

# **Sport in search of its own identity**

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## **Abstract**

Sport, one of the most popular phenomena in the European and world media, is in search of its own identity. Starting from its definition and from the numerous existing classifications, the present article aims to show The Model for Amateur Sport in Europe. The article presents the idea that, the exaggeration to which the human limits are exposed nowadays (by participating in or simply attending the sport show) can modify even the initial structure of this phenomenon. However, there are also optimistic opinions, which maintain that there is the sign of equality between sports and art, both of them being cultural phenomena. These opinions can philosophically extend to the world of ideas, in the centre of which MAN is situated (as a practitioner or as a spectator). Man is the only creature that is able to change the possible exacerbations into normality, good balance and harmony, which was called kalocagathia since ancient times.

**Keywords:** sport, art, Model for Amateur Sport in Europe, exacerbation, harmony, cultural constructions, perfection, good balance, kalocagathia.

## Physical effort and muscle pain (II)

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### Abstract

Two main forms of muscle pain caused by physical effort can be identified, namely: instant pain and postexercise pain. Instant pain occurs during the physical effort and immediately following exercise and it is mainly caused by oxidative stress. Late pain occurs after effort and it is caused by muscle lesions and by the subsequent enzyme effusion. Late pain occurs during exercise performed at high temperatures and followed by hydroelctrical changes.

**Keywords:** pain, physical effort, oxygen-reactive species, creatinekinase, electrolytes.

# **Experimental aspects and technico-methodical considerations regarding lesions of the cruciate anterior ligaments of the knee in alpine skiers**

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## **Abstract**

Alpine skiing is a sport that presents a high rate of accidents, regardless of the motor skills that athletes possess. Currently, due to the new skiwear and equipment materials and due to the technique evolution, the most frequent injuries occur at the level of the knee joint and, specifically in the cruciate anterior ligament. The article presents several experimental studies, which highlight motor execution cases, which must be avoided in order for those who love this sport to be able to practise it safely, effectively and pleasurably.

**Keywords:** alpine skiing, injury, knee joint, cruciate anterior ligament, pro-accident factors.

# **The effort capacity in postmenopausal women**

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## **Abstract**

As life expectancy extends, women spend a third of their life after the menopause onset. The ageing process causes an accumulation of several complex involution changes, which finally lead to the disability syndrome in the elderly. The assessment indicator for the effort capacity in the elderly is the maximal oxygen consumption. Out of the many age-related changes that occur in the postmenopause women's systems, the changes in the cardiovascular system are considered as top priority, as they constitute the limitative factor of maximal oxygen consumption on exertion.

The other major changes in the postmenopause women derive from their gaining weight at menopause (because of the lack of oestrogen), their excessive physical or psychical exhaustion and their reduced muscle performance at postmenopause (also because of the high incidence of osteo-articular degenerative diseases). All of these lead to the degradation of the physical effort capacity in the elderly women.

The improvement of physical performance, as part of higher life quality at postmenopause, can be observed in the women who combine hormone replacement therapy (HRT) with the physical, psychical and social benefits of the recommended physical exercise.

**Keywords:** postmenopause, hormone replacement therapy, ageing, exercise capacity, life quality.

# **The cardiovascular system adaptation during exercise**

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## **Abstract**

The adaptation reactions of the body during exercise include nervous and humoral-type cardiovascular respiratory and endocrine mechanisms, which aim to ensure a high level of muscle energy potential as needed by the body. The cardiovascular parameters assessed during exercise are the cardiac output, the blood pressure and the maximal oxygen consumption. The double product of blood pressure and heart rate is correlated with the oxygen consumption and the coronary blood flow. The functional optimization of the cardiovascular system during exercise has three stages according to the training duration and intensity.

**Keywords:** exercise, cardiac output, blood pressure, maximal oxygen consumption, training

# **Aspects of modern sport preparation related to training planning and periodicity**

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## **Abstract**

The present study is an attempt of multidisciplinary approach of the difficulties generated by the achievement of higher sport performances. In the last decades the achievement of high sport performances has lead to significant material advantages. For these reasons all the people involved in sport activities have looked for concrete means to improve the training process. This could be achieved by implementing the results obtained after some researches in different scientific fields. Among these scientific fields that had a real impact not only on the improvement of the training process but also on the value of sport performances we have to mention muscular genetics and neurophysiology of muscular activity. According to the mentioned above, in the present study we offer a personal approach of the means through which we can use the researches undertaken within these scientific fields in sports training planning.

**Keywords:** muscular genetics, sport training, sport training scheduling and planning, improvement of sport performances.

# Effects of vitamins A, E and C supplementations on oxidant/antioxidant balance in exercise

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## Abstract

The authors studied the effects of the vitamin A, E and C supplementations on the aerobic exercise capacity and on the oxidants (LPX) and antioxidants (hydrogen donor capacity: DH) during exercise in rats. The animals were trained daily for exercise by swimming. Vitamin supplementations caused higher increases of the aerobic exercise capacity, as compared with the control groups, and they also caused changes in serum LPX levels and DH levels. The vitamin E and A supplementations had favourable effects on the oxidant/antioxidant balance: decreases of LPX levels and increases of DH levels. The action of vitamin C was similar to that of a pro-oxidant.

**Keywords:** vitamin A, E and C, oxidative stress, exercise

# Possibilities of intervention by stretching on the locomotor apparatus in 6-9 year old children with dysfunctions

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## **Abstract**

*Background:* The research of motricity efficiency, of the harmonious growth and development of the body, of the motor skills and of the physical qualities in 6-9-year-old children is of major importance in paediatrics. The occurrence of certain distortions, dysfunctions and even disabilities in the statokinetic function in the children of 6-9 years also is a new and constant objective in paediatric research studies. According to these ideas, the hypothesis in this study asks the question of whether the statokinetic function can be positively influenced and achieved in the children with special needs and in those with different dysfunctions and disorders in their neurodevelopment, at an early age (6-9 years of age), by kinetotherapy means and by the Proprioceptive Neuromuscular Facilitation (PNF) procedure of muscular stretching.

*Aims:* to induce positive influences in 6-9-year-old children with various static and kinetic dysfunctions and with other disabilities such as: hearing, sight, psychic, emotional, neural and motor problems, by using kinetotherapy. To employ the strategy of central axis and the spiral dynamics regarding the pelvis control, by using the PNF procedure of prolonged muscular stretching. To develop the global and analytical motor control of the muscle segments and chains, and to develop the motor skills, by increasing of the range of motion and strength and by implementing physical therapy programmes and muscular stretching procedures. To record the assessment and the data analysis with the Ergosim and Biopac systems, and with the “Zoli box procedure” of controlled mobility, which can be useful for an objective and correct determination of the status of the static and kinetic function in the children of the study, by using the proportionality index, the joint mobility data, the muscle strength and the active timing shown in histograms.

*Methods:* the Biopac system was employed to record electromyographies of the quadriceps muscle in both lower limbs. The Ergosim system was used to record the following parameters: the muscle strength of the abduction and extension muscles as well as the maximal abduction and extension amplitude, the active strength and the active and passive timing. The SPSS (SPSS/ PC + Statistical Product and Service Solutions) were employed for data analysis. The graded rod test on the “Zoli” box was employed in order to determine the synchronic functioning of the major muscle chains of the statokinetic function and of the static and dynamic coordination of the body.

*Conclusions:* after applying the complex prophylactic and recovery programs the following conclusions were reached: (a) the amelioration of the symptoms regarding the state of hypertonia, of spastic muscle control, and even the decrease in this state in several children of group E (neuromotor) (CP.children); (b) the increase in the neuromotor performances regarding the fine motor and muscle control in group E (CP.children); (c) the articulation angles and the muscle levels augmented in all samples; (d) the muscle strength increased especially in group D (amblyopic children) and in group C (hearing disabilities); (e) the body and pelvis-hip stability was reached, especially in group C (children with hearing disabilities), D (amblyopic children), and E (CP.children).

**Keywords:** disability, Ergosim system, Biopac system, statokinetic function, stretching.

# **Home court advantage – a comparative study on men and women national handball league teams**

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## **Abstract**

Home court advantage is a missing topic from both the sportive, and the psycho-sociological literature in Romania. Therefore, I have considered but welcome such an approach, by a pioneering study in this respect on the Romanian handball game.

The study investigated the home court advantage, in the context of both Romanian handball and sports. It also identified some factors that contributed to the teams' final classification. To this end, the results of 728 games in the National Handball League (both men and women) were recorded, and the descriptive statistics, the bivariate correlations and the linear regressions were calculated and interpreted.

The results of the present study confirmed the hypothesis of the home court advantage. They also identified certain positive and negative relations between some of the variables implied in the handball performance, within the Romanian handball championship.

**Keywords:** handball, home court advantage, classification, descriptive statistics, correlations.