

VITAMIN A

Indication	<ul style="list-style-type: none"> • Treatment of deficiency <ul style="list-style-type: none"> ○ May be indicated in neonatal cholestasis¹ or short bowel syndrome² • Prevention of deficiency in preterm and LBW neonates^{3,4} when *Pentavite® unavailable 	
ORAL	Presentation	<ul style="list-style-type: none"> • Oral solution: 5000 units in 0.2 mL <ul style="list-style-type: none"> ○ All doses presented in units as retinol palmitate
	Dosage⁵ (treatment)	<ul style="list-style-type: none"> • 5000 units daily • If prescribed concomitantly with *Pentavite® <ul style="list-style-type: none"> ○ 2500 units daily
	Dosage (prevention)	<ul style="list-style-type: none"> • 5000 units twice a week
	Preparation	<ul style="list-style-type: none"> • Draw up prescribed dose into oral/enteral syringe
	Administration	<ul style="list-style-type: none"> • Oral/OGT/NGT with feeds to improve absorption³
Special considerations	<ul style="list-style-type: none"> • Dosage is consensus based (limited evidence) • Criteria for deficiency prevention <ul style="list-style-type: none"> ○ Birth gestation less than 32 weeks ○ Day 7 of life and tolerating EBM or PDHM ○ Not receiving PN ○ Cease at 32 weeks corrected gestational age • Supplementation may be associated with decreased risk of developing CNLD in preterm and LBW neonates^{6,7} • Vitamin A can be presented as units, IU or microgram RAE <ul style="list-style-type: none"> ○ 1 microgram RAE=3.33 units of retinol • Other sources of vitamin A <ul style="list-style-type: none"> ○ *Pentavite® contains 390 microgram RAE ○ Milk fortification may contain varied concentrations 	
Monitoring	<ul style="list-style-type: none"> • Treatment dose (to prevent hypervitaminosis and associated hepatotoxicity⁵) <ul style="list-style-type: none"> ○ Vitamin A levels every 1–2 months until stabilised within range, then every 3–6 months (at SMO's discretion)⁸ • Prevention dose <ul style="list-style-type: none"> ○ Not routinely required 	
Compatibility	<ul style="list-style-type: none"> • Not applicable 	
Incompatibility	<ul style="list-style-type: none"> • Not applicable 	
Interactions	<ul style="list-style-type: none"> • Nil significant (at recommended dose) 	
Stability⁹	<ul style="list-style-type: none"> • Store below 25 °C. Protect from light • Discard 4 weeks after opening or as per local policy 	
Side effects	<ul style="list-style-type: none"> • Rare <ul style="list-style-type: none"> ○ Digestive: abdominal discomfort⁴ ○ Lymphatic: oedema⁴, bulging fontanelle⁴ ○ Musculo-skeletal: bone pain^{4,10} ○ Nervous: irritability⁴ 	
Actions	<ul style="list-style-type: none"> • Fat-soluble vitamin^{4,10} • Promotes growth in lung and retinal epithelial cells^{10,11} • Important for reproductive functions and immune system development¹⁰ 	
Abbreviations	*Pentavite® refers to Pentavite® (Multivitamin liquid for infants 0–3 years) CNLD: chronic neonatal lung disease, EBM: expressed breast milk, IU: international units, LBW: low birth weight, NGT: nasogastric tube, OGT: orogastric tube, PDHM: pasteurised donor human milk, PN: parenteral nutrition, RAE: retinol activity equivalents, SMO: most senior medical officer	
Keywords	cholestasis, cholestatic liver disease, neonatal medicine, neonatal monograph, pentavite, retinol, short bowel syndrome, vitamin a, vitamin a deficiency, vitamin supplementation	



The Queensland Clinical Guideline *Neonatal Medicines* is integral to and should be read in conjunction with this monograph. Refer to the disclaimer. Destroy all printed copies of this monograph after use.

References

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