

ACICLOVIR

Indication	<ul style="list-style-type: none"> • Herpes simplex virus (HSV) infection • Varicella zoster virus (VZV) infection 						
INTRAVENOUS	Presentation <ul style="list-style-type: none"> • Vial 250 mg 500 mg • Ampoule: 250 mg in 10 mL 500 mg in 20 mL 						
	Dosage <ul style="list-style-type: none"> • 20 mg/kg¹ (frequency according to current gestational age) <table border="1" data-bbox="422 470 1348 593"> <thead> <tr> <th>Current gestational age (weeks)</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>29+6 or less</td> <td>every 12 hours</td> </tr> <tr> <td>30+0 or more</td> <td>every 8 hours</td> </tr> </tbody> </table>	Current gestational age (weeks)	Frequency	29+6 or less	every 12 hours	30+0 or more	every 8 hours
	Current gestational age (weeks)	Frequency					
	29+6 or less	every 12 hours					
30+0 or more	every 8 hours						
Preparation <ul style="list-style-type: none"> • 250 mg vial <ul style="list-style-type: none"> ○ Add 3 mL of water for injection or 0.9% sodium chloride ○ Draw up solution and make up to 10 mL total volume with water for injection or 0.9% sodium chloride² ○ <i>Concentration now equal to 25 mg/mL</i> • 500 mg vial <ul style="list-style-type: none"> ○ Add 3 mL of water for injection or 0.9% sodium chloride ○ Draw up solution and make up to 20 mL total volume with water for injection or 0.9% sodium chloride² ○ <i>Concentration now equal to 25 mg/mL</i> 							
Administration <ul style="list-style-type: none"> • 250 mg in 10 mL 500 mg in 20 mL) ampoule <ul style="list-style-type: none"> ○ <i>Concentration equal to 25 mg/mL in solution</i> • Draw up 4 mL of the 25 mg/mL solution (100 mg) and make up to 20 mL total volume with 0.9% sodium chloride <ul style="list-style-type: none"> ○ <i>Concentration now equal to 5 mg/mL</i> • Prime the infusion line and reduce total syringe volume to the prescribed dose • IV infusion via syringe driver pump over 60 minutes² <ul style="list-style-type: none"> ○ On completion, disconnect syringe and infusion line ○ Flush access port at same rate as infusion 							
Special considerations	<ul style="list-style-type: none"> • Duration of therapy depends on infection and response to treatment³ • If renal impairment, may need dosage adjustment³ • Ensure adequate hydration.^{3,4} Each 100 mg contains 0.42 mmol of sodium² • CVL access (to avoid extravasation injury) <ul style="list-style-type: none"> ○ Consider at commencement of all treatment regimens ○ Recommended at commencement of long treatment (21 day) course ○ If necessary, maximum concentration 25 mg/mL via CVL⁵ • Medication pH is 11—suitable only for IV infusion^{6,7} • If turbidity or crystallisation, then discard. May occur even with compatible fluids • UAC route: consult with neonatologist/paediatrician prior to use and refer to Queensland Clinical Guideline: <i>Neonatal medicines</i>⁸ • Current gestational age is the same as <i>postmenstrual age</i> (PMA) 						
Monitoring	<ul style="list-style-type: none"> • Renal and hepatic function, FBC • Extravasation risk 						
Compatibility	<ul style="list-style-type: none"> • Fluids² <ul style="list-style-type: none"> ○ 5% glucose, 0.9% sodium chloride, 0.45% sodium chloride • Y-site² <ul style="list-style-type: none"> ○ Amikacin, ampicillin, cefotaxime, cefoxitin, ceftazidime, ceftriaxone, cefazolin, clindamycin, dexamethasone, fluconazole, heparin, hydrocortisone, metronidazole, potassium chloride, ranitidine, sodium bicarbonate, trimethoprim-sulfamethoxazole (co-trimoxazole), vancomycin, zidovudine 						



Incompatibility	<ul style="list-style-type: none"> • PN and fat emulsion: co-infusion with aciclovir not recommended (evidence limited). If unavoidable, seek pharmacist advice first, filter infusion and flush before and after • Fluids <ul style="list-style-type: none"> ○ No information • Drugs <ul style="list-style-type: none"> ○ Adrenaline (epinephrine)², caffeine citrate², dobutamine², dopamine², meropenem¹, midazolam², ondansetron², paracetamol², piperacillin-tazobactam²
Interactions	<ul style="list-style-type: none"> • Nil significant
Stability	<ul style="list-style-type: none"> • Reconstituted solution <ul style="list-style-type: none"> ○ Use immediately upon reconstitution² • Infusion solution² <ul style="list-style-type: none"> ○ Once diluted for administration, store at room temperature ○ Use within 24 hours
Side effects	<ul style="list-style-type: none"> • Blood pathology: thrombocytopenia, leukopenia, neutropenia (rare), electrolyte disturbances⁹ • Circulatory: hypotension¹ • Digestive: vomiting (common)¹, hepatitis¹⁰ • Integumentary: rash (common)¹, injection site reactions⁷, severe extravasation burns and necrosis due to alkaline pH⁷, toxic epidermal necrolysis (rare)¹⁰, Stevens-Johnson syndrome (rare)¹⁰ • Nervous system: seizures¹ • Urinary: renal impairment¹⁰, crystalluria (rare)¹⁰
Actions	<ul style="list-style-type: none"> • Anti-viral agent. Prevents viral DNA synthesis⁶
Abbreviations	CVL: central venous line, FBC: full blood count, IV: intravenous; PN: parenteral nutrition, UAC: umbilical arterial catheter
Keywords	acyclovir, aciclovir, zovirax, zyclir, herpes simplex virus, HSV, VZV, varicella zoster virus

The Queensland Clinical Guideline *Neonatal Medicines* is integral to and should be read in conjunction with this monograph. Refer to the disclaimer. Destroy all printed copies of this monograph after use.

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Document history

ID number	Effective	Review	Summary of updates
NMedQ19.010-V1-R24	25/06/2019	25/06/2024	Endorsed by Queensland Neonatal Services Advisory Group (QNSAG)
NMedQ19.010-V2-R24	13/08/2021	25/06/2024	<ul style="list-style-type: none">• Amended gestational age to current gestational age• Deleted UAC icon• Amended instructions for administration via UAC• Added QR code

QR code

