13th Annual Congress of the

EUROPEAN COLLEGE OF SPORT SCIENCE

9-12 July 2008, ESTORIL - Portugal

BOOK OF ABSTRACTS

Edited by:
Cabri, J., Alves, F., Araújo, D., Barreiros, J., Diniz, J., Veloso, A.

Hosted by:
Faculdade de Motricidade Humana
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Welcome

The European College of Sport Science (ECSS) welcomes you to Estoril for its 13th Annual Congress. Hosted by the Faculdade de Motricidade Humana of the Universidade Técnica de Lisboa, the ECSS is delighted to stage this major event at the wonderful and sunny coast of Estoril from 9 to 12 July 2008.

The 13th Annual Congress of the ECSS aims to provide an international forum for the presentation and discussion of the latest research in sports science and its related fields The panel of distinguished scholars who are invited to share their expertise with the members of the scientific and professional community will, without any doubt, prove invaluable to its success.

The Scientific Programme is composed of more than 1.700 abstracts, which were accepted after being carefully reviewed. This year's Congress is the largest in the history of the ECSS, underlining both the interest of the sport scientific community and the importance of the ECSS as an interdisciplinary forum for ongoing debate. In view of the multifaceted character of sport science, state-of-the-art presentations cover basic and applied sciences as they relate to sport, exercise and health. The presented abstracts comprise not only all relevant sub-disciplines of sport science but also all continents and 68 different nations. The abstracts are distributed among 4 Plenary Sessions, 36 Invited Symposia, 74 Thematic Sessions and 3 Poster Sessions, each presenting close to 400 Posters.

The choice of venue of the 13th Annual Congress of the ECSS shall provide you with a unique opportunity for either revisiting or an unforgettable first-time experience of the magic of Portugal.

On behalf of the ECSS we wish you all a very pleasant and productive stay in Estoril and hope that it will be both scientifically and socially successful.

José Alves Diniz

Chair Local Organizing Committee, Dean of the Faculdade de Motricidade Humana

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COMPARISON BETWEEN PHYSICAL ACTIVITY LEVELS IN MEN AND WOMEN INSTITUCIONALIZED ELDERLY WITH MTI ACTIGRAPH

Monteiro, A., Mota, P., Carvalho, J.

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Introduction: Exact evaluation of the quantity and intensity of physical activity in daily life is considered very important due to the close relationship between physical activity level, functional decline and sedentary habits. Even moderate-to-vigorous intense physical activity (PA) is beneficial when done regularly for a total of 30 minutes or longer on most or all days. We used in this study accelerometers to measured minute-by-minute the movement, to assess PA volume and intensity performed by women and men older adults in different groups. The objective of this study was to analyze the pattern of PA performed by the Women and Men elderly in their daily routine. Methods: The sample was divided into two different groups (79,04±7,5 years old; BMI: 26,0±4,0), 166 subjects constitute the women group (WG) and 131 belong to the men group (MG). The Physical activity levels were directly measured for seven consecutive days using a MTI Actigraph accelerometer model 7164. The assessment of the level of physical activity performed by each individual has been carried out using the values suggested by Freedson et al. (1998). We joint the moderate/vigorous PA intensities because we have a few values in vigorous intensity. The habitual physical activity performed by the groups has been monitored and registered during a complete week (activity performed in week days and weekend). The statistical procedures were the Descriptive Statistics (mean, standard deviation and frequency distribution) and a Student t-test was used to compare WG and MG on the physical activity (PA) performances. Results: The results provided are: (i) The mean PA lower at a week by hour ($p<0,428$), the mean PA lower at a weekend ($p<0,893$) and de mean PA lower at all week by hour ($p<0,622$) were slightly higher in the WG than MG. (ii) The mean PA moderate/vigorous at a week by hour ($p<0,457$), the mean PA moderate/vigorous at a weekend ($p<0,053$) and de mean PA moderate/vigorous at all week by hour ($p<0,167$) were slightly higher in the MG than WG. (iii) No statistics significance between groups was found in Lower PA and in moderate/vigorous PA. Conclusion: We conclude that the groups have an equal profile of performance in PA in Lower or moderate/ vigorous intensities. There was no statistic significance in every intensities.

AGING ASSOCIATION TO THE EVALUATION OF THE PHYSICAL CAPACITY IN INSTITUTIONALIZED OLD PEOPLE OF BOTH GENDER

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Introduction: Recognising the benefits of regular physical exercise among aged people, the importance of knowing the factors that influence the participation of that population in the physical activity relies on the possibility of improving the intervention accuracy, the kinds of offer and activities. This way and bearing in mind the importance that physical activity assumes in life quality and activity performances, it is crucial to determine the levels of physical capacity, which is taken as one of the objectives of the physical activity, either at physical and physiological levels: to increase the physical capacity through the development, strength, resistance, flexibility, coordination and balance, as a way to overpass accurately and effortlessly the challenges of the daily activities, as well as diminishing the probability of the development of some degenerative chronic diseases. The aim of this current study was to assess the levels of Physical Capacity of aged individuals from both sexes, living in care homes and establishing a comparison with ageing. Methods: The sample is composed by institutionalized aged people, from care homes with ages from 68 to 96 (82,85±7,06). The women group (WG) was 18 subjects and the men group (MG) was 18 subjects too. We evaluated Body Mass Index (BMI) and to assess the physical capacity parameters we used the battery of tests developed by Rikli and Jones (1999). The test items included: chair stand test (assess lower-body strength); arm curl test (measure upper-body strength); 6-minute walk test (assess aerobic endurance); chair sit-and-reach test [assess lower-body (primarily hamstring) flexibility]; back scratch test [assess upper-body (shoulder) flexibility]; and 8 feet up-and-go test (assess agility and dynamic balance). The used statistical procedures were the descriptive statistics (mean, standard deviation and frequency distribution), presentation of the higher and minimal values in relation to the variables dependent on sex. And the inferential statistics (non-parametric tests for independent samples and U Mann Whitney). Results: The following results have shown that in average statistics significance was found in BMI ($p <0,004$). In Rikly and Jones battery tests, no statistics significance was found in every test. Conclusion: The levels of physical capacity that the aged people from the sample show are very low nevertheless the male genre presents higher values in every tests, with the exception of those which assess the flexibility of the upper-body and lower-body.

RELATIONSHIP BETWEEN HEALTH-RELATED PHYSICAL FITNESS AND OBJECTIVE PHYSICAL ACTIVITY IN PORTUGUESE FEMALE ADOLESCENTS

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Discussion of physical fitness and its relationship with physical activity is more apparent in adults than in children and adolescents (Malina 1996). A large portion of the variability in physical fitness is not accounted by physical activity (Malina, 2001). This suggests that, among pediatric subjects, other factors are involved and need to be considered, for example, growth, maturation, and other components of lifestyle such as television viewing (Katzmarzik et al., 1998). The current study examines the relationship between physical activity and physical fitness.

The sample is composed of 221 female subjects (14.1±1.1 years) from Portuguese Midlands. Somatic characteristics included body weight, stature, sum of six skinfolds and umbilical circumference. Physical activity was estimated using an uniaxial accelerometer (Actigraph, model 7164) on five consecutive days assuming a criterion of 10h per day for inclusion. Health-related physical fitness was defined as one-mile run, sit-ups, sit-and-reach and 20-meter shuttle run. After presenting descriptive statistics, data analysis determined the correlation between indicators of health-related fitness and physical activity.

Coefficients of correlation between physical activity (counts/min) and the four indicators of health-related physical fitness ranged from -0.17 to + 0.58. Between moderate-to-vigorous physical activity and health-related fitness, the magnitudes of correlations ranged from -0.13 through + 0.58. Physical activity was significantly and positively correlated with one-mile run and 20-m shuttle-run performance. No significant relationship was found between physical activity and sit-ups or sit-and-reach.

In summary, the relationship between 5-day accelerometry data and physical fitness were no more than weak to moderate. The results highlight the complexity of assessing short-term physical activity as a predictor of fitness in adolescents.

References.