

sodium bicarbonate

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

© Department for Health and Ageing, Government of South Australia. All rights reserved.

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.

SA Health does not accept responsibility for the quality or accuracy of material on websites linked from this site and does not sponsor, approve or endorse materials on such links.

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

This is a High Risk Medication 

An overdose can be rapidly fatal.

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

INFORMAL COPY WHEN PRINTED

Page 1 of 3



sodium bicarbonate

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

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 water for injection. 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 as an infusion over 30 to 60 minutes.

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%, Glucose 10%, 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), fluid overload, hypocalcaemia, hypokalaemia



sodium bicarbonate

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

Monitoring

- > Monitor acid/base status

Practice Points

- > Rapid intravenous infusion can increase risk of intracranial haemorrhage.
- > 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.

Document Ownership & History

| | |
|-------------------------|--|
| Developed by: | SA Maternal, Neonatal & Gynaecology Community of Practice |
| Contact: | Health.NeoMed@sa.gov.au |
| Endorsed by: | SA Health Safety and Quality Strategic Governance Committee |
| Next review due: | 05/07/2023 |
| ISBN number: | 978-1-74243-951-8 |
| PDS reference: | CG056 |
| Policy history: | Is this a new policy (V1)? N Does this policy amend or update an existing policy? Y If so, which version? V1 Does this policy replace another policy with a different title? N If so, which policy (title)? |

| Approval Date | Version | Who approved New/Revised Version | Reason for Change |
|---------------|---------|---|--|
| 5/7/18 | V2 | SA Health Safety and Quality Strategic Governance Committee | Formally reviewed in line with 5 year scheduled timeline for review. |
| 1/11/12 | V1 | SA Maternal & Neonatal Clinical Network | Original SA Maternal & Neonatal Clinical Network approved version. |

