

Correction of Morpho-Functional Changes in the Kidney Caused by Groundwater Consumption with Bioactive Additives

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Abstract: The pathogenesis of groundwater with a high chemical content is explained by the direct and indirect effects of chemicals on the body. The chemical compounds contained in the water accumulate on the walls of blood vessels and in the parenchyma of all organs and are related to their direct and indirect effect on the metabolism. In this case, the physical and chemical processes in the affected cells are disturbed. In this case, the permeability of the cell membrane increases or decreases.

Keywords: Radiolysis of water, atomic hydrogen, hydroperoxyl radicals, hydrogen peroxide, disulfide compounds, macrophytes.

Any external physical, chemical and biological effects on a living organism lead to changes in the structure and function of the organs of this organism. As a result, the body responds by changing the clinical-laboratory parameters, including the morphology of organs, within the framework of compensatory-adaptive mechanisms. Among external influences, one of the most common influences in modern times is drinking water with different composition. It has been proven that excessive amounts of salts, macro and micro elements, chemical and biological composition of water have a negative effect on the organs and systems of the body. Morpho-functional changes in the kidney as a result of groundwater consumption is a pathological condition of the organism, caused by the influence of doses of chemical elements and compounds higher than the maximum allowed standards. Changes in the body under the influence of high chemical content water consumption, including the morphological characteristics of organs, and the development of treatment and preventive measures to reduce the impact of groundwater with a high chemical content have not lost their relevance.

Researchers-scientists of today's leading scientific centers in the world have determined the maximum doses of exposure to the body of underground waters with a high chemical content, the duration of their irreversible and irreversible pathological processes in the body, the level of influence of underground waters with a high chemical content on the body and organs, purifying water for consumption. Those who conducted research and published their results on the production and use of tools. In addition, groundwater with a high chemical content causes morpho-functional changes in the kidney.

It consists of studying the morpho-functional changes in the kidney as a result of groundwater consumption and the effect of bioactive supplements (in the case of Bukhara region).

Among the sources of water pollution, the most important place is occupied by industrial and household waste water. These wastewaters contain various acids, phenols, hydrogen sulfate, ammonia, copper, zinc, mercury, cyanide, arsenic, chromium and other toxic substances, oil, petroleum products, which are dangerous for living organisms, together with the wastewater used in industrial enterprises, joining rivers, lakes and reservoirs and polluting them. One of the factors of fulfilling these tasks, i.e. preventing the pollution of water resources and providing the population with clean drinking water, is the economical use of water resources, the reduction of used water and the improvement of water resources protection measures. Another of these issues is that the discharge of wastewater into a water body can be allowed only on the condition that the pollutants contained in the water body do not exceed the established standards and that the water user delivers and cleans such wastewater to the level determined by the bodies of nature protection and sanitary control.

As a result of consumption of groundwater, various pathomorphological changes in the kidney of experimental animals are recorded in 66.7-86.7% of cases, and such negative changes, even if the level and intensity are low, are observed under the influence of consumption of groundwater, they are proven to indicate the development of diseases in the kidney. the importance of diagnosis and treatment in storage is indicated;

Citric acid is rich in proteins, fats, carbohydrates, organic acids, vitamins, macro and micro elements. Essential oils containing citric acid are obtained by cold pressing. Limonene, citral, geranyl acetate, sesquiterpenes, and other monoterpenes are separated into fractions by distillation under vacuum.

Citric acid also contains many organic substances, and many compounds are found in its essential oils.

The intensity of functional changes in the kidney among patients who took the biologically active supplement "Lemon water" as a preventive biocorrection to prevent changes in the kidney after drinking groundwater was lower than in patients who did not take this biopreparation. Prophylactic biocorrection affected the level and intensity of functional changes in the kidney among patients, and there is a practical difference with the contingent of patients who did not receive this biopreparation.

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