# Vitamin E: Strategic use in prevention of senescence and age-related diseases

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The interest in Anti-aging is fast growing under a still small % of the population. Besides life-extension there is the quality of human life. A happy live of good quality really counts and certainly depends on Vitamin E.
Critical scientist concludes: the best chances for anti-aging are in the field of calorie-restriction in combination with nutrient dense food.
In order to reach these goals it is certainly needed to have an optimal intake of vitamin E, which helps to reduce free radical pathology causing less damage to enzymes and other biological active proteins/substances incl. DNA/RNA.

Vitamin E has different molecular forms and is a fat-soluble substance with important anti-oxidant activity. It is present in cell membranes all over in the human body and stabilises the membranes. It also stimulates the immune system and is important in detoxification of certain toxic substances.
Deficiency of vitamin E promotes free radical pathology, inflammation, and damage to DNA etc.

Blood serum levels of Vitamin E are very important as part of an Anti-Aging or Optimal Health Check Up. However for Anti-Aging it is often not possible to relay on classical reference ranges, which are more related to minimal health then to optimal health. Also the function of vitamin E in relation to other nutrients is very important.
The research of Prof. K.F.Gey in Europe clearly showed that levels of vitamin E below 30 µmol/l increases the mortality from several diseases related to aging such as cardiovascular disease (CVD) and cancer.
Mental diseases occurring during aging such as dementia and depression are also sensitive to deficiencies/dysfunction of vitamins E.
Vitamin E works together with other anti-oxidants such as Vitamin C, Coenzyme Q10, lipoic acid, selenium, Glutathione etc. These anti-oxidants help to recycle vitamin E because when vitamin E is functioning as anti-oxidant, it is oxidised and the oxidised form can be reduced back to vitamin E by the other anti-oxidants. This reduces the need for vitamin E.
Foods rich in polyunsaturated fats need extra vitamin E to help these fats from being oxidised/rancid (> 1 mg of vitamin E/ g of unsaturated fat).

Based on the fact that each person has his own unique DNA and as a consequence everybody has his/her own personal need of Vitamin E and other essential nutrients or with other words "Biochemical Individuality". The environment also influences this individuality.
Vitamin E diminishes the toxicity of vitamin A (another fat-soluble vitamin) when this is given in high doses. The absorption of vitamin E and other fat-soluble vitamins is stimulated by the amino acid taurine. Unsaturated fatty acids in the food increase the need for vitamin E.

Recently there is controversy concerning the long time use of vitamin E as supplement related to certain disease risks and mortality. This occurs at levels of supplementation of +/- 400 mg/day and above.

Partly this may be caused by the misconception that taking a high dose of vitamin E increases the sense of safety allowing people to have a more risk full behaviour.
Another cause may be the fact that supplements contain mostly one form of vitamin E, which is at least partly not natural. Also using only vitamin E without balancing the antioxidant system may be a cause.
The best strategic use of vitamin E is:
- Eating as much as possible nutrient dense foods high in the different forms of vitamin E and vitamin E supporting other nutrients.
-Test for your blood serum values of Vitamin E and the anti-oxidant system
-Use supplement doses of vitamin E below 400 mg/day, preferably a mixture of natural forms together with vitamin E supporting nutrients.
-For real anti-aging also integrate the use of other anti-aging habits.

Nutrient dense food rich in vitamin E are red peppers, garden cress, spinach, kale, tomato and kiwi (see also the WHF website: www.worldhealthfoundation.info, go to food program, see instructions, register etc).
Nutrient less dense foods rich in vitamin E are certain seeds such as sunflower kernels, hazelnuts, almonds and wheat germs. The first 4 are also rich in unsaturated oils, which need vitamin E for protection causing reduced availability of the vitamin E.

In our society the fastest results are reached by uniting the people having interest in this life-extension approach and demonstrate that this approach is effective. The WHF (World Health Foundation) has a section in which people who want to reach a happy and healthy 100 years work together to reach this goal.