



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

## 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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