

**PHYSIOLOGY**

**HYPOXIA AS FACTOR OF INTENSIFICATION OF COMPLEX-COORDINATION ACTIVITY IN SPORTS**

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**Keywords:** hypoxia, EEG, alpha and beta rhythms, sports, psychophysiological indicators, complex-coordinating abilities, athletes.

**Annotation.** The purpose of the study: to determine the influence of hypoxic factors on psychophysiological indicators due to the manifestation of difficult-coordination abilities of athletes. 30 qualified athletes specializing in single combats participated in scientific observation. Under standard laboratory conditions, normobaric hypoxia (10% oxygen gas mixture) was used. The observation revealed that hypoxic factor directly affects the manifestation of complex-coordination abilities of the person, on the structure of individual motor skills and skills.

**AGE AND GENDER CHARACTERISTICS OF PSYCHOPHYSIOLOGICAL INDICATORS OF ATHLETES OF DIFFERENT SPORTS**

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**Key words:** psycho-physiological testing, attention, reaction, track and field, soccer, athletes.

**Annotation.** Objective: to identify age and gender characteristics of the psychophysiological indicators of athletes of various sports. The results of the study show that among the age groups of men: mental stability and a complex sensorimotor reaction are better at the age of up to 18 years, a simple sensorimotor reaction is better at the age of 31-36 years. In women under the age of 18, a simple sensorimotor reaction is worse, and a complex sensorimotor reaction worsens with age. Women aged 31-36 years demonstrate higher work efficiency, but mental stability in women of this age is worse. Sexual differences are manifested in the best indicators of simple and complex sensorimotor reactions in men in all studied age groups. The work efficiency of women aged 31-36 years is better than that of men of this age.

**PHYSIOLOGICAL MECHANISMS OF THE EFFECT OF  
COMPLEX APPLICATION OF ESSENTUKI 17 MINERAL WATER AND  
SUCCINIC ACID IN TOXIC LESIONS IN THE EXPERIMENT**

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**Keywords:** drinking mineral water, succinic acid, Essentuki 17, oxidative stress.

**Annotation.** In the article analyzes the physiological mechanisms of the drinking rate of mineral water «Essentuki 17» in combination with succinic acid based on its own experimental data. Evaluation of modification of functional metabolic resources was carried out in an experiment with preventive application of the studied complex on a model of subacute carbon tetrachloride lesion. The effectiveness of combined use of medium mineralized mineral water and succinic acid (Krebs cycle intermediate) in pathologies with oxidative stress in pathogenesis is shown.

**SPORTS MEDICINE, BALNEOLOGY AND REHABILITATION**

**TO THE QUESTION OF DEVELOPING EFFECTIVE RESTORATION  
STRATEGIES FOR ATHLETES DURING STAY IN THE CAMP AT  
FEDERAL BASES OF SPORTS TRAINING**

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**Key words:** athletes; recovery; physiotherapy; hydrotherapy; functional condition; psychophysiological condition.

**Annotation:** The aim of the work was to develop, test and determine the most effective recovery strategies for athletes during their stay in the camp on a specialized base of sports training. The results of the study showed the effectiveness of using both the developed complexes of rehabilitation measures, including transcranial electrical stimulation and other physiological and hydraulic effects, but to a greater extent, the complex included thermal power plants, vacuumed, and every other day underwater shower massage.

## **THE PHYSIOTHERAPEUTIC HARDWARE COMPLEX ReCUB IN REHABILITATION OF ATHLETES**

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**Keywords:** rehabilitation of athletes, hardware complex, postural stability

**Annotation.** Physical rehabilitation of athletes necessitates accelerating recovery processes after injuries and diseases. The purpose of the study: substantiation of the effectiveness of using the physiotherapeutic apparatus complex ReCUB in the rehabilitation of athletes. Complex physiotherapy is a rational combination of several physical methods in an innovative device - a capsule. The study allowed us to conclude that the use of ReCUB significantly affects the speed and quality of recovery processes, which are reflected in the functioning of the human postural system.

## **PHYSICAL CULTURE AND SPORTS**

### **SPECIFICS OF THE MORPHOFUNCTIONAL STATUS OF 6-8- YEAR-OLD ATHLETES ENGAGED IN RHYTHMIC GYMNASTICS**

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**Keywords:** rhythmic gymnastics, morphofunctional features, somatotype, girls-6-8 years, initial stage of training

**Annotation.** The article presents the results of somatoscopy of girls 6-8 years old who are engaged in rhythmic gymnastics, as well as the results of a study of the physical development of this group of students. The article reveals some specific features of physical development of gymnasts, and also identifies the most suitable somatotype for rhythmic gymnastics.

### **IMPROVEMENT OF PERFORMANCE OF COMPETITIVE GYLWEARING ATHLETES BASED ON THE DEVELOPMENT OF LOCAL MUSCLE ENDURANCE**

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**Keywords:** weight-lifting, weight-lifting athletes, local muscle endurance, competitive performance

**Annotation.** The aim of the work was to increase the effectiveness of competitive activities in kettlebell lifting based on the development of local muscle endurance. The study involved cadet soldiers who are members of the university’s

team of kettlebell lifting and have sports qualifications from the I sports category to the master of sports of Russia. Evaluation of the effectiveness of the experimental methodology was determined on the basis of the result of the competitive exercise - "push two weights from the chest". It was found that in athletes who were engaged in the development of local muscle endurance, the effectiveness of the competitive exercise significantly increased compared with the control group.

### **EFFICIENCY OF USING THE DOUBLE PULLING METHOD BY SKI-RACERS AT DIFFERENT SITES OF THE SPURTER DISTANCE**

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**Keywords:** cross-country skiers, classic style, double pulling, sprint distances.

**Annotation.** The aim of the study was to substantiate the effectiveness of using the double pulling method in cross-country skiing competitions in overcoming sprint distances with a classic style. 10 athletes-skiers took part in the study, among them 5 people had 1 category, 2 people had the title of candidate for master of sports and 3 people were masters of sports. It is shown that the double pulling method allows to improve the performance of overcoming the distance by skiers-racers on all variants of the track relief. Heart rates in different sections of the route indicate that the double pulling method is less energy-intensive.

### **TRAMPOLINE EXERCISES IN THE CHILDREN'S TRAINING SYSTEM FOR GTO**

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**Keywords:** children, health group, trampoline jumping, psycho-emotional state, coordination abilities, speed and strength qualities.

**Annotation.** The effectiveness of exercise on the trampoline in children 6-8 years of various health groups in the training system to run the tests, the TRP was estimated according to the dynamics of the emotional state: we evaluated the level of generalization, conceptual development and the possibility of allocating a significant semantic characteristics, revealed features of cognitive style (the method of "4-time") and explicit anxiety level CCM (method of A. M. Prihozhan).

The children in the experimental group (n=20) groups I and II health (mean age 6.8 years) who participated in testing in accordance with state requirements stages TRP, a statistically significant improvement of psychoemotional state ( $1.2 \pm 0.17$  to  $3.6 \pm 0.11$   $P < 0.05$ ), decrease of severe anxiety (from  $7.8 \pm 0.25$  to  $3.2 \pm 1.9$   $P < 0.05$ ). The effectiveness is confirmed by an increase in the number of people who met the TRP standards (from 54.7% to 93.3%), including "silver" (from 16.7% to

23.3%) and "gold" (from 16.7% to 23.3%), which indicates the effectiveness of including a set of trampoline exercises in the system of preparing children 6-8 years old to meet the TRP standards.

## **VISUAL CONTROL OF GAME SITUATIONS AS AN ESSENTIAL COMPONENT OF TACTICAL AND TECHNICAL SKILL**

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**Keywords:** tactics, technique, cognitive functions, game situations.

**Annotation.** In this paper, we consider the problem of insufficient sensory control of game situations arising from the features of the tactical and technical training of beginner hockey players. The leading role in the implementation of individual tactical and technical actions of hockey players is played by the perceptual characteristics of athletes, who, through the perception of gaming conditions, determine the course of subsequent actions of the subject of activity. Our studies indicate that in training in technical actions, specialists pay insufficient attention to the visual component, which cannot but affect the effectiveness of the game actions of young hockey players.