

Food Additives

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Introduction. Nutritional supplements in the broad sense of the term people use for centuries and in some cases even thousands of years. The widespread use of food supplementation began only at the end of XIX century and quickly reached the maximum spread nowadays all over the world.

Despite the prejudices of many people nutritional supplements for severity, frequency and severity of possible disease agents belong to a minimal risk.

Materials and methods. The term “dietary supplement” is not the only interpretation. A group of substances of natural or synthetic origin that are used to improve the technology of obtaining products, special purpose, with distinctive organoleptic characteristics, relevant properties are understood under the food additives. The use of food additives is relevant in terms of improving the competitiveness of products. It aims to significantly improve the appearance, taste, aroma, texture products, provide output with a given set of multifunctional properties, high resistance during storage. It is vital that made additions do not change the properties of consumer food products. Distinguish 30 functional classes of food additives, colorants, preservatives, antioxidants, sweeteners, emulsifiers, thickeners, gelling agents, stabilizers, flavour enhancers, acidity regulators (buffers), leavening agents, glaze, flour improvers, hardeners, regulators of humidity, fillers, modified starches, substance baking forms and letters and Indo beginning of the 90-ies of the XX century and the use of food additives in Ukraine was limited in comparison with foreign countries of Europe and the United States. During the last years the use of food additives in the country has significantly increased. In 1994 according to the Decree of the Cabinet of Ministers, it was allowed to use 194 drugs, in 2000 – already 221. With the expansion of production of food additives the range of food products derived without using them constantly decreases. Now foods that do not contain food additives are vegetables, fruit (except citrus), rice, mineral water, milk, eggs, honey, meat, sugar and vodka. Food intended for power supply of newborn children also do not contain food additives. All other foods contain a certain number of those or other nutritional supplements. To protect public health and to restrict the intake of the rights there were established maximum permissible levels, food additives in products, as well as for many foods – acceptable daily intake – DDD (DDS – acceptable daily intake or PD – acceptable daily intake). In addition, the regulated list of food products in which it is expedient to add nutritional supplements. Restricted or prohibited the use of food additives in the manufacture of baby products. The introduction of new food additives must be preceded by

experimental research on animals with the study of the overall toxicity, kinetics in the body, metabolism, study of remote effects of the use of food additives on 2–3 generations of animals, clinical observations on volunteers, and performing research on the identification and specification.

Results. With the introduction of food additives in food products adhere to the following requirements: 1) add the minimum necessary to achieve the objective of quantities and not exceed the established by the legislation of the GDR; 2) add only if the goal cannot be achieved in any other way; 3) dietary supplements should be non-toxic and does not increase the risk of morbidity of the population; 4) food additives must have a high degree of purity (set specifications). All dietary supplements depending on the origin are divided into three groups: natural, analogues of natural substances and synthetic. Until recently, food additives of natural origin were considered harmless for people and when used in food production gave preference to the front synthetic or analogies of natural compounds. From a Toxicological point of view, food additives, even natural origin, cannot be considered as absolutely harmless for health of people, because most of the toxic substances of natural origin. In connection with rapid development of chemistry in the end of XX century opinion about the low toxicity of natural compounds is gradually changing. However food additives is of synthetic origin and is now considered to be the most dangerous, because it is xenobiotics, which the human organism during its evolutionary development is not met and, therefore, his body is missing enzymes that are able to turn them in non-toxic metabolites. Concern is growing fragrances not only in food production, but also in the production of cigarettes. But scientific information about their security is not enough. Although flavours compared with other classes of food additives are typically used in significantly lower concentrations, this does not guarantee that they may not represent a health risk.

Conclusions. Based on these facts, the use of food additives must be strictly controlled. Since control over a large number of food additives for many reasons is difficult, we should limit their list, which is used in food industry, leaving only those who we desperately need, say, to accelerate and improve the technological process and the use of which at this stage of development of science is absolutely harmless to the body of people, even outside of DDD.

References

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