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The effect of vitamin E deficiency on human health

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Abstract

This study aims to the importance of vitamin E for human health, to learn people about the worth of vitamin E, and if a leak will go serious complexity for the person, leading to his illness, an electronic question was handed out through WhatsApp public networking implementation, where it was deal to about 850 people in the city of Mecca, and 700 replies were gained.

Keywords: Vitamin E, Deficiency, effect

1. Introduction

Vitamin E is one of the eight fat-soluble complexes and contains both tocopherols and tocotrienols, Vitamin E prohibits the oxidation of polyunsaturated fatty acids and blocks the oxidation of low-density lipoproteins, so it lowers the hazard of atherosclerosis. It also saves the phospholipids of cellular and subcellular membranes by stopping the oxidation of polyunsaturated fatty acids. This antioxidant impact of vitamin E is influenced by high oxygen concentrations and is therefore centered in red blood cells, respiratory membranes, and comebacks. The need for vitamin E raise as the income of polyunsaturated fatty acids rises. There are many standards of vitamin E in nuts; Hazelnuts, almonds, and walnuts. Vitamin E planes in animal feeds are much lower than those in plant meals. Vegetable oils are especially top in vitamin E, and α -tocopherol generally predominates. Otherwise, γ -tocopherol predominates in soybean oil. The more unsaturated fatty acids in the oils, the more vitamin E they include. Refining these oils can drive enormous losses (up to about 40%) of Vitamin E. Vegetables have little vitamin E match to oils, and the green sections of plants generally include a lot of α -tocopherol rely on the number of chloroplasts. In addition, it is also found in other "yellow" plant parts such as origins or fruits, where it is related to chromoplast content (mainly as γ -tocopherol). Other resources of vitamin E are cereals and cereal products. Vitamin E, found in wheat, is consumed by the grain during germination^[4], depending on the layer of the wheat grain, there are various vitamins. Vitamin E is only synthesized in plants, and biosynthesis starts from homogentisic acid and phytyl pyrophosphate mostly in synthases^[5].

It is an antioxidant in the body and is used in cures. Alpha-tocopherol is known as a resource of vitamin E and is a trade-available substance that supplies the demand properties of vitamin E. Tocopherol has moderate antioxidant properties. Beta, gamma, and alpha have a greater impact as antioxidants. Tocopherol derivatives are useful in oily or lipid-based pharmaceutical preparations. Its concentration usually ranges from (0.00 - 0.05%) and there is always an optimal concentration for it, as the self-oxidation of flax acid and methyl linolenes when using low concentrations of tocopherol, but it spreads when using height condensations of it goes slow because it by itself oxidizes it. It is likely to promote antioxidant action by adding oleophobic materials such as lecithin and ascorbyl palmitate^[6].

Absorption of vitamin E relies on the task of the pancreas, bile secretion, fat emulsion forming, and transit through the intestinal membranes. This is due to the fact that the vitamin is soaked up and melted in feed fats, then it is released and absorbed during the assimilation of the fat, then it is imparted in the blood through the lipoproteins sitting in the plasma and stored in the fatty tissues. Therefore, any condition that involves the processes remind drives a deficiency of vitamin E, such as cystic fibrosis, chronic liver illness, abetalipoproteinemia, fatty stools, and steatorrhea, and in patients who have had pieces of their intestines removed, such as intestinal mutilation. Vitamin E deficiency may go in a lessening of the life span of red blood cells, which drives to anemia, especially in children. There is some evidence that vitamin E can overheat the skin from the impact of ultraviolet radiation. Vitamin E backs to strengthen lymphocytes, decrease the offspring of immunosuppressive prostaglandin E₂, and decrease immunosuppressive serum lipid peroxides. Vitamin E has an anti-platelet influence and therefore lowers its adhesion to the walls of blood vessels.

2. Material and Methods

This study began in (the city of Mecca in Saudi Arabia), launched writing the examination, in August 2022, and the project finished data gathering in December 2022. The

reconnoitering applied the adjective analytical method that employs a quantitative or qualitative characterization of the friendly phenomenon, and (The impact of vitamin E reduction on human health). This part of the study is characterized by analysis, cause, topicality, and fact, as it is careful in people and socials, as its treatise the deleted and their impact on the health of the individual, culture, and expenders, the extending of illness and they are linked to demographic changeable such as age, sex, nationalism, and marriageable situation. Condition, jobs ^[1], and use of the Office Group 2010 histogram for Excel to stand the outcomes by pulling them on the statistical software ^[2].

3. Results and Discussion

The questions are an important major tool to gather data. However, investigators cannot stand personal interviews with entrants ' answers to the online questions, because of the public prevention regulations at that time way studies to block contagion between participants and examiners and vice versa. It is also it was enough to answer the questionnaire electronically only as the questions contain twelve questions, which are closed. The online path has also been, used to produce good samples, in like studies in Saudi Arabia and others ^[3].

Table 1: The effect of vitamin B deficiency on human health.

| Questions | Yes | No |
|--|-------|-------|
| Have you had a blood test for Vitamin E recently | 18.2% | 81.8% |
| Did you take vitamin E based on a doctor's consultation recently? | 18.2% | 81.8% |
| It was about to do you eat fruits and vegetables regularly | 63.6% | 36.4% |
| Was about whether you eat nuts such as almonds regularly | 45.5% | 54.5% |
| Was about do you take vitamin E supplements from pharmacies | 9.1% | 90.9% |
| Did you have a deficiency in vitamin E recently? | 11.1% | 88.9% |
| Do you take vitamin E, especially to strengthen hair? | 0% | 100% |
| Do you take vitamin E, especially its effect on male fertility | 0% | 100% |
| Do you take vitamin E, especially because it has a role in the development of a healthy fetus during pregnancy | 0% | 100% |

For the first question, have you had a blood test for Vitamin E recently? 18.2% answered yes and 81.8% answered no. As for the second question, did you take vitamin E based on a doctor's consultation recently? The answer was the same (18.2% yes and 81.8% no), with regard to the third question, it was about to do you eat fruits and vegetables regularly. The answer was that 63.6% answered yes and 36.4% answered no, the fourth question was about to do you have the following symptoms, and the participants answered as follows: 36.4% did not experience any of these symptoms, 18.2% had dark circles near the eye, hair removal, dullness and lack of density, traces resulting from operations or wounds and skin pigmentation, 9.0% for reducing broken nails and 0% for both sunburn in the body and the appearance of signs of skin aging, the effect of radiation in the atmosphere and pollutants. Regarding the fifth question, it was about whether you eat nuts such as almonds regularly. The answer was 45.5% said yes and 54.5% said no. sixth question, was about do you take vitamin E supplements from pharmacies. 9.1% answered yes and 90.9%no answered no. As for the seventh question, did you have a deficiency in vitamin E recently? 11.1% answered yes, and 88.9% answered no. The eighth question is about to do you take vitamin E, especially to strengthen hair. The answer was 18.2% said yes and 81.8% said no. As for the ninth

question, do you take vitamin E to relieve menstrual pain and reduce its effects? The participants answered that 100% of them do not take it, and also with regard to the tenth question, it was about to do you take vitamin E, especially its effect on male fertility. The answer was 100% of the men do not take it. The last question was about to do you take vitamin E, especially because it has a role in the development of a healthy fetus during pregnancy. The answer was 100% no.

4. Conclusion

Vitamin E properties have been set to play a function in clinical and empirical research supporting that vitamin E has a vital role in the fight against various illnesses such as Atherosclerosis, oxidative overwork, cancer, and cataracts, this vitamin has been found to be active against asthma allergies and diabetes, among others. Discussion of the dietary sources, RDA, and the interaction of vitamin E complements with other dietary factors have demonstrated the need for and importance of vitamin E in the human situation. Thus, raising public consciousness of the function of dietary antioxidants in preserving better health would interest a number of lives. This study showed it is consistent with the study of Rizvi et al. ^[7].

5. Acknowledgment

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