



Clinical Practice Guideline

Guideline coverage includes NICU KEMH, NICU PMH and NETS WA

# Vitamin and Mineral Supplementation

This document should be read in conjunction with the [Disclaimer](#)

Also refer to Neonatology Medication Protocols: [Vitamin and Mineral Supplements](#).

## 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 preterm infants born <35 wk gestation fed unfortified breast milk or term formula.
- 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 (including those fed fortified breast milk and preterm formula) 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 after discharge 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**, S26 SMA human milk fortifier and PreNAN Preterm formula is used.

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

### Multivitamin Supplement (Penta-vite 0-3 y)

Preterm infants born <35 weeks 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 Neonatology Medication Protocol: [Vitamins, Infants](#).

### Iron Supplement

At KEMH, S26 SMA HMF\* is used to fortify breast milk. S26 SMA HMF does not contain iron. Therefore, starting not before 4 weeks of age, ALL breast milk fed-infants born <35 weeks gestation 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 **do not** require an iron supplement.

Note: Different fortifiers contain different amounts of iron.

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

	In Hospital	At Discharge
<b>Cholecalciferol (Vitamin D)</b>		
<ul style="list-style-type: none"> <li>Preterm infants born &lt;35 weeks gestation fed unfortified breast milk or term formula</li> </ul>	<p style="text-align: center;">√</p> <p style="text-align: center;">Once full enteral feeds are achieved</p>	<p>ONLY if infant is vitamin D deficient 25(OH)D &lt;50 nmol/L 6 wk GP Follow up letter</p>
<ul style="list-style-type: none"> <li>Preterm infants born &lt;35 weeks gestation fed PreNAN HA preterm formula or breast milk fortified with S26 SMA Human milk fortifier</li> </ul>	<p>ONLY if infant has one or more Vitamin D risk factors</p>	<p>ONLY if infant is vitamin D deficient 25(OH)D &lt;50 nmol/L 6 wk GP Follow up letter</p>
<ul style="list-style-type: none"> <li>Breast milk fed infants born ≥35 weeks gestation of mothers with vitamin D deficiency</li> </ul>	<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>
<b>Ferrous Sulphate</b>		
<ul style="list-style-type: none"> <li>All breast milk-fed preterm infants born &lt;35 weeks gestation</li> </ul>	<p style="text-align: center;">√</p> <p style="text-align: center;">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>

	<b>In Hospital</b>	<b>At Discharge</b>
<b>Penta-vite (Infants 0-3 y)</b>	ONLY consider if preterm infant born <35 weeks gestation is fed full feeds of unfortified breast milk	X
<b>Calcium</b>	ONLY consider if preterm infant born <35 weeks gestation is fed full feeds of unfortified breast milk	X
<b>Phosphate</b>	ONLY consider if preterm infant born <35 weeks gestation is fed full feeds of unfortified breast milk	X

### Related WNHS policies, procedures and guidelines

- Neonatal Medication Protocols - Vitamin and Mineral Supplements
  - Cholecalciferol (Vitamin D)
  - Vitamins, Infants
  - Ferrous Sulphate
  - Phosphate (buffered)
  - Calcium Carbonate

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