

sodium bicarbonate

8.4% (1mmol/mL) injection, 7.5% (0.89mmol/mL) oral solution*

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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

Synonyms

NaHCO₃

Dose and Indications

All doses are written in millimoles of sodium bicarbonate

Correcting Metabolic Acidosis

Intravenous

Determined by base deficit

Full Correction Dose (mmol) = 0.3 x base deficit (mmol/L) x wt(kg)

Administer **half of the calculated dose**, and then assess the need for remainder.

Late Metabolic Acidosis

Oral

2mmol/kg daily

ISBN number:
Endorsed by:
Last Revised:
Contact:

978-1-74243-431-5
South Australian Maternal & Neonatal Clinical Network
8/11/2012
South Australian Neonatal Medication Guidelines Workgroup at:
NeoMed@health.sa.gov.au

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Preparation and Administration**Intravenous**

Be sure to dilute the IV preparation prior to administration.

Dilute the 8.4% sodium bicarbonate solution with an equal volume of compatible fluid. The resulting solution contains 0.5mmol/mL sodium bicarbonate.

Dose	2mmol	4mmol	6mmol	8mmol	10mmol
Volume	4mL	8mL	12mL	16mL	20mL

Shake well to ensure thorough mixing.

Administered at a rate not exceeding 0.5mmol/kg/minute.

Discard remaining solution

Oral

The oral solution contains 0.89mmol/mL of sodium bicarbonate.

* 7.5% (0.89mmol/mL) oral solution is not commercially available however is manufactured by Women's & Children's Health Network Pharmacy

The intravenous preparation contains 1mmol/mL and may be given orally.

To minimise gastric irritation, give with feeds or dilute with equal volume water for injection.

Compatible Fluids

Glucose 5%, 10% and Sodium Chloride 0.9%

Adverse Effects**Common**

Local tissue necrosis if extravasation occurs.

Infrequent

Metabolic alkalosis (with excessive doses, too rapid administration, or in renal impairment)

Rare

Hypernatraemia (with excessive use)

Monitoring

> Monitor acid/base status

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Practice Points

- > When using Intravenously, do NOT administer a concentration greater than 0.5mmol/mL nor inject at a rate faster than 0.5mmol/kg/minute.
- > Flush intravenous line before and after administration if the primary intravenous fluid contains calcium or phosphate as these will precipitate.
- > Do not give with any other intravenous drugs.
- > Hypernatraemia may result from excessive use.
- > Intracellular acidosis may worsen if administered during poor ventilation
- > Initial administration of half the calculated dose may minimise the sodium and fluid load.
- > Adjust dose as indicated by serum bicarbonate.

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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