



NEONATAL MEDICATION GUIDELINE

Midazolam

Scope (Staff): Nursing, Medical and Pharmacy Staff

Scope (Area): KEMH NICU, PCH NICU, NETS WA

This document should be read in conjunction with the [Disclaimer](#).

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Requires Neonatologist review within 24 hours of initiation

HIGH RISK Medication 

Description

Short acting benzodiazepine

Presentation

Ampoule: 5mg/5mL (1000 microgram/mL)
15mg/3mL (5000 microgram/mL)

Oral liquid: 2.5mg/mL (2500 microgram/mL)

Storage

Store at room temperature, below 25°C

Protect from light

Schedule 4 Restricted Medication

Indications

Short acting sleep-inducing agent for:

- Short procedures

- Induction of anaesthesia
- Prolonged sedation of ventilated patients

Treatment for refractory seizures

Midazolam enhances the central sedative effects of tranquilisers, narcotics, analgesics, and anaesthetics

Dose

IV:

Intermittent dosing:

50 – 150 microgram/kg/dose every 2 – 4 hours as required followed by a continuous infusion

Continuous infusion – SEDATION

0.5 – 1 microgram/kg/minute

Continuous infusion – SEIZURES

1 – 7 microgram/kg/minute

Induction/Sedation

Oral:

250 – 500 microgram/kg/dose administered 15 – 30 minutes before a procedure

Dose Adjustment

Dose adjusted according to response with adequate monitoring

Dose adjustment in seizure control may be higher – use with caution

Preparation

IV

Available from CIVAS (KEMH & PCH)

Infusion calculation:

Dilute 3mg of midazolam per kilogram of baby's weight and make to a final volume of 50mL with a compatible fluid

Concentration = 1 microgram/kg/minute = **1 mL/hour**

Administration

Oral

May be given at any time with regards to feeds

IV

Inject over at least 5 minutes

IV infusion

Infuse at the prescribed rate using a controlled infusion pump

Compatible Fluids

Sodium chloride 0.9%, Glucose 5%, Glucose 10%

Compatibility with Heparin

	Sodium Chloride 0.9%	Glucose 5%	Glucose 10%
WITH Heparin	24 hours at room temperature	24 hours at room temperature	No information
WITHOUT Heparin	48 hours at room temperature	48 hours at room temperature	24 hours at room temperature

Y-Site Compatibility

Refer to KEMH Neonatal Medication Guideline: [Y-Site IV Compatibility in Neonates](#)

Side Effects

Common: hypotension, reduced cardiac output

Serious: apnoea, respiratory depression, seizures

Interactions

Combination use with other CNS depressants can increase the opioid effect – increasing risk of respiratory depression and sedation

Concurrent administration with erythromycin promotes accumulation

Pentoxifylline may decrease the anaesthetic/sedative effect of benzodiazepines

Care needs to be taken with adding or withdrawing caffeine

Comments

May be used in conjunction with morphine

Flumazenil (see [monograph](#)) is used as the reversal agent for midazolam

Related Policies, Procedures & Guidelines

CAHS Clinical Practice Guidelines:

[Neonatal Seizures](#)

[End of Life Care](#)

[Resuscitation and Intubation Drugs for Neonates](#)

[Calculation of the Composition of Drug Infusions](#)

[Medication Administration: Intramuscular, Subcutaneous, Intravascular](#)

References









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