VITAMIN E (d-alpha tocopherol acetate)

Read in conjunction with Disclaimer

Formulary: Unrestricted	
Presentation	**Oral solution (Micel-E®):** 104.7 mg/mL (equivalent to 156 international units per mL); 50mL bottle
Classification	Fat soluble vitamin: antioxidant protecting cell membranes from oxidative stress and haemolysis.
Indication	• Vitamin E deficiency in preterm neonates. • Vitamin E deficiency in congenital malabsorption or hereditary chronic cholestasis. • Supplement during erythropoietin therapy.
Precautions	• Predisposition to thrombosis. • Risk of renal toxicity due to polyethylene glycol content. • Hypersensitivity to vitamin E or any component (excipients: potassium sorbate, citric acid anhydrous, glycerol, PEG-35 castor oil, ethanol, water). • Doses exceeding 25 units/kg/day oral may post more risk than benefit for preterm neonates.
Monitoring	• Assess feeding tolerance. • Monitor closely in renal impairment. • Serum bilirubin may be increased. • Serum vitamin E levels are not routinely required. • Signs of vitamin E deficiency: hemolytic anaemia and thrombocytosis.
Compatibility	Not applicable
Interactions	Ferrous sulphate (iron) impairs the absorption and lowers the bioavailability of Vitamin E - Do NOT administer at the same time as ferrous sulphate (separate doses by at least 2 hours). Vitamin E may increase effects of vitamin K antagonist and antiplatelet agents. Interacts with other oxidants or any polyunsaturated fatty acids.
Side Effects	**Common:** gastrointestinal disturbance
	Infrequent: feeding intolerance, rash
	Serious: necrotising enterocolitis (with high oral doses e.g. >200 units/day), sepsis, thrombocytosis, haemolytic anaemia.

Storage & Stability	**Oral solution:** Store at room temperature, below 25°C. Protect from light.
Comments	• 1 mg d-alpha-tocopherol acetate is equivalent to 1.49 international units of d-alpha-tocopherol acetate. • d-alpha-tocopherol acetate is also present in formula and human milk fortifiers – refer to Breast Milk Fortification and Preterm Formula Clinical Guideline

ORAL

Presentation	**Oral solution**: 104.7 mg/mL (equivalent to 156 international units per mL)
Dosage	**Vitamin E supplementation (all indications)** 5 - 25 units once daily (0.03 mL – 0.16 mL) **Note:** Doses exceeding 25 units a day may pose more risk than benefit for preterm neonates. **Dose adjustment:** • Renal or hepatic impairment: no information
Preparation	Nil required.
Administration	• Draw prescribed dose into oral/enteral syringe. • Can be given Oral/OGT/NGT. • Give with or soon after a feed to reduce gastrointestinal irritation. • May be diluted with sterile water or formula to reduce osmolarity. • Do NOT administer at the same time as ferrous sulfate (iron) due to impaired absorption – separate doses by at least 2 hours.

Related Policies, Procedures, and Guidelines

Clinical Practice Guidelines:

Neonatology – Milk Room: Breast Milk Fortification and Preterm Formula

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