South Australian Neonatal Medication Guidelines

sodium chloride

0.45%, 0.9% & 20% intravenous, 6% inhalation, 20% oral solution*

Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Dose and Indications

Sodium supplementation

Intravenous Infusion, Oral

2 to 4mmol/kg per day

Higher doses up to 6mmol/kg per day may be needed for severe depletion

Adjust the dose according to clinical requirements for sodium. Higher doses may be required in very premature infants because of significant renal loss of electrolytes.

Bronchiolitis

Inhalation

4mL 3% sodium chloride every two to four hours via nebuliser

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Government of South Australia
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Preparation and Administration

Intravenous Infusion

0.45% sodium chloride contains 0.08mmol/mL

0.9% sodium chloride contains 0.15mmol/mL

20% sodium chloride contains 3.4mmol/mL

DO NOT ADMINISTER UNDILUTED HYPERTONIC SODIUM CHLORIDE 20% INTRAVENOUSLY. THIS SHOULD ONLY BE USED AS AN ADDITIVE FOR INFUSION SOLUTIONS

Oral

The oral solution contains 20% (3.4mmol/mL) sodium chloride.

Dose	1mmol	2mmol	4mmol	6mmol	8mmol	10mmol
Volume	0.3mL	0.6mL	1.2mL	1.8mL	2.4mL	3mL

Give with feeds to minimise gastric irritation

* 20% (3.4mmol/mL) oral solution is not commercially available however is manufactured by Women's & Children's Health Network Pharmacy

Inhalation

To prepare 4mL 3% sodium chloride; use **ONE** of the **TWO methods** indicated

Method ONE: dilute 0.6mL 20% sodium chloride injection with 3.4mL water for injection

OR

Method TWO: dilute 2mL 6% sodium chloride inhalation with 2mL water for injection

The resulting solution should then be placed in the nebuliser bowl and nebulised. No further dilution is required.

Compatible Fluids

Glucose 5%, glucose 10%

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Adverse Effects

Adverse effects not generally noticed at therapeutic doses.

Oral sodium chloride has been associated vomiting and diarrhoea.

Large doses, rapid intravenous administration or dehydration may result in hypernatraemia.

Concentrated intravenous sodium chloride has been associated with thrombophlebitis and pain at injection side.

A large chloride intake may result in the loss of bicarbonate leading to metabolic acidosis or hypokalaemia.

Monitoring

- Regular electrolytes, particularly sodium
- Renal function
- Practice Points
- Do not use in patients with hypernatraemia or severe renal impairment with oliguria or anuria.
- Use cautiously in states where there is a potential for increased sodium or water retention such as:
  - moderate renal impairment
  - congestive heart failure
  - peripheral or pulmonary oedema
  - corticosteroid therapy

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	November 2012	current	Original version

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