

SODIUM CHLORIDE 3%

NEWBORN USE ONLY

2017

Alert	Osmolarity: 1027 mOsm/L. ¹ Sodium supplementation is not always appropriate and fluid restriction may be appropriate in the management of hyponatraemia. Treatment should always be tailored to the cause.
Indication	Treatment of hyponatraemia.
Action	Sodium is the major cation of extracellular fluid.
Drug Type	Sodium chloride 3% contains 30 g/L sodium chloride, equivalent to 0.5 mmol/mL of sodium.
Trade Name	Sodium chloride 3%
Presentation	Sodium chloride 3% – 1000 mL.
Dosage/Interval	<p><u>Severe hyponatraemia < 120 mmol/L or symptomatic hyponatraemia</u></p> <p>IV: Give sodium chloride 3% at 0.5 mmol/kg/hour (1 mL/kg/hour) until symptoms abate or sodium \geq 120 mmol/L.*</p> <p>Then give sodium chloride 3% at 0.15 mmol/kg/hour (0.3 mL/kg/hour) for 48 hours or until desired sodium is achieved.</p> <p>[Therapeutic goal is to increase sodium by 7 mmol/L/day]</p> <p>*1 mL/kg sodium chloride 3% will raise serum sodium by approximately 1 mmol/L.²</p> <p><u>IV supplementation</u> Start at 2–4 mmol/kg/day and increase as required.</p>
Route	IV
Maximum Dose	
Preparation/Dilution	IV: Sodium chloride 3% can be given undiluted.
Administration	IV: Sodium chloride 3% – Can be given undiluted as an infusion, preferably through large vein.
Monitoring	IV: Watch the local site for signs of extravasation. Monitor serum sodium as per clinical team's recommendation.
Contraindications	IV: No information.
Precautions	Impaired renal function, cardiac insufficiency, pre-existing oedema with sodium retention.
Drug Interactions	No information.
Adverse Reactions	Hypernatraemia, volume overload, congestive heart failure, respiratory distress. Hyperchloraemia, hypercalciuria. Disseminated intravascular coagulation (DIC) is associated with inadvertent injections of sodium chloride into blood vessels of the uterus or placenta due to hypernatraemic shock; not reported in infants. Osmotic demyelinating syndrome. Fever. IV site: Extravasation, phlebitis, venous thrombosis.
Compatibility	IV Fluids: Glucose 5%, glucose 10%, glucose 5% in sodium chloride 0.9%, glucose 5% in sodium chloride 0.45%, sodium chloride 0.9%, sodium chloride 0.45%. Y site: No information.
Incompatibility	IV Fluids: Fat emulsion. Y site: No information. Amino acid solutions – No information.
Stability	
Storage	Store at room temperature, 20–25°C
Special Comments	Osmolarity of undiluted hypertonic sodium chloride is $>$ 1000 mOsm/L, posing the risk of extravasation for peripheral IV solutions. ^{3,4} Monitor for extravasation when infused peripherally at higher rates.

SODIUM CHLORIDE 3%

NEWBORN USE ONLY

2017

	Total body water is traditionally calculated as weight x 0.6 in children. Greater total body water content in newborns should be considered and therefore should be calculated as weight x 0.75. ^{2,5}
Evidence summary	Refer to full version.
References	Refer to full version.

Original version Date: 06/09/2017	Author: NMF Consensus Group
Current Version number: 1.0	Version Date: 06/09/2017
Risk Rating: Medium	Due for Review: 06/09/2020
Approved by: JHCH CQ&PCC	Approval Date: 26/09/2017

Authors Contribution

Original author/s	Chris Wake, Srinivas Bolisetty
Pharmacy Review	Ushma Trivedi
Expert review	
Evidence Review	Timothy Schindler
Final content and editing review	Ian Whyte
Facilitator/s	Srinivas Bolisetty