		Type: Drug Guideline	Document reference: 2903	Manual Classification: Waikato DHB Drug Guidelines
Title: Calcium Oral for Neonates			Effective date: 16 June 2020	
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BRIEF ADMINISTRATION GUIDE

For detailed information refer to The Australasian Neonatal Medicines Formulary [calcium](#) guideline



Critical Note: there are minor variations between the ANMF and Waikato DHB best practice within this drug guideline – see **yellow shaded text**

Indications:

- Treatment of mild asymptomatic hypocalcaemia

Note: Severe symptomatic hypocalcaemia requires an intravenous infusion of calcium gluconate 10% - refer [calcium gluconate guideline #0596](#)

Route: Oral

Supplied as

- calcium 500mg effervescent tablets (=12.5 mmol of calcium per tablet) OR calcium 1000mg effervescent tablets (= 25 mmol of calcium per tablet)
- calcium gluconate 10% 10mL vial (calcium 0.22 mmol/mL). Injection solutions can be administered orally if tablets are not available or appropriate.

Dose: **Doses are expressed in mmol of elemental calcium.**

- 1 – 2 mmol/kg/day in 2 to 4 divided doses scheduled around oral feeds
- Recommended starting dose 0.5 mmol/kg/day. Adjust according to response.

Note: Estimate the calcium intake from all sources before prescribing oral calcium (Recommended total daily intake of elemental calcium from all sources: 3–5 mmol/kg/day)

Preparation and administration:

Calcium 12.5mmol (500mg elemental calcium) tablets e.g. Cacit® 500mg

- Dissolve one tablet in **10.5 mL** water for injection. This will produce a **1mmol/mL** solution (12.5mmol in 12.5mL). The tablet takes approximately 5 minutes to dissolve (wait until the bubbles have stopped before proceeding).

Calcium 25mmol (1000mg elemental calcium) tablets e.g. Calcium Sandoz Fortissimum 1000mg

- Dissolve one tablet in approximately 20 mL water for injection. The tablet takes approximately 10 minutes to dissolve.
- Once the bubbles have stopped, make volume up to 25 mL to provide a 1 mmol/mL solution.

Calcium gluconate (injection solution) 0.22 mmol/mL


- Draw up prescribed dose and dilute 1:4 with water or milk before administration
- Note: if baby under NEC bundle use water for injection as the diluent and no need for further dilution

For all solutions given orally:

- Draw up prescribed dose in an oral syringe and administer orally with feeds.
- Discard remaining solution after use.

Note:

- Do not mix calcium with any medication that contains phosphates, carbonates, sulfates or tartrates
- Separate doses of the following by at least 2 hours: phosphate, iron, thyroxine and phenytoin
- If the baby is to be discharged on calcium both the tablets and calcium gluconate injection are funded

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Monitoring:

- Monitor serum calcium and phosphate levels
- Correct hypomagnesaemia if present
- Assess gastrointestinal tolerance

Competency for administration:

This procedure is carried out by, or under, the direct supervision of a registered nurse/registered midwife who holds current Waikato DHB Generic Medicine Management.

References:

- Australian Neonatal Medicines Formulary. Calcium Oral Drug Guideline 2018, available from: https://www.seslhd.health.nsw.gov.au/sites/default/files/groups/Royal_Hospital_for_Women/Neonatal/Neomed/neomed20/calciumoralfull.pdf
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- eMC Cacit 500mg effervescent tablets, available from <https://www.medicines.org.uk/emc/product/3842/smpc>
- Leeds Children's Hospital, NHS Trust. Paediatric Oral Calcium guideline, accessed at <http://www.leedsformulary.nhs.uk/docs/PaediatricCalciumOral.pdf>

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