amLODIPine

Indication	• Hypertension[1]

ORAL

Presentation	• Compounded oral solution 1 mg in 1 mL o Available: Mater Pharmacy Production Services | Central Pharmacy QH • Tablet: 5 mg
Dosage	• 0.05–0.3 mg/kg once daily[2,3] o May be given in two divided doses if required to control BP[4] o Increase at intervals of 1–2 weeks according to response up to maximum[2] of 0.6 mg/kg/day
Preparation (if no oral solution available[5])	• Crush the tablet[1] • Tablets do not disperse easily and may take up to 5 minutes to dissolve[1]
	• Tablet 5 mg o Disperse 5 mg tablet in 10 mL of water for injection o *Concentration now equal to 0.5 mg/mL*
Administration	• Draw up prescribed dose into oral/enteral syringe • Oral/OGT/NGT without regard to feeds[1]

Special considerations	• BP and withholding dose o Individualise MAP cut-off based on gestation and postnatal age[3] (e.g. consider less than 50th centile as cut-off) • May take up to 1 week to see full anti-hypertensive effect[1] o Half-life of 35–50 hours[6] o Caution with more frequent dosage changes
Monitoring	• Consider baseline serum creatinine, potassium, sodium, calcium at commencement[7] • BP monitoring as directed by SMO or o Every 8 hours on commencement and with dose increase o May reduce frequency of monitoring, when steady dosage achieved and BP within desired parameters
Compatibility	• Not applicable
Incompatibility	• Not applicable
Interactions	• Diuretics (furosemide (frusemide), hydrochlorothiazide, spironolactone): increased risk of hypotension[5] • Diazoxide: increased risk of hypotension[5] • Fluconazole: increased levels of amlodipine[5] • Sildenafil: increased risk of hypotension[5]
Stability	• Compounded oral solution o Refrigerate 2–8 °C o Discard 4 weeks after opening or as per local infection control policy (limited evidence) • Tablets o Store below 25 °C[6] • Dispersed tablet solution o Discard unused portion immediately
Side effects	• Blood pathology: blood dyscrasia[5], raised liver enzymes (may require dose reduction in hepatic impairment[4]) • Circulatory: hypotension[5], tachycardia[5], peripheral oedema due to redistribution of extracellular fluid which does not respond to diuretics[8], pulmonary oedema[5] • Immunologic: hypersensitivity reactions[1] (Stevens-Johnsons Syndrome, dermatitis and angioedema[5]) • Integumentary: flushing[6] • Severe toxicity: acute renal failure, profound hypotension, shock, metabolic acidosis, respiratory failure and/or hypoxemia can develop[6]

Actions	• A dihydropyridine calcium channel blocker (anti-hypertensive) that works by blocking the inward current of calcium into cells in vascular smooth muscle, myocardium and cardiac conducting system via L type calcium channels[6] • Acts mainly on arteriolar smooth muscle to reduce peripheral vascular resistance and BP with minimal effect on myocardial cells[6] • Slow onset (6–8 hours) and prolonged duration of action (half-life 2 days)[7]
Abbreviations	BP: blood pressure, MAP: mean arterial pressure, NGT: nasogastric tube, OGT: orogastric tube, SMO: most senior medical officer
Keywords	Hypertension, anti-hypertensive, calcium channel blocker

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
NMedQ21.069-V1-R26	20/07/2021	20/07/2026	Endorsed by Queensland Neonatal Services Advisory Group (QNSAG)

QR code