

NEONATAL MEDICATION PROTOCOLS

SODIUM BICARBONATE
 Created by: NCCU
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NCCU Clinical Guidelines
 KEMH/PMH
 Perth, Western Australia

DRUG:	SODIUM BICARBONATE
PRESENTATION:	<p>Vial: 8.4% 10 mL Vial: 8.4% 100 mL Oral Solution: 8.4% (1 mmol/mL)</p> <p>Each 1ml contains:</p> <p>Sodium Ions 1mmol Bicarbonate Ions 1mmol</p>
ACTION & INDICATION:	Alkalinising agent that dissociates to provide bicarbonate ions. For correction and treatment of metabolic acidosis.
DOSE :	<p>CARDIOPULMONARY RESUSCITATION: Sodium bicarbonate is not recommended in a resuscitation situation unless it has progressed greater than 10-15 minutes and a blood gas has demonstrated a severe metabolic acidosis. Intravenous/Umbilical arterial/venous: 1-2 mmol/kg over 30 minutes of 4.2% sodium bicarbonate. The dose could be repeated according to arterial blood gas analysis.</p> <p>CORRECTION OF pH: To be used for correcting metabolic acidosis if pH<7.2, BE> -10, and a normal PCO₂</p> <p>Dose (mmol) = $\frac{0.3 \times \text{weight (kg)} \times \text{Base deficit}}{2}$</p> <p>This is a half correction.</p> <p>MAINTENANCE OF pH Bicarbonate may be infused at a prescribed rate to slowly elevate pH. A rate of 1 – 2 mmol/kg/hr of 4.2% Sodium bicarbonate may be infused peripherally. 8.4% Sodium bicarbonate may be given into a central vein only. Once desired pH is reached this infusion may be ceased.</p> <p>SUPPLEMENTATION (Oral) 1 mmol/kg tds</p>
PREPARATION:	Diluent: Water for Injections Dilute 1:1 or 1:2 before use. May be further diluted if required.
ADMINISTRATION:	For correction of metabolic acidosis, infuse dose over 2 to 6 hours (usually slower infusions for smaller babies) ORAL May be given at any time with regard to feeds only if on full feeds.
ADVERSE EFFECTS :	Hypernatraemia Increased risk of intraventricular haemorrhage. Alkalosis: dyspnoea, restlessness, muscle weakness, myocardial depression, convulsions, coma. Hyperosmolality, extravasation may cause tissue necrosis.
COMMENTS:	Usually not used in the acute phase of resuscitation - ensure adequate ventilation. Monitor blood pH Discard vial immediately after use
REFERENCES:	Neonatal Pharmacopaeia 2 nd Ed Royal Women's Hospital Melbourne Neofax 2013
DATE:	July 2015