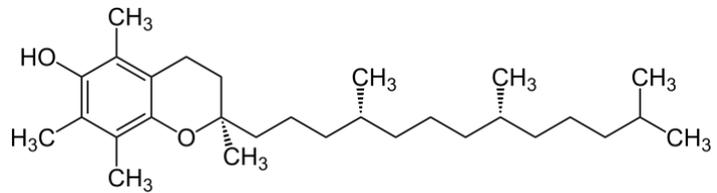


Factsheet vitamin E (α -tocopherol)

Functions

The most active form of vitamin E is α -tocopherol, which acts as an antioxidant in humans. Vitamin E protects cell membranes, proteins and DNA from oxidation and thereby contributes to cellular health. It also prevents oxidation of the polyunsaturated fatty acids and lipids in the cells. Vitamin E is stored in the liver and is safe even at high intakes.



Structure of α -tocopherol

Sources of vitamin E

Vitamin E in the α -tocopherol form is found in edible vegetable oils, especially in wheat germ oil, sunflower and rapeseed oil. Other valuable sources of vitamin E are leafy green vegetables such as spinach and chard, nuts like almonds and peanuts, nut spreads, sunflower seeds as well as avocado, mango and kiwifruit.

Intake recommendations (D-A-CH)

	Unit Sex	mg-equivalent/day	
		m	f
Infants	0 to under 4 months		3
	4 to under 12 months		4
Children	1 to under 4 years	6	5
	4 to under 7 years		8
	7 to under 10 years	10	9
	10 to under 13 years	13	11
	13 to under 15 years	14	12
Adolescents and adults	15 to under 19 years	15	12
	19 to under 25 years	15	12
	25 to under 51 years	14	12
	51 to under 65 years	13	12
	65 years and older	12	11
Pregnant women			13
Lactating women			17

Bioavailability

Vitamin E is a fat-soluble nutrient. As such, absorption of this vitamin is enhanced in the presence of fat in a meal.

Risk groups

For people whose diet consists mainly of starchy staple foods – with inconsistent intake of edible oils or other vegetable sources of vitamin E – there is a risk of inadequate vitamin E intake. A deficiency of vitamin E is rather rare and leads to a destruction of red blood cells and nerve damages.

Recent studies from Bangladesh associate low vitamin E blood levels with an increased risk of miscarriage. In other studies vitamin E supplementation has been successfully used for the treatment of non-alcoholic fatty liver disease, which is prevalent in overweight and obese people.

Tolerable Upper Intake Level (UL)

The European Food Safety Authority (EFSA) defined the following Tolerable Upper Intake Levels (UL) for vitamin E: For children applies an age-dependent UL, which ranges from 100 mg vitamin E/day for children aged 1 to 3 years up to 260 mg vitamin E/day for adolescents aged 15 to 17 years. For adults aged 18 and older, the UL is 300 mg vitamin E/day.

References and further information

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