

South Australian Neonatal Medication Guidelines

# Calcium carbonate (oral)

## 1,250mg (equiv. 500mg elemental calcium) chewable tablets

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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

### For information on intravenous calcium, see calcium gluconate

Calcium carbonate tablets (Calsup<sup>®</sup>, Cal-500<sup>®</sup>) 1,250 mg contain 500 mg of elemental calcium (equivalent to 12.5mmol)

## Dose and Indications

### Maintenance treatment of hypocalcaemia

#### Oral

Doses should be expressed in millimol (mmol) of elemental calcium.

0.5mmol/kg/day of elemental calcium, up to 2mmol/kg/day

Give in 2 to 4 divided doses.

Adjust according to calcium and phosphate levels.

### Phosphate binding in renal failure

#### Oral

6.25mmol (250mg) elemental calcium into total daily feeds

Increase to a maximum daily dose of 12.5mmol (500mg) elemental calcium into feeds if inadequate response to treatment.

Nephrology consultation is required when commencing.



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### Preparation and Administration

#### Oral

Disperse one tablet of calcium carbonate (12.5mmol) in 12.5mL of sterile water to get a mixture of 1mmol/mL.

Dose	0.25mmol	0.5mmol	0.75mmol	1.0mmol	1.25mmol
Volume	0.25mL	0.5mL	0.75mL	1.0mL	1.25mL

NB – Calcium carbonate is not soluble in water; however the chewable tablets (Calsup<sup>®</sup>, Cal-500<sup>®</sup>) disperse readily in water. Shake well to disperse before measuring a dose. Discard remaining solution after use.

When given for calcium supplementation, separate dose from feeds by 2 hours.

Give with feeds for phosphate binding.

### Adverse Effects

#### Common

Gastric irritation, diarrhoea

#### Infrequent

Hypercalcaemia, alkalosis, hypophosphatemia

#### Rare

Renal calculi, mild-alkali syndrome

### Monitoring

- > Serum calcium and phosphate levels

### Practice Points

- > Do not mix with other drugs as precipitation may occur.
- > Clinical effect may be reduced by drugs that increase gastric pH (including sodium bicarbonate).
- > Separate dose of calcium and the following medications by at least 2 hours – iron, thyroxine, phenytoin and phosphate.
- > Hypercalcaemia can occur following administration, especially if prolonged. Monitoring of calcium levels following commencement of therapy is recommended.
- > Hypocalcaemia can commonly occur in conjunction with hyperphosphataemia and is unlikely to respond to treatment until the hyperphosphataemia is controlled.



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### Document Ownership & History

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9/3/2018	V1.1	SA Health Safety and Quality Strategic Governance Committee	Review date extended to 5 years following risk assessment. New template.
13/8/2013	V1	SA Health Safety and Quality Strategic Governance Committee	Original SA Health Safety and Quality Strategic Governance Committee approved version

