

PROPERTIES OF NATURAL AND SYNTHETIC VITAMINS AND MINERALS

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The relevance of the topic is confirmed by the presence of many articles about the properties of synthetic and natural vitamins, for example «Natural Vitamins vs. Synthetic» by: Dr. George Obikoya, «The Differences Between Synthetic and Natural Vitamins» by Dr. Edward Group DC, NP, DACBN, DCBCN, DABFM.

Vitamins are organic components in food that are needed in very small amounts for the normal functioning of the organism. Vitamins themselves don't have any nutritional value, in other words, they don't contain any calories and can't serve as sources of energy. These compounds perform catalytic function as part of the active centers of various enzymes and may be involved in humoral regulation as exogenous prohormones and hormones [1].

In the last century, scientists learned how to synthesize vitamins in laboratories. Theme of the report is the research of the benefits and harms of synthetic vitamins.

«It is rather difficult to make the distinction between "synthetic" and "natural" vitamins. Some define a natural vitamin as a concentrated nutrient derived from a natural source. The idea is the maximum retention of the natural material; No artificial colors, sweeteners, or preservatives should be used.

A natural source contains co-factors that comes with the nutrient in nature. For instance, some co-factors that are usually found with Vitamin C are various bioflavonoids. It is concentrated from its natural source as carefully as possible. No extreme heat, pressure, or possibly toxic solvents are used. There are no sugar or chemical tablet coatings. The nutrients are prepared from high quality raw ingredients. No artificial chemicals are added. Harsh binders and fillers do not hinder absorption.

Synthetic vitamins are made in a laboratory setting from coal tar derivatives. No co-factors are present. Most of the food supplements are on sale and are cheaper to produce than natural vitamins» [4].

According to statistics [2], every second person suffers from a shortage of vitamins. Undoubtedly, vitamins in the composition with natural products are more desirable, because in any case they are more organic and customary for us, but sometimes we have to fill the deficit with vitamin preparations. «People need to maximally consume natural vitamins that are in vegetables, fruits, meat, bread, etc., and about 30-50% with drugs. Because as you know in the last 50 years, the vitamin content of fruits and vegetables also decreased. Synthetic vitamins in moderate dosage are not carcinogenic and should not harm health» [2].

Noticeable results synthetic and natural vitamins have only against the background of scarcity, when the deficit is eliminated, there is no preventive or curative or magical effect. Allergy cannot be caused by either synthetic or natural vitamins. It's all about concomitant additives, or in a huge excess of the dose, which also causes poisoning.

We agree with the opinion that if both hypovitaminosis and synthetic vitamins are evil, it's better to determine what evil is less. «Vitamin deficiencies lead to a wide range of problems spanning from anorexia to obesity, organ malfunction, confusion, depression and fatigue» [3].

Conclusions: nobody denies that vitamins are not fully understood, especially the effect of different individual isomers. And at the same time, there are no unambiguous conclusions about the dangers of synthetic vitamins in moderate doses. In addition, the occurrence of hypovitaminosis in the absence of valuable nutrition is quite predictable. Because the problem of providing natural vitamins in the modern food industry is a fact.

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