Phosphate Oral for neonates

BRIEF ADMINISTRATION GUIDE

For detailed information refer to Australasian Neonatal Medicines Formulary Phosphorus guideline

⚠ Note: Shaded text indicates where Te Whatu Ora Waikato practice differs from ANMF

1. Medicine

1.1. Indications

- Raised alkaline phosphatase (ALP > 500 U/L)
  Note: for <32/40 measure initial ALP, PTH, phosphate and calcium at 3 weeks of age, and exclude liver dysfunction. Recheck every 14 days
- Treatment of hypophosphataemia

1.2. Route and Presentation

Oral

Supplied as:

- phosphate 0.5 mmol/mL oral solution (made by Pharmacy from tablets)
- phosphate effervescent tablet, equivalent to phosphate 16 mmol

1.3. Dose

Treatment of Raised ALP (> 500 U/L)

- 1 – 2 mmol/kg/day orally in 2 to 3 divided doses scheduled around oral feeds
- Recommended starting dose 1 mmol/kg/day. Adjust according to response, and stop when ALP decreases to 400 or below.

Treatment of mild asymptomatic hypophosphataemia

- 1 – 2 mmol/kg/day orally in 2 to 3 divided doses scheduled around oral feeds
- Recommended starting dose 1 mmol/kg/day. Adjust according to response. Ideal phosphate level > 1.8 mmol/L.

Note: 1mmol phosphate = 1mmol elemental phosphorus = 31 mg elemental phosphorus

2. Preparation and Administration

2.1. Compatible fluids

N/a

2.2. Administration Method

- Draw up prescribed dose in an oral syringe, dilute as appropriate and administer orally with feeds

If oral solution from Pharmacy is not available a solution can be prepared using tablets as follows:

- Add one tablet to approximately 30 mL of water for injection
- Allow tablet to dissolve, stirring if necessary
- Make volume up to 32mL and mix thoroughly

Note: Do not administer calcium and phosphate at the same time. If administering in breast milk alternate giving calcium and phosphate in the feeds.

2.3. Monitoring

- Alkaline phosphatase levels weekly (needs time for effect to be noticed)
- Monitor electrolytes, especially serum calcium and phosphate
- Assess for gastrointestinal intolerance
- Confirm adequate renal function

2.4. Storage and Stability

- Store Pharmacy manufactured phosphate solution in the fridge. Expiry is 7 days from manufacture.
- Discard any unused solution if prepared from the tablets on the ward.

Phosphate Oral for neonates

2.5. Competency for Administration

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

2.6. Guardrails

N/a

3. Associated Te Whatu Ora Waikato documents

Waikato guideline: Metabolic Bone Disease of Prematurity – NICU (Ref. 6474)

4. References

- Australian Neonatal Medicines Formulary. Phosphorus Drug Guideline 2021, available from: www.anmfonline.org/wp-content/uploads/2022/08/Phosphorus_ANMFv4.0_20211021.pdf
- Waikato DHB guideline #6474 Metabolic Bone Disease of Prematurity – NICU
- New Zealand Formulary for Children (NZFC). Phosphate (oral). Accessed 25th January 2023. Available from: https://www.nzfchildren.org.nz/nzf_70292
- Lexicomp. Potassium phosphate and sodium phosphate: Pediatric drug information monographs. UpToDate Accessed 25th January 2023. Available from: https://www.uptodate.com.
- Auckland DHB Newborn Services. Phosphate (oral) for neonates drug guideline. Available from https://www.starship.org.nz/guidelines/phosphate-oral-for-neonates/
- Truven Health Analytics Inc. Micromedex®. Phosphate monograph. Accessed 25.1.2023. Available from: http://www.micromedexsolutions.com.

Document Ownership

Document Authorisor:	John Barnard	Chair Medicines & Therapeutics Committee
Document Authorisor:	Jutta van den Boom	Clinical Director Neonatal Intensive Care Unit
Document Facilitator:	Kerrie Knox	Pharmacist