

## THE DEPENDENCE OF HUMAN HEALTH UPON ENVIRONMENT

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The evaluation of conditions of various environmental factors on human health represents a complex process that demands multidisciplinary approach towards the study at the level of ecosystem. The biogeochemical chains of nutrition create functional dependence of human health on soil composition, water and food.

The biological role of chemical elements in a human organism is very diverse. There are many known illnesses connected with the deficiency or sufficiency of different chemical elements in a human organism. This phenomenon is connected with the fact that in a human organism there is a balance of optimal concentration of biogenic elements - chemical homeostasis.

The deficiency of biogenic elements (Fe, Cu, F, Zn, J, Ca, P, Mg, etc.) in the nutrition brings about serious problems in human health.

The sufficiency of some biogenic elements can also cause harmful effects in organism, because this can disturb chemical homeostasis.

The biogenic elements have wide applicability in the agriculture. Adding to the soil of very small amounts of microelements (B, Cu, Mn, Zn, Co, Mo) brings about a high crop yield of many culture. The microelements increase the activity of enzymes in plants by which they stimulate the synthesis of vitamins, nucleic acid, sugar and starch. Some chemical elements have positive effects on photosynthesis, accelerate growth and development of plants, maturation of seeds. The microelements are being added to the fodder for cattle nutrition.

The anthropogenic environmental pollution, in connection with the microelements from the heavy metal group, may cause serious concern over negative consequences for the health of various demographic groups and the whole mankind. Today there is a growing significance of technogenic chemical elements.

Together with the diseases caused by the anthropogenic environmental pollution, there are diseases connected with the anomalous content of some elements in soil or water of a certain geographic zone. Such diseases are called endemic diseases.

The endemic diseases, caused by the deficiency or sufficiency of some microelements in the environment, affect plants, animals and people. The sensitivity of some organisms to various degrees of deficiency or sufficiency of chemical elements determines the level of proneness of citizens to endemic diseases.

On the basis of study of chemical ecology of biogeochemical provinces, chemical elements, such as B, Cu, Mn, J, etc. as fertilizers or fodder additives, have found wide applicability in the battle with the appropriate endemism. On the basis of research of the content of the chemical elements in soil and plants there has been created the biogeochemical method of ore prospect.

In this paper the mechanisms of action of biogenic and toxic elements on human organism have been shown.