Vitamin E (Alpha-tocopherol)

Vitamin E (alpha-tocopherol) is a fat soluble vitamin with antioxidant properties against the peroxidation of lipids. Vitamin E is indicated for patients with alpha-TTP deficiency and fat malabsorption syndrome. Since bleeding is a side effect of vitamin E, limit vitamin E doses to < 200 IU/day. Excess levels increases the risk of hemorrhagic stroke. Dietary sources of vitamin E include vegetable oils, nuts, and whole grains.



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Mechanism

Antioxidant
Ant-tie-ox
Vitamin E has antioxidant properties that help protect against lipid peroxidation. The vitamin acts against free radical damage. As a fat soluble vitamin, it also protects the cell membrane from oxidative damage.

Indications

Fat Malabsorption Syndrome
Fat Intestinal-mallet
Since fat soluble vitamins require the presence of fat to be absorbed, patients with fat malabsorption syndrome require vitamin E supplementation. Fat malabsorption syndromes include Crohn's disease and celiac disease.

Alpha-TTP Deficiency
Afro-guy with T-TP Deficiency
Although vitamin E deficiency is rare, supplementation is indicated for patients with alpha-TTP deficiency. Symptoms of vitamin E deficiency include ataxia, sensory neuropathy, areflexia, and muscle hypertrophy.

Side Effects

Bleeding
Bleeding
Since vitamin E suppresses coagulation, excessive amounts increases the risk of bleeding and may cause hemorrhage. Vitamin K promotes synthesis of clotting factors and counteracts bleeding caused by vitamin E. Patients with vitamin K deficiency have an increased risk of bleeding.

Considerations

Increased Risk Hemorrhagic Stroke
Up-arrow Risk of Hemorrhage-hammer Stroke-crew
Vitamin E increases the risk of bleeding and hemorrhagic stroke. Excessive amounts of vitamin E can suppress coagulation and increase prothrombin time.

Limit Doses < 200 IU per Day
Limit-sign with Less-than (2) Tutu (100) Dollar-bills
Excessive doses of vitamin E increases the risk of heart failure, cancer progression, and mortality. Daily doses exceeding 200 IU/day may increase the risk of death in older patients with additional risk factors.

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Nuts and Whole Grains

Nuts and Grains

Dietary sources of vitamin E include nuts, whole grains, mustard greens, and wheat germ. Almonds and hazelnuts are examples of nuts containing vitamin E.

Vegetable Oils

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Vitamin E is found in vegetable oils such as corn oil, olive oil, cottonseed oil, safflower oil, and canola oil. The fats found in oils enhance the body's ability to absorb vitamin E.

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