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The effect of vitamin A deficiency on human health

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Abstract

This study aims at the importance of vitamin A for human health, and to educate people about the importance of vitamin A, and that if a deficiency will lead to severe complications for the person, leading to his illness, an electronic questionnaire was distributed through WhatsApp social networking application, where it was distributed to about 1100 people in the city of Mecca honor, and 850 responses were obtained.

Keywords: Vitamin B, deficiency, young and old

1. Introduction

Vitamin A or retinol is a family of fat-soluble components that game an important turn in sight, bone growth, breed, cell section, and cell variety (by which a cell becomes part of the brain, muscle, or brain). Lungs, etc. ^[4, 5, 6]. (Vitamin A assists adjust the immune system, which aid stop or hold off contagion by making white blood cells that collapse bacteria and viruses. Vitamin A also helps lymphocytes, a kind of white blood cell, war infections more effectively. Face Vitamin A supplies healthy linings for the eyes, respiratory and urination systems, and intestinal tracts ^[7]. When these linings are cracked, it becomes easier for bacteria to enter the body and reason infection. Vitamin A also helps keep the integrity of the skin and mucous membranes, which also act as a block to bacteria and viruses. Retinol is the most pushing, or most widely used, a form of vitamin A, and is found in animal foods such as liver and full milk. Retinol is also called perfect vitamin A because it can be transformed into retinal or retinoic acid, which are various active shapes of the vitamin A family. Provitamin A carotenoids source deep dye and are found in plant foods, and they can be turned into to vitamin A. In the United States, 26% and 34% of the vitamin A cleanout by men and women, regard, comes from the carotenoid provitamin A. popular carotenoids in food are beta-carotene, alpha-carotene, lutein, zeaxanthin, lycopene, and cryptoxanthin. Of the 563 types of carotenoids that were particular, a lower 10% are generated for vitamin A. through them, is beta-carotene which modifies very efficiently into retinol. Alpha-carotene and beta-cryptoxanthin are also switched into vitamin A, but with half the efficiency of beta-carotene. The carotenoids lycopene, lutein, and zeaxanthin do not have vitamin A activity, but they do have other health interests. It is needful to expand fruits and vegetables wealthy in carotenoids because of their usefulness to the body. Some carotenoids, in addition to favor as a resource of vitamin A, have been shown to doing as antioxidants in laboratory experiments. This function does not show within the human body. Antioxidants save cells from free radicals, which harm byproducts of oxygen metabolism and may share with some chronic illnesses. Vitamin A deficiency (NFA) is a deficiency of vitamin A in humans. It is rife in pauper countries but scarcely seen in more evolved countries.

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Night blindness is one of the first signals of NFA. Xerophthalmia, keratoconjunctivitis, and plenary blindness can also come as vitamin A plays an important part in photosynthesis. Vitamin A deficiency is the major purpose of stopped childhood blindness and is critical to realize the four Millennium Development targets to minimize child mortality^[8]. Approximately 250,000 to 500,000 malnourished children in the developing world go blind each year as a result of vitamin A deficiency, about half of whom pass away within a year of becoming blind. The United Nations Special Session on Children in 2002 set the goal of eliminating NFA by 2010. The spread of night blindness due to (NFA) is also high among pregnant women in many developing countries. NFA drives maternal death and other poor results in pregnancy and lactation^[9, 10, 11, 12]. Also, NFA has less ability to fight infections. Countries, where children are not injected, have a high mortality average from infectious illnesses such as measles. Mild vitamin A deficiency can be problematic, Alfred Somer explained, because it can increase children's danger of developing respiratory infections and diarrhea, have a low growth rate, slow bone growth, and reduce their odds of surviving a serious illness. NFA is rated to impact approximately one-third of children under the age of five worldwide^[13]. It is appreciated to kill 670,000 children under the age of five yearly^[14]. Approximately 250,000-500,000 children become blind in developing countries each year due to NFA, with the highest prevalence in Southeast Asia and Africa. According to the World Health Organization, NFA is under control in the United States, but in developing countries, NFA is the main concern. Globally, 65% of all children aged 6-59 months draw two doses of vitamin A in 2013, and 80% were fully protected against NFA in the least-developed countries^[8].

2. Material and Methods

This study was launched in (the city of Mecca in the kingdom of Saudi Arabia), start writing the research and then writing the questionnaire in June 2022, and the study finished with data collection in October 2022. The researcher used the descriptive analytical approach that uses a quantitative or qualitative description of the social phenomenon, and (The effect of vitamin A deficiency on human health). This type of study is characterized by analysis, reason, objectivity, and reality, as it is concerned with individuals and societies, as it studies the variables and their effects on the health of the individual, society, and consumer, the spread of diseases and their relationship to demographic variables such as age, gender, nationality, and

marital status. Status, occupation (1), and use of the Office Group 2010 histogram for Excel to rank the results by dragging them on the statistical software^[2].

3. Results and Discussion

The questionnaire is a convenient and essential tool to collect data. However, researchers cannot conduct personal interviews with Participants' answers to the online questionnaire, because of the social distancing regulations at that time conducting a study to prevent infection between participants and researchers and vice versa. It is also enough to answer the questionnaire electronically only as the questionnaire consists of thirteen questions, 11 open and two closed. The online approach has also been, used to generate valid samples in similar studies in Saudi Arabia and others^[3]. For the first question, have you checked your vitamin A recently? Those who agreed with yes were 15.9% and the percentage of those who answered no was 84.1%. The second question was about to do you suffer from genetic diseases such as anemia. The participants who answered yes were 13.4%, while answered no, to the third question about 86.6% suffer from hereditary diseases of eyesight. 14.8% said yes and 85.2% said no. The fourth question is about to do you suffer from genetic skin diseases. 10.3% answered yes, while 89.7% answered no, the fifth question: Do you suffer from the following symptoms: The answers were as follows: Night supper and all of the above 0.6%, infection of the throat, chest, and abdomen 4.5%, dry skin 12.7%, problems with Fertility 2.5%, growth retardation in children 1.9%, no 77.1%. Regarding the sixth question about whether you ever took an overdose of vitamin A without medical advice and the following symptoms appeared: The answers were as follows: constant fatigue, cracked and broken nails and hair loss 2.6%, nausea, dizziness, headaches, and liver problems 0%, pain Osteoporosis and all of the above 1.9%, no I didn't take 90.3%. The seventh question was about to do you eat fruits and vegetables on a daily basis. 40.8% answered yes, while 59.2% answered no. As for the eighth question, do you eat red and white meat periodically? 78.8% answered yes and 21.2% answered no. The ninth question: Do you diversify your diet on a daily basis? 79% answered yes and 21% answered no. Question 10: Do you eat dairy products on a daily basis with your meals on a daily or periodic basis? 59% answered yes and 41% said no. Question 11: Do you suffer from the following symptoms because of your excessive intake of foods rich in vitamin A? The answer was as follows: nausea and vomiting 0.6%, vision problem 3.8%, dizziness 1.3%, all of the above 4.5%, no 89.7%.

Table 1: The effect of vitamin A deficiency on human health

Questions	Yes	No
Have you checked your vitamin A recently?	15.9%	84.1%
Do you suffer from genetic diseases such as anemia?	13.4%	86.6%
Do you suffer from hereditary diseases of eyesight?	14.8%	85.2%
Do you suffer from genetic skin diseases?	10.3%	89.7%
Do you eat fruits and vegetables on a daily basis?	40.8%	59.2%
Do you eat red and white meat periodically?	78.8%	21.2%
Do you diversify your diet on a daily basis?	79%	21%
Do you eat dairy products on a daily basis with your meals on a daily or periodic basis?	59%	41%
Do you suffer from the following symptoms because of your excessive intake of foods rich in vitamin A?	89.7%	10.3%

4. Conclusion

Vitamin A is one of the important vitamins for human health, especially in the matter of vision and anemia, because it has an important role in human health, and people are advised to eat fruits, vegetables, and a variety of foods in general.

5. Acknowledgment

Praise be to God, prayer and peace be upon our prophet Muhammad and his family companions, to begin with, we would like to offer big thanks to my brothers who are with me in the research to help me to finish this research, may God to keep them safe to their family and I wish them a lot of good in this world and the hereafter amen.

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