

PHYSIOLOGY

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HEALTH PRESERVATION MODEL FOR ESPORTS ATHLETES

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Abstract. Introduction. The purpose of the study is to develop a health preservation model for esports athletes. **Methods.** The study included the analysis of scientific articles, as well as participant observation in the context of training activities. **Results.** The article analyzes scientific research from Russian and international databases, which made it possible to identify the main threats to the health of professional players and to develop a comprehensive health preservation model for esports athletes, integrating physiotherapy, medicine, psychology, ophthalmology, nutrition science, and wearable digital devices and services. **Conclusion.** The approbation of the model in real conditions requires empirical testing and standardization of protocols for practical implementation into the process of sports training of esports athletes.

Keywords: computer sports, esports, wearable digital devices, phygital movement, sports, athletic training, health preservation, digital environment, digital footprint.

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ADAPTIVE AND RESERVE CAPABILITIES OF THE CARDIOVASCULAR SYSTEM
OF PEOPLE FROM CONTRASTING CLIMATIC AND GEOGRAPHICAL REGIONS IN
THE CONDITIONS OF THE SOUTHEASTERN COAST OF CRIMEA

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Abstract. Introduction. The article examines the features of the adaptive and reserve capabilities of girls' bodies from contrasting regions in the conditions of the southeastern coast of Crimea, taking into account the prevailing type of autonomic regulation. **Methods.** The study involved girls from contrasting regions (n=25, the main health group), during the follicular phase of the menstrual cycle. In the course of the study, we applied the heart rate variability method. **Results.** The analysis of the obtained data has revealed the tension of the body's regulatory mechanisms during the acute phase of adaptation in all the subjects. A reduced functional state of the cardiovascular system, autonomic hyperreactivity, and a paradoxical type of stress response were found in girls with a suprasegmental regulatory circuit. **Conclusion.** Maladaptation processes during the acute phase cause deterioration of the body's reserve capabilities, which identifies the need for timely preventive measures to preserve the health of students.

Keywords: adaptation, reserve capabilities, cardiovascular system, heart rate variability, climatic and geographical region, girls.

INTEGRATION OF THE THREE-PHASE BREATHING TECHNIQUE INTO THE PROCESS OF FUNCTIONAL TRAINING OF CLASSICAL BALLET DANCERS: PRACTICAL SUBSTANTIATION AND METHODOLOGY

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Abstract. Introduction. While learning complex classical dance movements, ballet dancers often experience a reflexive breath holding during moments of maximum concentration. Developing a reverse reflex, i.e. conscious control over breathing, is the main goal of breathing exercises for dancers. The three-phase breathing system can develop the entire respiratory system through specific exercises and establish a close connection between movement and breathing. Objective: to study the effect of special exercises on the development of functional capabilities of the body of future ballet dancers using the three-phase breathing system. **Methods.** Study of dyspnea using the validated Borg scale; heart rate monitoring; respiratory rate; resistance to hypoxia (respiration tests on inhale and exhale). **Results.** Improvement in the state of the cardiorespiratory system has been noted with a decrease in pulse rate by 2.1% and respiratory rate by 2.7%. The degree of dyspnea has reduced by 47.2%. The time for holding breath has increased during both the inhalation (by 18%) and exhalation (by 4.8%) phases. **Conclusion.** The use of specific breathing techniques as part of choreographic training helps improve the body's adaptation to physical activity and enhances the coordination of movement and breathing.

Keywords: breathing exercises, classical ballet, functional capabilities, three-phase breathing.

GENDER PECULIARITIES OF CARDIOVASCULAR SYSTEM AND ITS REGULATION IN 9-10-YEAR-OLD CHILDREN

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Abstract. Introduction. Age of 9-10 years is an important stage of development characterized by intense growth and morphofunctional maturing of all systems of the body, including cardiovascular system. Objective: to study gender peculiarities of cardiovascular indices of 9-10-year-old children. **Methods.** The parameters of the cardiovascular system were determined in 42 children of both genders using the ESTECK System Complex. **Results.** Statistically significant differences were found between boys and girls in systolic ($p < 0.05$) and diastolic blood pressure ($p < 0.01$) at the age of 10 years, as well as blood oxygen saturation at 9 years and 10 years ($p < 0.005$). **Conclusion.** In 9-10-year-old children, minor gender differences in cardiovascular indicators were revealed: boys have a predominance of sympathetic activity, while girls have a predominance of parasympathetic activity.

Keywords: cardiovascular system, gender peculiarities, 9-10-year-old children, heart rate, blood pressure.

RESTORATIVE MEDICINE, BALNEOLOGY AND PHYSICAL THERAPY

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THERAPEUTIC AND HEALTH EFFECT OF SLAVYANOVSKAYA MINERAL WATER ON THE HUMAN BODY (ANALYTICAL REVIEW)

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Abstract. Introduction. Low-mineralized mineral waters with a sulfate-hydrocarbonate calcium-sodium composition are currently widely used in spa treatment, as well as outside the Zheleznovodsk resort. Objective: to conduct an analytical review of studies on the Slavyanovskaya mineral water therapeutic and health properties, which enhance the body's reserve capacity. **Methods.** Analysis of domestic and foreign scientific literature was conducted. **Results.** Slavyanovskaya mineral water has been studied in different conditions and modifications. Its beneficial effects on the functional state of the hepatobiliary system, hormonal regulation of metabolic processes, the reproductive system, peroxide homeostasis, and protective properties of the gastroduodenal mucosa have been reliably identified. **Conclusion.** The literature data analysis has demonstrated that Slavyanovskaya mineral water has a positive effect on the human body. However, there are still unresolved issues regarding individual variability in the response to the course use of water and its impact on the psychofunctional state and adaptive reserves of an individual.

Keywords: Slavyanovskaya mineral water, balneology, natural healing factors, mineral water classification, restorative medicine, sports medicine, physiology.

SPORTS MEDICINE

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EFFECTIVENESS OF THE UPPER LIMB RECOVERY PROGRAM FOR ATHLETES DURING THE OFF-SEASON

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Abstract. Introduction. Objectives: to develop and evaluate the effectiveness of a program for restoring the functional state of athletes' upper limbs of during the off-season. **Methods.** The study involved 22 elite male athletes. We recorded the parameters of their neuromuscular system and regional hemodynamics before and after applying the developed program. **Results.** The application of a rehabilitation program that included electrotherapy, mud therapy for the neck-collar area combined with climate and wellness path therapy in the conditions of the Kislovodsk resort for 14 days, during the off-season led to an improvement in muscle electrical activity, movement coordination and blood circulation in athletes' upper limbs. Additionally, we observed an improvement in cerebral hemodynamics. **Conclusion.** The clinical study conducted proved the effectiveness of the 14-day program developed for restoring the functional state of athletes' upper limbs.

Keywords: athletes, performance, musculoskeletal system, upper limbs, electrotherapy, mud therapy, neck-collar area, climate therapy, wellness path therapy.

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FACTOR STRUCTURE OF GAME ACTIONS ON THE EXAMPLE OF THE LADIES EUROPEAN TOUR

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Abstract. Introduction. The article attempts to establish the factor structure of game actions and identify the most significant indicators that determine the game's results. **Methods.** To solve these problems, a correlation, factor, and regression analysis of the statistical indicators of players in the Ladies European Tour and the 2024-2025 Ladies European Tour Access Series tournaments was conducted. The sample size included 120 players. **Results.** The factor structure of game actions has been established. A multiple linear regression equation has been obtained, linking the average game result in one round with seven significant statistical indicators. **Conclusion.** As a result of the regression analysis, the most significant statistical indicators have been identified, explaining 80% of the changes in the game's result during the round.

Keywords: regression, accuracy and range of swings, mental stability, technical and tactical fitness.

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A MODERN VIEW OF FOREIGN STUDIES ON THE METHODOLOGY AND ORGANIZATION OF RESEARCH ON TECHNICAL AND TACTICAL FITNESS IN CROSS-COUNTRY SKIING

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Abstract. Introduction. The analysis of technical and tactical fitness in cross-country skiing disciplines has methodological and technical challenges that can negatively affect the reliability and reproducibility of the results, as well as the ability to compare data from various studies. **Methods.** We conducted a search for scientific data about the methodology and technical tools used in cross-country skiing research, starting from 2000. **Results.** The researchers recommend standardizing and documenting the methods and materials used in research so that the methodology's description makes it possible to reproduce the results. The authors also develop standards and requirements for conducting and reporting experiments, particularly regarding skiing technique and biomechanics. **Conclusion.** Considering the presented materials will contribute to the advancement of scientific research on the technique and biomechanics of cross-country skiing and improve the quality of technical and tactical training in this sport.

Keywords: cross-country skiing, technical and tactical fitness.