Vitamin E (vey-ta-min E)

alpha-tocopherol, Vitamin E, Aquasol E, E-200, E-400, E-COMPLEX-600, E-TAL, Liquat-E, Nutra-E, **Wildco Vitamin E**

**Classification**
Therapeutic: vitamin
Pharmacologic: fat-soluble vitamins

**Pregnancy Category** A (doses within RDA), C (doses > RDA)

**Indications**
PO: Used as a dietary supplement. Used in low-birth-weight infants to prevent and treat hemolysis due to vitamin E deficiency. Topical: Treatment of irritated, chapped, or dry skin.

**Action**
Prevents the oxidation (antioxidant) of other substances. Protects RBC membranes against hemolysis, especially in low-birth-weight neonates.

**Therapeutic Effects:** Prevention and treatment of deficiency in high-risk patients.

**Pharmacokinetics**
**Absorption:** 20–80% absorbed following oral administration. Absorption requires fat and bile salts.
**Distribution:** Widely distributed, stored in adipose tissue (4-yr supply).
**Metabolism and Excretion:** Metabolized by the liver, excreted in bile.
**Half-life:** Unknown.

**TIME/ACTION PROFILE**
ROUTE ONSET PEAK DURATION
PO unknown unknown unknown

**Contraindications/Precautions**
Hypersensitivity to ingredients in preparations (parabens, propylene glycol).

**Use Cautiously**
Anemia due to iron deficiency; Vitamin K deficiency (may increase risk of bleeding);
Pediatrics: Oral administration may cause necrotizing enterocolitis in low-birth-weight infants.

**Adverse Reactions/Side Effects**

**Interactions**
Drug-Drug: Cholestyramine, colestipol, olsalazine, mineral oil, and sequestrants; decreases absorption. May decrease hematologic response to iron supplements. May increase risk of bleeding with warfarin or aspirin.

Drug-Natural Products: **↑** bleeding risk with anise, arnica, chamomile, clove, dong quai, feverfew, licorice, ginger, ginkgo, Panax ginseng, licorice, and others.

**Route/Dosage**
Other dosing regimens may be used.

PO (Adults and Children): Determined by nutritional intake or degree of deficiency.

Topical (Adults and Children): Apply to affected areas as needed.

**NURSING IMPLICATIONS**
**Assessment**
- Monitor patient for signs of vitamin E deficiency (anorexia, weakness, myopathy, abnormal bleeding) in high-risk patients.
- Monitor nutritional status through 24-h diet recall. Determine frequency of consumption of vitamin E–rich foods.

**Potential Nursing Diagnoses**
- Imbalanced nutrition: less than body requirements (Indications)

**Implementation**
- PO: Administer with or after meals.
- Chewable tablets should be chewed well or crushed before swallowing. Solution may be dropped directly into mouth or mixed with cereal, fruit juice, or other food. Use calibrated dropper supplied by manufacturer to measure solution accurately.

**Contraindications**: 
- Lactation: Use only if potential benefit justifies risk to the fetus.
- Renal failure: Used with caution.
- **Discontinue**: 
- CNS: convulsions
- Hematologic: aplastic anemia
- Skin: necrotizing enterocolitis in low-birth-weight infants

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Patient/Family Teaching

- Instruct patient to take medication as directed. If a dose is missed, it should be omitted, because fat-soluble vitamins are stored in the body for long periods.
- Encourage patient to comply with diet recommendations of health care professional. Explain that the best source of vitamins is a well-balanced diet with foods from the four basic food groups.
- Foods high in vitamin E include vegetable oils, wheat germ, whole-grain cereals, egg yolks, and liver. Vitamin E content is not markedly affected by cooking.
- Patients self-medicating with vitamin supplements should be cautioned not to exceed RDA. The effectiveness of megadoses for treatment of various medical conditions is unproved, and this may cause side effects and toxicity.
- Review symptoms of overdosage (blurred vision, disorientation, headache, breast enlargement). Instruct patient to report these promptly to health care professional.
- Mineral oil may interfere with the absorption of fat-soluble vitamins and should not be used concurrently.

Evaluation/Desired Outcomes

- Prevention of or decrease in the symptoms of vitamin E deficiency.
- Control of dry or chapped skin.

Why was this drug prescribed for your patient?