/profs/datasheet/m/MeropenemRanbaxyinj.pdf>
- New Zealand Formulary for Children (NZFC). Meropenem. Accessed 16.4.2020. Available from https://nzfchildren.org.nz/nzf_3089
- The Royal Children's Hospital Melbourne. Paediatric Injectable Guidelines. Accessed 16.4.2020. Available from <https://pig.rch.org.au>.
- Auckland DHB Newborn Services. Cefotaxime Drug Protocol. December 2005. Available from <http://www.adhb.govt.nz/newborn/DrugProtocols/MeropenemPharmacology.htm>
- Canterbury DHB Neonatal Services. Cefotaxime Drug Information Sheet. March 2016. Available from <https://cdhb.health.nz/wp-content/uploads/41810f30-meropenem.pdf>
- Truven Health Analytics Inc. Pediatrics and Neofax®. Meropenem monograph. Accessed 16.4.2020. Available from: <http://www.micromedexsolutions.com>.
- Notes on Injectable Drugs 7th Edition (NZ Health Care Pharmacists), 2015.
- Waikato DHB Guardrails dataset 2020.

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