



## IMPORTANCE OF VITAMINS IN THE BODY

**Rakhat Dauletmuratov**

Nukus Technical School Of Public Health named after  
Abu Ali Ibn Sino. Teacher of dietetics  
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### ABSTRACT

*The article discusses the processes of the influence of vitamins on the body. The authors present the results of a study of the quantitative determination of vitamin C and the reasons for its instability.*

### INTRODUCTION

Vitamins (from the Latin vita) are life, high-molecular organic compounds of various chemical natures that perform the most important biochemical and physiological functions in the human body [1].

The body requires small amounts of vitamins because they have high biological activity. A person does not synthesize vitamins or synthesizes them in insufficient quantities and therefore must receive them from food. Food at the cellular level controls all processes in the human body, guaranteeing either a long and vigorous life, or illness and infirmity.

### MATERIALS AND METHODS

In this regard, the purpose of the study was determined: to study the role of vitamins necessary for the occurrence of various processes in the human body.

To achieve this goal, the following tasks were identified:

- analyze which foods contain vitamins;
- learn to visually determine the lack of vitamins in the body;
- identify the causes of vitamin deficiencies;
- carry out qualitative reactions to vitamin C, make sure that vitamin C is unstable.

The following research methods were used: theoretical analysis of the literature, experimental work on the quantitative determination of ascorbic acid, study of the stability of vitamin C.

### RESULTS AND DISCUSSION

The importance of vitamins for the body is very important, because one of the most important functions of vitamins is to maintain immunity. It is thanks to these substances that the body becomes resistant to colds and infectious diseases, adapts to the environmental situation, which has recently only worsened, and they also increase the body's resistance to a number of other environmental factors.

The author carried out experimental work on the detection of vitamin C. The quantitative determination of ascorbic acid is based on a change in the color of the solution. Based on the amount of reagent consumed for the oxidation of vitamin C, it is possible to determine the amount of this vitamin in the material under study [2].

Vitamin C is very unstable and is destroyed in air and also in contact with metals. The absence of ascorbic acid can be checked in a fairly simple way. The study is based on the property of ascorbic acid to discolor iodine. In vegetables and fruits, vitamin C is gradually destroyed during storage. As a result, fresh vegetables and fruits are always richer in vitamin C.

Heating (when cooking) enhances the oxidation (destroys) of vitamin C.



Fig.1. Vitamin C stability study

Vitamin C as an antioxidant works best together with vitamin E, and in the presence of vitamin P, the effect of vitamin C is enhanced. Folic acid (B9) interacts positively with vitamin C. In turn, vitamin C improves the absorption of iron [3].

The author conducted a survey and external examination of himself, friends, and relatives to determine the lack of certain vitamins in the body, with the goal of learning to visually determine the lack of vitamins in the body.

External signs of vitamin deficiency in those examined were a lack of vitamin A and B2. The author made recommendations on what foods they should eat.

While writing the work, the author revealed the role of vitamins in metabolism; characterized the importance of essential vitamins and their content in food products; substantiated the conditions for preserving vitamins in food.

## CONCLUSION

Nature gives us the opportunity to get everything useful from the food we eat.

Sources of vitamin A are the liver of fish and animals, butter, egg yolks, orange-colored plant foods, fish oil, and green leafy vegetables.

B vitamins are found in cereals, nuts, brewer's and bread yeast, seeds, fish and animal liver, meat, fish, seafood, meat by-products, green vegetables, legumes, potatoes, dried fruits.

Vitamin C in food is found mainly in products of plant origin: fresh vegetables, fruits, herbs, berries, root vegetables, especially those that have a sour taste - for example, rose hips, lemon, currants, etc.

Sources of vitamin D include fish and seafood, as well as nuts and milk.

Vitamin E is found in vegetable fats, eggs, animal liver, legumes, nuts and seeds, rose hips, sea buckthorn, rowan, cherries, and leafy vegetables.

Vitamin K is synthesized in the human intestine, but in order to provide the body with its daily norm, you need to eat plant foods - vegetables, fruits, cereals and nuts, tea, vegetable fats, as well as milk, animal liver, eggs and fish.

Biotin is found in eggs, milk, nuts, fruits and beef liver, as well as legumes.

Thanks to the content of vitamins in food, our body maintains its vital functions and remains healthy.

#### References:

1. Gorelova L.V. Anatomy in diagrams and tables / L.V. Gorelova, I.M. Tayurskaya. – Rostov n/d: Phoenix, 2010. – 573 p.
2. Zbarsky B.I. Workshop on biological chemistry / B.I. Zbarsky, I.V. Zbarsky, A.I. Solntsev. – M.: Medgiz, 2012. – 280 p.
3. Kamensky A.A. The human body: simply about the complex: Materials for preparing for the unified state exam and entrance exams to universities: Study guide. – M.: Bustard, 2010. – 267 p.

