

MORPHINE – Neonatal Substance Withdrawal

Trade Name	RA Morph
Class	Opioid analgesic
Mechanism of Action	Binds μ opioid receptors in the central nervous system.
Indications	<p>Withdrawal from Maternal Opioid medications:</p> <p>Using the Eat, Sleep Console tool for assessment, with bedside and team huddles.</p> <ul style="list-style-type: none"> • Yes responses to the Eat/Sleep assessments, AND • Consolability scale is 3 on 2 consecutive assessments, AND • No improvement with non-pharmacological measures
Contraindications	Hypersensitivity to morphine. Use with caution in patients with raised intracranial pressure, hepatic or renal impairment, cardiac arrhythmia, hypotension or breathing difficulties.
Supplied As	Morphine Hydrochloride 1mg/mL oral mixture
Dilution	N/A
Dosage	<p><u>Initial Dosing</u></p> <p>Morphine 0.3mg/kg/DAY in 6 divided doses (ie: 4 hourly) if the 3-4hrly ESC Score is: Eat =Yes, Sleep = Yes, Consolability =3</p> <p>Morphine at 0.4mg/kg/DAY in 6 divided doses (ie: 4 hourly) if the 3-4hrly ESC Score is: Eat =Yes, Sleep = Yes, Consolability = 3 and polypharmacy and high dose methadone antenatally</p> <p><u>Increasing the Dose</u></p> <p>Increase by 0.1mg/kg/DAY increments, but, consider Increasing by 0.2mg/kg/DAY increment if polypharmacy or high dose methadone antenatally</p> <p>If on 0.8mg/kg/DAY and not controlled, consider adding in phenobarbitone depending on the maternal drugs used</p> <p><u>Reducing the Dose</u></p> <p>When stable for 48 hours the first change is not a reduction in the overall daily dose but an increase in the dose interval. Give the same daily dose in mg/kg/DAY in 4 divided doses ie: 6 hourly as opposed to 4 hourly</p> <p>When stable for 48 hours after the interval change Reduce dose by 0.05mls per dose. Review every 48 hours as inpatient Review 1-2 times a week for outpatients If this rate of reduction is not tolerated then reduce the dose by 10% instead</p>

Interval	Start 4 hourly, then change to 6 hourly when there has been 48 hours of stability on the ESC scoring without changing the total mg/kg/day
Administration	<p>Oral and given before a feed</p> <p>The solution is very bitter and may induce vomiting.</p> <ul style="list-style-type: none"> • If the infant has a large vomit within 10 minutes of being given a dose – repeat the dose • If the infant has a large vomit more than 10 minutes after the dose – give an extra <u>half</u> dose • If the infant vomits 20 – 30 minutes after the dose or <u>after</u> the feed - do not repeat the dose
Compatible With	N/A
Incompatible With	N/A
Monitoring	<p>Oral morphine doses greater than 0.8mg/kg/day require that the infant has cardiorespiratory monitoring as the dose is introduced</p> <p>Bowel and urinary output (especially at higher doses).</p>
Stability	Discard 6 months after opening or as per manufacturer's expiry. (which ever date is shortest)
Storage	Controlled Drug Cupboard
Adverse Reactions	<p>Respiratory depression, bradycardia, hypotension, ileus and delayed gastric emptying, urinary retention, sweating, nausea and vomiting, development of tolerance. Seizures (higher doses).</p> <p>Naloxone reverses effects. Mechanical Ventilation may be preferable if narcotic effects are required.</p>
Metabolism	Hepatic conversion to glucuronide metabolites which are renally excreted. Variable pharmacokinetics. Elimination half life approximately 9 hours.
Interactions	Morphine decreases effects of diuretics by inducing release of ADH. Morphine may increase zidovudine levels by competitively inhibiting glucuronidation or directly inhibiting metabolism.
Comments	<p>RA-Morph[®] is a clear colourless or pale yellow solution.</p> <p>It is sugar and alcohol free.</p> <p>Outpatient's prescriptions for morphine must be written on a Controlled Drug Prescription form.</p> <p>Morphine for NSW infants is prescribed on a weekly basis.</p> <p>The dose of morphine should be reduced by 0.05mL per dose 1-2 times a week.</p> <p>The total volume prescribed should include an extra 2mL in excess of the volume expected to be used over the 7 day period in order to allow</p>

	<p>for some loss associated with the drawing up process. (approximately 0.05mL /oral syringe).</p> <p>In order to permit the pharmacist to dispense a greater volume than that expected from the dose prescribed instructions for administration on the prescription should include the words “as instructed.”</p> <p>Eg Rx Morphine Oral Solution (one mg/mL) Sig Zero point two (0.2) mL every six hours as instructed Mitte Six point six (6.6) mL</p>
References	<ol style="list-style-type: none"> 1. Neofax in www.micromedexsolutions.com 2. Medicines for Children RCPCH. 3. ADC 2000;83:F101-3 4. The Journal of Clinical Pharmacology 2016, 56(8) 1009–1018
Updated By	<p>A Lynn and B Robertshawe September 2007 A Lynn, B Robertshawe Nov 2012 (re-order profile) N Austin, K Hougland, M Wallenstein, B Robertshawe Dec 2021 A Lynn, N Austin June 2022 – clarify dosing per DAY, morphine sticker</p>