

# Vitamin A and E solution

## Newborn use only

2022

<b>Alert</b>	There are individual formularies for vitamin A and E. The dose recommendation of vitamins A and E oral solution in this formulary is based on the vitamin A content and may exceed vitamin E recommended dosage. Pentavite Infant, a commonly used multivitamin supplement in Australia, doesn't contain vitamin E.
<b>Indication</b>	Cholestatic liver disease
<b>Action</b>	Vitamin A: Fat soluble vitamin required for vision, growth and bone development, immune function and maintenance of epithelial cells particularly in the retina and respiratory tract tissues. Vitamin E: Antioxidant protecting cell membranes from oxidative stress. Active isomer is $\alpha$ -tocopherol.
<b>Drug type</b>	Fat soluble vitamins
<b>Trade name</b>	Bio-Logical Vitamins A and E Solution
<b>Presentation</b>	Bio-Logical Vitamins A and E Solution (50 mL bottle): Each 1 mL contains retinol palmitate 1.2 mg = Vitamin A 2210 units = 663 microgram retinol equivalents and d-alpha-tocopheryl acetate 75 mg = Vitamin E 102 units.
<b>Dose</b>	<b>Refer to Vitamins in cholestasis formulary <sup>(1)</sup></b> <b>Individual vitamin A and E preparations are preferred options.</b> <b>Suggested dose if Bio-Logical Vitamins A &amp; E Solution is chosen:</b> 1 mL/day in 1 or 2 divided doses. Other preparations such as Pentavite Infant or Vitamin A is required to meet vitamin A requirements.
<b>Dose adjustment</b>	Therapeutic hypothermia – No information. ECMO – Not applicable. Renal impairment - No information. Hepatic impairment – No information.
<b>Maximum dose</b>	
<b>Total cumulative dose</b>	
<b>Route</b>	Oral
<b>Preparation</b>	No preparation is required
<b>Administration</b>	Oral: Administer undiluted with a feed
<b>Monitoring</b>	
<b>Contraindications</b>	Hypersensitivity to vitamins A or E, or any component of the formulation, hypervitaminosis A.
<b>Precautions</b>	Vitamin E interacts with iron and other oxidants or any polyunsaturated fatty acids. Vitamin E can increase serum bilirubin.
<b>Drug interactions</b>	Vitamin A may increase effects of anticoagulant and antiplatelet agents. Iron - Lowers bioavailability of Vitamin E. Vitamin E may increase the effects of vitamin K antagonists and antiplatelet agents.
<b>Adverse reactions</b>	Hypervitaminosis A: Irritability, vomiting, bulging fontanelle. Vitamin E: Sepsis, necrotising enterocolitis.
<b>Compatibility</b>	Not applicable
<b>Incompatibility</b>	Not applicable
<b>Stability</b>	
<b>Storage</b>	Protect from light. Store below 25°C.
<b>Excipients</b>	Sodium benzoate. Avoid exposure to sodium benzoate of >99 mg/kg/day in neonates.
<b>Special comments</b>	
<b>Evidence</b>	<b>See individual Vitamin A and Vitamin E monographs for evidence summaries.</b>
<b>Practice points</b>	
<b>References</b>	1. Vitamins in cholestasis. <a href="https://www.anmfonline.org/clinical-resources/">https://www.anmfonline.org/clinical-resources/</a>

VERSION/NUMBER	DATE
Original 1.0	21/02/2022
Current 2.0	21/07/2022
REVIEW	21/07/2027

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