

Heart rate variability and effort tolerance in patients with type II diabetes mellitus

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Abstract

Background. Cardiovascular autonomic neuropathy (CAN) is a common form of autonomic dysfunction in diabetes mellitus (DM) patients and associates abnormalities in heart rate control, and in central and peripheral vascular dynamics.

Aims. The purpose of this study was to evaluate the impact of DM on heart rate variability (HRV) parameters, measured with 24 hours – ECG registration, in a group of DM patients with or without cardiovascular symptoms specific for autonomic neuropathy.

Methods. The study group consisted of 50 patients, both males and females, diagnosed with type 2 diabetes mellitus. We created two study groups, with and without cardiovascular symptoms. HRV was measured using a 24-hour ECG monitoring system.

Results. The study demonstrated statistical significant differences between disease duration (and not age), greater in patients with cardiovascular symptoms. Asymptomatic patients were more often treated with oral drug, as opposed to symptomatic ones, treated especially with insulin. Symptomatic patients had a worse control of the disease, reflected in higher levels of HbA1c.

Conclusion. Subclinical autonomic neuropathy could and should be detected using autonomic function tests, including 24 hours – ECG monitoring, which is more and more accessible in later years. Alterations in effort tolerance in DM patients has many mechanisms and appears before systolic function of the left ventricle which is affected, correlating with autonomic system imbalance.

Keywords: diabetes mellitus, effort tolerance, heart rate variability.

The evaluation of the performance of Rhythmic Gymnastics' Judges

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Abstract

Background. Judging is a very important factor in rhythmic gymnastics (RG), so much so that the evaluation made by the judge leads to its development.

Aims. The main goal of this study is to analyze the behavior of the Portuguese rhythmic gymnastics' judges during a national competition.

Methods. The judging of 23 national judges was evaluated during the 2009 Portuguese Cup using an International Gymnastics Federation (FIG) table. The control score was obtained by the judging of 4 international judges in the same routines.

A questionnaire was applied to all judges in order to obtain data to relate the premonition variables to the judgment score. For the results interpretation a comparative and inferential analysis in SPSS 17 and Excel (Office 2007) was used.

Results. The main results were as follows: 70% of the judges were National (5 to 8 years of judging experience) and 30% International (more than 9 years of judging experience). The average of the classifications obtained was 6.035 (from a maximum of 10 points). The age of the judges, their judging experience and, their judging competitions per year and the category of National Judge had a great influence on the judgment score. Also, the experience as a coach, and a job related to sport and high education qualifications showed a tendency of an improvement in the judgment evaluation. Their experience as a gymnast resulted in the worst performance as judges.

Conclusions. There are differences in the judging competences among the different judges. The selected variables influence the evaluation of performance, and from these the age, sports experience and judging experience are the most important.

Keywords: rhythmic gymnastics, judging, evaluation, performance.

Correlations between selection tests performed on land and the actual water swimming performance

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Abstract

Background. To win a medal in international competitions cannot be achieved without a well thought and organized selection and considered as an evolutionary process.

The selection of children does not refer only the primary selection, but also to the methods and training means within the stages of the training too. All of them try to prepare the children to experience the stress of future training and selection stages.

Aims. The present study tries to review the items of the swimming selected test. It is addressed to children who want to attend the primary school with specific swimming vocational classes. Through our study we want to underline the importance of the methodology of the selection test for choosing children who have the skills for performance swimming.

Methods. For the present study we used the primary statistical analysis which was performed with the help of the average, standard deviation and variability coefficient. The results obtained at these statistical tests determined us to calculate the Person linear correlation coefficient as a parametric statistical test for quantitative data.

Results. The results obtained after the statistical calculations gave the information regarding the homogeneity of the data and the lack of correlation between the land tests and the specificity of the effort.

Conclusions. The selection tests do not demonstrate the qualities of the children who are chosen to attend the swimming vocational classes.

Keywords: selection, tests on land, water, parametrical tests.

Specific training methods for performance weightlifters

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Abstract

Background. The authors introduce the contents of the specific training methods of the competitive and pre-competitive training micro-cycles in performance weightlifting. We considered that the optimum balance of the physical and technical training methods within the workouts would improve training and better performances during competitions. This approach determined us to conduct a research within the Rapid Sports Club of Bucharest, Weightlifting Division.

Aims. The scientific argument is the presentation of the training methods specific to the performance weightlifters' training in the pre~ and competitive period, ensuring an optimum relation between technical training and physical training during workouts that will contribute to the increase of sports performances in competition.

Methods. The research was carried out during the pre-competitive and competitive training period (7.01.2008- 24.02.2008) with 7 workout micro-cycles, in a group of 8 athletes, aged from 15 to 32 (level of juniors and seniors classes). The athletes' performances were recorded in the training stages and competitions using the methods of statistical, mathematical and graphical representation.

Results. The study emphasized the contents of the specific training methods during the competitive and pre-competitive training micro-cycles and mezzo-cycles in the performance weightlifting.

Conclusions. The optimum relationship of the technical and physical training means, obtained during the performance weightlifting workouts, contributes to the improvement of the training and to the achievement of better performances during competitions.

Keywords: weightlifting, technical training, physical training, performance, planning.

Motivation in athletic activities

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Abstract

Background. In non-sport faculties, motivation for physical activities is completely different from that of students from sport faculties.

Aims. To study the motivation for physical activity in general and for a particular sport discipline; the correlation between motivation and stress; the continuity of physical activities from pre-university to university education in medical students.

Methods. The researches were performed on 184 1st and 2nd year students from the “Iuliu Hațieganu” University of Medicine and Pharmacy, in whom motivation for physical activities based on the questionnaire elaborated by Tache (unpublished data) and stress for physical activities based on the Cohen questionnaire (1983) were studied.

Results. The motivation questionnaire generally showed a positive motivation of students and predominantly mild stress. The positive motivation score varied between 0 and maximum possible 8. The questioned subjects had a mean of 6.07 ± 1.70 , which is above the mean motivation level (score 4) and above the 4th quartile of 75% (score 6). The negative motivation score varied between 0 and maximum possible 8. The questioned subjects had a mean of 1.93 ± 1.70 . Descriptive statistics for the motivation questionnaire score. In the studied group of 184 students, for the PPS questionnaire, the following were found: 56% mild stress, 43% moderate stress, and 1% no stress.

Conclusions. Positive motivation in physical education classes is characteristic of medical students who have an increased attendance and an interest in physical exercise, which is initiated in the pre-university period and continued in university. Medical students have an increased interest in sports activities such as aerobics, swimming, tennis, basketball and athletics, and as an alternative preferential activity, they mention tourism. Medical students appreciate the importance and the necessity of physical education classes for their future professional training.

Keywords: motivation, physical exercise, stress.

The influence of flavonoid supplementation on the oxidant/antioxidant balance and effort capacity on trained animals

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Abstract

Background. Supplementation with flavonoids, which are widespread in nature and have antioxidant effects, could influence the physical effort capacity positively, by reducing the oxidative stress that is induced by effort.

Objective. This study investigated the effects of dietary supplementation with flavonoids on the oxidant/antioxidant balance and aerobic effort capacity in experimental conditions.

Methods. The study was conducted on two groups of white Wistar rats (n=10 animals/group): group I included aerobic effort trained animals; group II included aerobic effort trained animals with dietary supplementation of flavonoids. The training was conducted over 28 days. The aerobic exercise capacity was measured based on the treadmill test on day 1, 14 and 28. The markers for the oxidant/antioxidant balance were malondialdehyde (MDA) and hydrogen donors (HD) and were measured on day 1 and 28.

Results. For the first group MDA increased significantly and HD decreased significantly after 28 days of training. Group II registered a significant decrease of MDA after 28 days of training and flavonoid supplementation. The aerobic exercise capacity increased significantly after training in both groups, but the growth was higher in group II.

Conclusions. The dietary supplementation with flavonoids has a positive influence on the aerobic exercise capacity and the oxidant/antioxidant capacity, by reducing the oxidative stress in trained animals.

Keywords: flavonoid, physical effort, oxidative stress, malondialdehyde, hydrogen donors.

Exercise – for and against – in psoriasis

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Abstract

Sports participation has shown a steady increase over the past 30 years.

Along with the gain in popularity of athletic activity has come an increase in sports-related dermatoses and infections.

Physical activity is reflected in the body through a complex stress: neuromuscular, endocrinometabolic, psycho-emotional and biochemical oxidative. This can produce a beneficial (eustress) or a negative (distress) effect on it.

In psoriasis patients (autoimmune skin disease, mostly induced and aggravated by various forms of stress), sustained physical effort has a paradoxical effect: psycho-physiological distress (inducer of psoriasis) and therapeutical eustress (increasing the quality of life at these patients).

Keywords: exercise, psoriasis, neuro-immuno-modulation, eustress, distress.

Physical therapy programs to improve joint mobility of the hand and leg

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Abstract

The paper represents a program for improving mobility and tonification of the hand joint, and the lower limb. Following the basic pedagogical principles, recovery was made starting from recuperation of the coarse motricity to the fine motricity. Also, developing and maintaining rough motricity, it is advisable to use these structures for learning and improving exercise, aiming at a practical utility of self service and writing.

The proposed task is accomplished by passive mobilization, assisted passive, and active assisted and free mobilization. Programs were designed according to the authors' completed and enriched by personal experience over years, and by the results achieved in special education as well.

Keywords: passive mobilization, active assisted mobilization, free active mobilization, disabilities.

The influence of exercise on the development of language, maths, social studies and basic skills

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Abstract

In this paper we analyzed the movement activities and the way they are involved in the development of learning perceptual and motor skills. The project itself was applied in Grade I and Grade II classes, during four years of teaching in the International School of Choueifat - Doha, Qatar, each class having around 30 students. In this environment we adapted some of the movement activities we worked out, to realize the cognitive learning in the areas of basic, language skills, mathematics and social studies. This interdisciplinarity was possible because of well structured programs, adapted to the environment, to the level of students and to the skills' learning stage of both physical and other subjects. In practice we used a wide range of exercises, well structured, in order to gain new skills in connection with scientific areas mentioned.

Keywords: active learning, movement activities, cognitive effects, interdisciplinarity, transfer.

Program project for the management and use of the Ic Ponor area in the Apuseni Mountains for tourism and sport for young people

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Abstract

The starting idea is the option of students for the practice of physical education and sport in the form of tourism – walking, hiking, trekking. An inquiry among 1st and 2nd year students has shown that tourism is on the 5th position in the list of general options of students from the “Iuliu Hațieganu” University of Medicine and Pharmacy. Consequently, a project for the identification and management of circuits with different degrees of difficulty in localities adjacent to Cluj-Napoca city was initiated for the practice of tourism as a physical activity, depending on the physical fitness of young people. The program project concerned approaches the thematic area required for the elaboration of management works in the tourist Ic Ponor area, in collaboration with the Forestserv Society of Cluj-Napoca, for the practice of some curricular and extracurricular student sport activities in Cluj county. Curricular physical activities include a mean of 56 hours practical work of physical education (42 hours or 28 hours), depending on the education plan. These hours can partly or fully consist of sports and tourism activities, scheduled intensively in autumn and spring, possibly in winter, combined with skiing.

Keywords: management for tourism and sport, tourism and sport activities, university and pre-university students.

Project of establishing and furnishing the Center for Psychomotor Counselling and Improvement of Quality of Life

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Abstract

Specialized studies showed the importance of physical activities in preventing premature aging, in maintaining functional independence and in improving life's quality. Our colleagues, the teaching staff from the other theoretical disciplines from the entire University of Bucharest showed their interest in changing their life style into a healthier one through a documentation, learning, adaptation and development program of their own psychophysical resources. The argumentation for this measure lies in the fact that the university staff forms a group with varied necessities.

The psychometric counseling for the teaching staff has as its main targets: the study of the individual's motor capacities in comparison with the standard motor possibilities of their age, sex and social position, of the possibilities of transfer in order to improve life quality, the establishment of the best ways of prevention and intervention.

The creation of programs which have as their purpose the self development skills of the teaching staff in accordance with particularities, through development and personal maintenance activities, the initiation of informal activities in partnership (psychomotor education specialist-academic community), the development of the services with regard to the teaching staff and their children in order to improve the child/teenager-parents relationship and the teaching staff's informing, educational and counseling actions. In addition the programs initiate some communication sessions, events, in order to promote models of good practice, the creation of some programs to form guidelines for credit awards and the elaboration of some support for the didactic activity focused on individual documentation with respect to health (nourishment, nutrition, support programs etc).

The Center will conduct activities such as: aerobics, physical therapy, fitness, bodybuilding, table tennis, chess, outdoor activities and educational activities.

In this way, we suggest the promotion through social policies and institutional ones of the establishment in each higher education institution of counseling centers for teachers and TESA staff. By accessing European funding and a consistent promotion of training in specially equipped rooms and outdoors benefits will be immediately demonstrated.

Keywords: psychomotor counseling, teaching staff, health, life's quality improvement.

The establishment and activity of the “Oradea Athletic Club” Football Team (Nagyváradí Athletikai Club), 1910-1944

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Abstract

Premises. Developing a study of this kind contributes to a better understanding of our city's sports history, especially football in Oradea.

Objectives. Based on the examination of the archived documents, the articles in the local media and other sources of documentation, we intend to elaborate a study which celebrates the 100 years anniversary of the Oradea Athletic Club (OAC), which reflects the activity of the soccer team in its 35 years of existence.

Material. Monographic works were studied, such as: encyclopedias, boxes of sports in Oradea press, related to the establishment and activity of this team, other documents relating to players, managers who contributed to the development of the OAC Football Department between 1910-1944.

Methods. Study of the related literature relevant to the theme, documents in archives, in private collections and newspaper articles was the main research method used.

Results. Some aspects regarding the conditions in which the Athletic Club Oradea appeared, the activity of the people who have added a recognized contribution to the establishment and management of this sports structure, representative players, the contribution of the football team in the formation of national teams of Romania and Hungary, the main competitions attended were the results obtained

Conclusions. Through the results of the OAC in regional championship, through the leading places obtained in the Romanian national championship and in the Hungarian championship, regarding the contribution to the national football training teams of Romania and Hungary proves that Oradea Athletic Club was one of the best football teams in our country at that time.

Keywords: sport history, football, Oradea, Athletic Club.