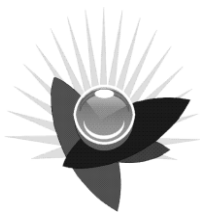


МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
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МЕДИЧНОЇ РЕАБІЛІТАЦІЇ ТА КУРОРТОЛОГІЇ МОЗ УКРАЇНИ»

**САНАТОРНО-КУРОРТНЕ ЛІКУВАННЯ ТА РЕАБІЛІТАЦІЯ:
СУЧАСНІ ТЕНДЕНЦІЇ РОЗВИТКУ**

Матеріали науково-практичної конференції
з міжнародною участю
(30 вересня – 1 жовтня 2021 року, м. Одеса)



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C18 Санаторно-курортне лікування та реабілітація: сучасні тенденції розвитку: матеріали науково-практичної конференції з міжнародною участю (Одеса, 30 вересня – 01 жовтня 2021 р.). — Одеса: Поліграф, 2021. — 190 с.

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До збірника матеріалів ввійшли тези доповідей, подані учасниками науково-практичної конференції з міжнародною участю «Санаторно-курортне лікування та реабілітація: сучасні тенденції розвитку» (30 вересня – 01 жовтня 2021 року, ДУ «Український науково-дослідний інститут медичної реабілітації та курортології МОЗ України»). У публікаціях представлено наукові результати з актуальних питань організації санаторно-курортного лікування та надання реабілітаційної допомоги у сфері охорони здоров'я, комплексного дослідження природних лікувальних ресурсів і розвитку курортних територій, підвищення якості надання санаторно-курортних послуг.

Тексти публікуються в авторській редакції. За науковий зміст і якість поданих матеріалів відповідають автори.

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THE EFFECTS OF FUNCTIONAL FOOD ON REHABILITATION OF CORONARY HEARTS DISEASE PATIENTS

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Patients with coronary heart disease (CHD) are at high cardiovascular risk (CVR), due to a complex set of inter-related hemodynamic, metabolic and neuro-hormonal disorders. Particular importance is the correction of body weight as one of the most modifiable risk factors. The connecting link between the risk of coronary heart disease and obesity is dyslipidemia. The use of pharmaceutical products helps to improve the results of treatment of CHD, however, drug therapy has a number of disadvantages, the main of which are allergic reactions, development of addiction, side effects. Rehabilitation treatment of patients with CHD in the sanatorium stage provides for the mandatory inclusion of non-drug interventions, such as: physical therapy and dietetics. One of the promising directions of currently research of correction of weight is the use of functional foods [1]. We have received positive results in preliminary studies in athletes by use of functional foods containing L-carnitine [2]. On this basis, we have developed functional product for patients with CHD taking into account peculiarities of metabolism.

To investigate the efficacy of functional foods in patients with CHD at the stage of sanatorium treatment for weight loss and normalization of lipid metabolism.

30 patients with CHD FC I-II, 14 men, 16 women, mean age – $(52,2 \pm 2,4)$, were divided into 2 groups: a control received the standard range of spa treatments, the main additionally received 2 types of functional food. The first, «LFK-1» includes L-carnitine, taurine, inositol, choline, coenzyme Q₁₀, was held for 15-20 minutes before the start of gymnastic exercises. Second, «LFK-3», for correction of psycho-emotional status includes vitamins A, B₂, E, B₅, B₆, B₁₂, PP, D, C, extracts of motherwort, hawthorn, valerian, succinic acid, chromium was carried out for 15-20 minutes before a night's sleep. The duration of treatment was 21 days. Investigations before and after the courses include: anamnesis, dynamic clinical observation of objective and subjective condition, laboratory diagnostics (general clinical research, lipidogram, coagulogram, liver function tests, transaminase), instrumental methods of investigation (measurement of blood pressure (BP), electrocardiogram (ECG) in 12 standard leads, Holter ECG monitoring, assessment of quality of life (WHO questionnaire WHOQOL-100). The body mass composition was investigated by using body composition monitor «Omron» BF-511.

When analyzing the dynamics of anthropometric indicators in the control group, no significant changes in weight were registered ($p > 0.05$). In the main group, a significant decrease in body weight was observed, which led to a corresponding decrease in BMI ($p < 0.05$). As a result, there were changes in the classification of the degree of obesity in the main group: if 76.4% of patients were diag-

nosed with first-degree obesity for treatment, and overweight in 25.6%, then after treatment, first-degree obesity was observed only in 14.3%, and overweight – 85.7%. The dynamics of body composition indicators in the main and control groups was unidirectional. The fat content decreases both in the control and in the main group, however, only in the main group is this change statistically significant ($p < 0.05$). Also, a significant difference was recorded between the percentage of fat in the study and control groups after treatment ($p < 0.05$). When recalculated in absolute values, the value of the fat component in the main group decreases at a high level of statistical significance ($p < 0.01$), while the decrease in the control group is insignificant ($p > 0.05$). As a result, there is a statistically significant difference between the absolute indicators of fat mass in the main and control groups after the course of treatment ($p < 0.05$). The level of visceral fat in the control group did not practically change, while in the main group its decrease was significant ($p < 0.05$). The differences in the degree of changes in the main and control groups are very significant. If before the treatment 100% of the subjects in both groups in terms of percentage of fat were classified as «Very high», then after treatment, in the main group, their number decreased to 28.6%. The overwhelming majority – 64.3% – moved to the «High» category, and in 7.1% the fat content normalized. In the control group, these changes are much less pronounced. The «Very high» level remained in 71.4% of the surveyed, 28.6% entered the «High» category, and the normalization of the fat level was not observed at all. Changes in the level of visceral fat in men in the main group after treatment led to a decrease in the amount in the «High» category from 57.1% to 42.9%, and in the «Normal» category there was an increase from 42.9% to 57.1%. In the control group, no changes were registered. In all examined patients, both in the main and in the control group, there is some improvement in lipid status indicators [3]. The total cholesterol indicator significantly decreases in the main and control groups ($p < 0.05$). This testifies to the effectiveness of the complex of sanatorium-resort treatment of patients with coronary artery disease. However, this is the only indicator in the control group, whose change is statistically significant. All other significant changes were observed only in the main group. There was a significant decrease in triglyceride levels almost to normal values ($p < 0.05$). But special attention is caused by changes in lipoprotein fractions. A significant increase in the level of HDL and, at the same time, a significant decrease in the level of LDL led to a significant decrease in the atherogenic coefficient before its normalization [4]. There are also positive changes in the enzymes AST and ALT. The AST level significantly increased, and the ALT level significantly decreased (within the reference values). These changes contributed to a significant increase in the index where Ritis to more optimal values, indicating the normalization of liver function ($p < 0.05$). However, the detoxification function of the liver, based on the dynamics of bilirubin metabolism, did not change significantly ($P > 0.05$, both for total bilirubin and for its fractions). Thus, the use of a food product for special medical purposes in patients with coronary artery disease at the stage of sanatorium-resort

rehabilitation contributes to the normalization of lipid metabolism, which is expressed in a decrease in the level of total cholesterol and triglycerides, optimization of the ratio of cholesterol and LDL fractions, correction of the level and ratio of AST and ALT enzymes. The improvement of the clinical course of the underlying disease, the degree of reduction of cardiovascular risk in the form of lower body mass index, the improvement of clinical and laboratory parameters and increase of physical capacity of patients with coronary artery disease accompanied by positive dynamics of the main indicators of quality of life.

Our study demonstrated that the use of functional foods in patients with CHD significantly reduced body weight and fat components, normalize lipid metabolism and improves exercise tolerance.

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PHYSIOTHERAPY AND ROBOT REHABILITATION

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«Rehabilitation this is a set of interventions designed to optimize functioning and reduced is ability in individuals with health conditions in interaction with their environment. For rehabilitation to reach its full potential, efforts should be directed towards strengthening the health system as a whole and making rehabilitation part of health care at all levels of the health system, and as part of universal health coverage» [3].

«Physical therapy refers to the use of physical agents and techniques in the treatment of musculoskeletal diseases. Physical therapy methods are the application of physical agents from outside the body. The applied physical therapy agents