МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

М А Т Е Р І А Л И

105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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after 1 hour, the other – on the 12th day of the post-ischemic period by decapitation under anesthesia. The Bcl-2 protein content in nerve and glial cells was determined by the immunocytofluorescence method. The statistical significance of the differences was assessed by the t-Student's test for independent samples.

Results. According to the results of experimental studies, it was established that after a 20-minute ischemia with one-hour reperfusion in the cells of the parietal lobe, a decrease in the total number of Bcl-2^+ cells by 1.2 times and the density of Bcl-2^+neurocytes by 1.3 times was observed. On the 12th day of the ischemia-reperfusion period, a significant decrease in the total number of Bcl-2^+ cells and Bcl-2^+ neurocytes was maintained by 1.3 and 1.4 times, respectively. In addition, during this period, a decrease in the density of gliocytesby 1.2 times relative to the control. Modeling of DM increased the total density of Bcl-2^+ cells by 1.2 times and Bcl-2^+ neurons by 1.5 times compared to the control group of animals and did not affect the density of Bcl-2^+gliocytes.

Conclusions. Thus, by studying the role of antiapoptotic proteins in neurological diseases with impaired energy metabolism, in particular carbohydrate metabolism, we can enhance the understanding of the mechanisms of brainneuroplasticity.

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FEATURES OF MICRONUTRIENT CONSUMPTION BY STUDENT YOUTH FOR THE PREVENTION OF RESPIRATORY DISEASES

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Introduction. An important aspect of the respiratory diseases prevention is sufficient provision of the body with vitamins and minerals. However, in today's realities, it is not always possible to provide the body with the necessary amount of micronutrients due to their insufficient content in food products during the cold season, as well as due to a violation of the nutritional regime and its balance.

The aim of the study. To analyze the peculiarities of micronutrients' use by student youth in order to prevent respiratory diseases.

Material and methods. An anonymous survey was analyzed, in which 100 Ukrainian students of the 2nd and 3rd courses of the "Medicine" specialty of the Bukovinian State Medical University voluntarily participated.

Results. The results of the survey showed that 38% of respondents use medicines and/or dietary supplements containing micronutrients for the prevention of respiratory diseases, 54% – in the event of the first symptoms of the disease, and only 8% – do not use them, preferring their natural sources. Among the interviewees who used medicinal drugs and/or dietary supplements for preventive purposes, 32% chose monopreparations of specific vitamins or minerals, 68% preferred vitamin-mineral complexes. 38% of respondents took the appropriate medicines or dietary supplements on the advice of their family doctor, 32% on the advice of friends or bloggers on social networks, 18% on the advice of university teachers, and 12% on the advice of their parents.

Most often, the interviewees consumed vitamins C and D (78% and 42%, respectively), somewhat less often - the minerals zinc (33%) and selenium (12%). Among the respondents who consumed medicines and/or dietary supplements of vitamin C for preventive purposes, 35% took them in a daily dose of less than 500 mg/day, 53% – 500 mg/day, 12% – 1000 mg/day and more. Among vitamin D preparations, 55% of respondents preferred a dosage of 2000 IU per day, 40% – 1000 IU and less, 5% – 4000 IU and more.

Among food sources of vitamin C, 55% of respondents preferred citrus fruits, 20% preferred other fruits and berries (apples, rose hips, cranberries, etc.), 25% preferred seasonal vegetables (sauerkraut, onions). Among the main sources of vitamin D, 46% of students used dairy products, 32% – chicken eggs, and 22% – fish. Also, according to the results of the questionnaire (questions without answer options), it was possible to find out that the respondents are not sufficiently aware of which food products are the main sources of zinc (52%) and selenium (64%), what are the

preventive doses of these microelements (25 % and 36%, respectively) as well as with specific aspects of the impact of these trace elements on body functions (18% and 22%, respectively).

Conclusions. The results of the survey indicate frequent cases of consumption of medicines and/or dietary supplements containing micronutrients without prior medical consultation, which may result in their insufficient effectiveness or the development of side effects. The majority of respondents are not sufficiently informed about the content of trace elements zinc and selenium in food products and their influence on immunological reactivity, which requires a more detailed consideration of these issues during practical classes on hygiene and ecology.

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ENVIRONMENTAL STATE OF THE RIVER NETWORK OF CHERNIVTSI REGION ACCORDING TO SANITARY AND HYGIENE INDICATORS

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Introduction. The river network of the Chernivtsi region is represented by watercourses that enter the Danube and Dniester basins. Excessive anthropogenic influence, lack of a network of centralized treatment facilities led to a catastrophic state of the river network. Assessment of the quality of surface and groundwater is still a major public interest in the developed countries of the world. Indicator bacterial organisms can serve as a reliable environmental test. Examination of the bacterial density of water can provide an approach to assess the reliability of monitoring data. However, currently, these indicators are not yet used in the monitoring system.

The aim of the study. Clarification of the ecological state of the basins of the Siret and Dniester rivers according to sanitary and hygienic indicators.

Material and methods. Surface waters of the studied river network. Standard methods of determining sanitary and hygienic indicators. Physico-chemical indicators of water were determined in accordance with DSTU 7525:2014 and DSTU ISO 10012:2005." To confirm the morphological and other properties of the culture of microorganisms, the microscopy method was used, followed by identification according to Bergey's determinant.

Results. In recent years, monitoring studies have been carried out on the sanitary and hygienic indicators of the surface waters of the Siret River basins (from the source to the crossing of the border with Romania) and the Dniester (within the territory of the Khotinskyi National Nature Park. As sanitary and indicator organisms, intestinal coli (Escherichia coli), "coli-index" and "coli-titer" indicators were investigated. Among the investigated sanitary and hygienic indicators were also: chemical and biochemical oxygen consumption, pH, content of free oxygen, nitrogen compounds, sulfur, etc. The obtained results indicated an increase in organic and microbiological pollution of watercourses downstream of the studied watercourses. It is mainly observed in the area of large settlements on the Siret River (the village of Beregomet and the city of Storozhynets), on the Dniester River (the cities of Khotyn and Novodnistrovsk). Thus, after the specified settlements, place 4-6 times exceeding the accepted standards. In order to improve the quality of surface water, we conducted research on the fibrous carrier of the "Viya" type (TU (995990). It has been established that this fibrous carrier can be successfully used for the construction of "bioreactors" for cleaning surface waters and saturating them with oxygen. The effectiveness of using the "Viya" carrier in combination with the wooden construction for cleaning natural watercourses in the mountainous region of the Pokutsko-Bukovynsky Carpathians is shown. During the season, the "Viya" can "overgrow" with invertebrates (the so-called periphyton is formed). Bacteria and algae also accumulate on the "Viya". It has been established that the fibrous carrier placed on the "weirs" is capable of significant accumulation (almost 15 times) of bacteria and hydrobionts compared to their content in surface waters. The advantages of the proposed scheme of natural water purification are that the biomass accumulated at the "Viya" is mineralized and assimilated in the trophic chain, as evidenced by the indicators of biochemical (BOD), chemical (COD) oxygen demand, the amount of suspended substances in the water before and after the treatment structures.