

SUCROSE

Indication	<ul style="list-style-type: none"> Mild analgesia and behavioural comfort prior to short term painful procedures¹ 																		
TRANSLINGUAL	Presentation <ul style="list-style-type: none"> Oral solution: 24% 																		
	<table border="1"> <thead> <tr> <th>Current gest age (weeks)</th> <th>Dose (mL per procedure)</th> <th>Max in 24 hours</th> </tr> </thead> <tbody> <tr> <td>Less than 29</td> <td colspan="2">Discuss with MO. Limited evidence² Suggested dose as for 29–32 weeks</td> </tr> <tr> <td>29–32</td> <td>0.1–0.2 mL</td> <td>0.2 mL</td> </tr> <tr> <td>32–40</td> <td>0.2–0.5 mL</td> <td>2.5 mL</td> </tr> <tr> <td>Birth (term)–1 month</td> <td>0.5–1 mL</td> <td>5 mL</td> </tr> <tr> <td>Greater than 1 month</td> <td>1–2 mL</td> <td>5 mL</td> </tr> </tbody> </table> <ul style="list-style-type: none"> If required, may repeat after 2 minutes once during procedure 	Current gest age (weeks)	Dose (mL per procedure)	Max in 24 hours	Less than 29	Discuss with MO. Limited evidence ² Suggested dose as for 29–32 weeks		29–32	0.1–0.2 mL	0.2 mL	32–40	0.2–0.5 mL	2.5 mL	Birth (term)–1 month	0.5–1 mL	5 mL	Greater than 1 month	1–2 mL	5 mL
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Preparation <ul style="list-style-type: none"> Not required 																			
Administration <ul style="list-style-type: none"> Draw up prescribed dose (mL per procedure) Place one quarter of dose on the anterior part of the tongue 2 minutes prior to procedure² Then if able to suck, offer non-nutritive sucking (pacifier/dummy) or breastfeeding¹ Give remainder of dose incrementally² 																			
Special considerations <ul style="list-style-type: none"> If administering from a pipette, 0.1 mL is equivalent to two (2) drops (0.05 mL in 1 drop) If available, breastfeeding or 0.25 mL of EBM can be substituted for sucrose² Contraindications³ <ul style="list-style-type: none"> NEC (suspected or proven), feeding intolerance, distended abdomen Unrepaired trachea-oesophageal fistula, altered gag or swallow (e.g. with HIE) Fructose or sucrose intolerance Critically ill babies receiving appropriate IV analgesia and sedation Precautions <ul style="list-style-type: none"> If investigated for hypoglycaemia (prefer EBM to sucrose) Inborn errors of metabolism Only effective if placed on the tongue.² Do not give oral or via NGT or OGT² Combine sucrose administration with swaddling, containment, non-nutritive sucking and other supportive measures² Current gestational age is the same as <i>postmenstrual age</i> (PMA) 																			
Monitoring <ul style="list-style-type: none"> Assess for pain and discomfort¹ 																			
Compatibility <ul style="list-style-type: none"> Nil 																			
Incompatibility <ul style="list-style-type: none"> Nil known 																			
Interactions <ul style="list-style-type: none"> Nil known 																			
Stability <ul style="list-style-type: none"> Store below 30 °C 																			
Side effects <ul style="list-style-type: none"> Nil clinically significant⁴ Adverse effects of repeated doses in premature babies are unknown¹ 																			
Actions <ul style="list-style-type: none"> A disaccharide (glucose + fructose) Small amounts of sucrose/EBM placed on the tip of the tongue shown to mediate an increase in the endogenous opioid release, reduce procedural pain and minimise crying post event^{1,5} Non-nutritive sucking enhances the calming response elicited by EBM or sucrose^{5,6} Effects last for about 5 minutes after first administration² 																			
Abbreviations <p>EBM: expressed breast milk, HIE: hypoxic-ischaemic encephalopathy, IV: intravenous, MO: most senior medical officer, NEC: necrotising enterocolitis, NGT: nasogastric tube, OGT: orogastric tube, PMA: post menstrual age (equivalent to current gestational age)</p>																			



Keywords

Sucrose, analgesia, comfort care, painful procedure, neonatal pain, pain measurement, sucking behaviour

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.

References

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Document history

ID number	Effective	Review	Summary of updates
NMedQ21.066-V1-R26	06/05/2021	06/05/2026	Endorsed by Queensland Neonatal Services Advisory Group (QNSAG)

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