



| CLINICAL GUIDELINE | |
|-------------------------------------|------------------------------|
| Vitamin and Mineral Supplementation | |
| Scope (Staff): | Nursing and Medical Staff |
| Scope (Area): | NICU KEMH, NICU PCH, NETS WA |

This document should be read in conjunction with this [DISCLAIMER](#)

Vitamin D Supplement

ALL infants with one or more risk factors listed below should be considered for vitamin D prophylaxis:

- Infants with rickets.
- Infants with vitamin D deficiency 25(OH)D level.
- Prophylaxis for all preterm infants born < 35 weeks gestation with weights below 1.8 kg.
- Prophylaxis for infants with one or more risk factors for Vitamin D deficiency.
 - Infants born to a mother with low Vitamin D and receiving breast milk.
 - Lack of skin exposure to sunlight.
 - Dark skin.
 - Conditions affecting vitamin D metabolism and storage (hypoparathyroidism, renal osteodystrophy, cholestatic liver disease).

Vitamin D treatment dose **FOR SEVERE VITAMIN D DEFICIENCY** 25(OH)D <30nmol/L is higher than the prophylaxis dose.

The vitamin D status of all preterm infants born < 35 weeks gestation is monitored monthly in hospital at 4, 8 and 12 weeks and/or at discharge and supplemented as indicated.

At discharge, only infants being treated for vitamin D deficiency and breast milk-fed infants of Vitamin D deficient mothers need Vitamin D supplementation with GP follow-up at 6 weeks post term, as per hospital guidelines.

Note: Different fortifiers and formula may contain different amounts of vitamin D. **At KEMH and PMH**, PreNAN Human Milk Fortifier, PreNAN RTF Preterm formula and Aptamil RTF Term Formula are used.

Also refer to Neonatal Medication Protocol: [Cholecalciferol \(Vitamin D\)](#)

Multivitamin Supplement (Pentavite 0-3 y)

Preterm infants born < 35weeks gestation who are tolerating full, unfortified breast milk feeds may require a multivitamin supplementation. The multivitamin supplement should be ceased at discharge.

Note: Multivitamin supplements are not required routinely for infants receiving fortified breast milk or infant formula. Pentavite (Infants 0-3 years) multivitamin oral liquid contains water soluble vitamins and the fat soluble vitamins, A and D.

Also refer to Neonatal Medication Protocol: [Vitamins, Infants](#).

Iron Supplement

At KEMH, PreNAN HMF* is used to fortify breast milk. PreNAN Human contains iron. Therefore, starting not before 4 weeks of age, only infants born <35 weeks gestation who are fed unfortified breast milk should receive iron supplements until at least 4 months corrected age. Infants should be consuming iron-containing foods before iron supplementation is ceased.

Formula-fed infants and infants receiving breast milk fortified with PreNAN Human Milk Fortifier **do not** require an iron supplement.

*Note: Different fortifiers contain different amounts of iron.

Also refer to Neonatal Medication Protocol: [Ferrous Sulphate](#).

Calcium / Phosphate Supplement

Preterm infants born < 35 weeks gestation who are fed full feeds of unfortified breast milk may require calcium and phosphate supplementation.


Also refer to Neonatal Medication Protocol: [Calcium Carbonate](#); [Phosphate \(Buffered\)](#).

| | In Hospital | At Discharge |
|---|--|--|
| Cholecalciferol (Vitamin D) | | |
| <ul style="list-style-type: none"> Preterm infants born < 35 weeks gestation weighing <1.8 kg | <p style="text-align: center;">√</p> <p>Once full enteral feeds are achieved</p> | <p>ONLY if infant is vitamin D deficient 25(OH)D <50 nmol/L 6 week GP Follow up letter</p> |
| <ul style="list-style-type: none"> Breastmilk fed infants born ≥ 35 weeks gestation of mothers with vitamin D deficiency | <p>ONLY if infant has one or more Vitamin D risk factors</p> | <p style="text-align: center;">√</p> <p>6 week GP follow up letter</p> |
| Ferrous Sulphate | | |
| <ul style="list-style-type: none"> All preterm infants born < 35 weeks gestation fed unfortified breast milk | <p style="text-align: center;">√</p> <p>Not before 4 weeks of age</p> | <p style="text-align: center;">√</p> <p>Continue to at least 4 months corrected age - encourage iron-rich foods when introducing solids.</p> |
| | In Hospital | At Discharge |
| Penta-vite (Infants 0-3 y) | <p>ONLY consider if preterm infant born < 35 weeks gestation is fed full feeds of unfortified breast milk</p> | × |
| Calcium | <p>ONLY consider if preterm infant born < 35 weeks gestation is fed full feeds of unfortified breast milk</p> | × |
| Phosphate | <p>ONLY consider if preterm infant born < 35 weeks gestation is fed full feeds of unfortified breast milk</p> | × |

| Related CAHS internal policies, procedures and guidelines | |
|---|--|
| Neonatal Medication Protocols | <ul style="list-style-type: none"> - Vitamin and Mineral Supplements - Cholecalciferol (Vitamin D) - Vitamins, Infants. - Ferrous Sulphate. - Phosphate (Buffered) - Calcium Carbonate |

| Useful resources |
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| Maternal Vitamin D Deficiency and Family Monitoring GP Follow up Letter |

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