

1st International Science Congress



ISC-2011

24th - 25th December-2011

SOUVENIR

Science and Technology for Sustainable Development



Organized by

Research Journal of Chemical Sciences
Research Journal of Recent Sciences

Venue
Maharaja Ranjit Singh College of Professional Sciences
Indore, MP, INDIA

International Sciences Congress Association



ISCA-ISC-2011-16SpotS-01

Effects of 6-Weeks Yogasanas Training on Agility and Muscular Strength in Sportsmen

Singh Amandeep, Singh Sukhdev and Vishaw Gaurav

Department of Physical Education, Guru Nanak Dev University, Amritsar, Punjab, INDIA

Abstract: The aim of the study is to assess the effects of 6-weeks yogasanas training on agility and muscular strength in sportsmen. A group thirty randomly selected male players of department of physical education, Guru Nanak Dev University, Amritsar (Punjab, India) aged 18 – 24 years, volunteered to participate in the study. They were randomly assigned into two groups: Y (experimental N=15) and C (control N=15). The subjects from Group Y were subjected to a 6-weeks yogasanas training programme. Student's t-test for independent data was used to assess the between-group differences for dependent data to assess the Post-Pre differences. The level of $p < 0.01$ was considered significant. The agility and muscular strength significantly improved in Group Y compared with the control one. The yoga asana training may be recommended to improve agility and muscular strength and may contribute to enhance sports performance.

Keywords: Yogasana, agility, muscular strength.

ISCA-ISC-2011-16SpotS-02

The First Evidence of Peppermint Essential oil on Enhancing Exercise Performance

Meamarbashi A. and Rajabi A.

Department of Physical Education and Sports Sciences, University of Mohaghegh Ardabili, Ardabil, IRAN

Abstract: Enhancing performance is a desire for all the athletes, coaches and researchers. Peppermint has been used for its analgesic, anti-inflammatory, antimicrobial, antispasmodic, digestive, vasoconstrictor, stimulant, cognitive enhancer, decongestant, expectorant, and *bronchodilator* effects. Even though inhaling mint odor was investigated in athletes but failed to show any significant effect on pulmonary parameters and exercise performance. This is the first evidence on enhancing exercise performance and respiratory parameters during ten days of oral supplementation with peppermint essential oil. *Mentha piperita* or Peppermint is native to North America, Europe and southwest Asia. Mint essential oil and extract showed antioxidant, antispasmodic, analgesic, spasmolytic choleric, coolant, carminative, anti-fatigue and relaxing, antibacterial and antifungal effects. The principal components of the oil are menthol (29%), menthone (20-30%), and menthyl acetate (3-10%). A group of twelve (12) healthy university students aged 25.3 ± 1.04 years and weighing 82.3 ± 3.7 kg volunteered to participate in the study. The subjects were tested before and after the mint consumption for maximum sound duration as well as anthropometric (body fat percent, chest diameters after maximum inhale and exhale, waist to hip ratio, body weight and height), blood pressure, heart rate, respiratory rate and spirometry parameters (Forced Expiration Volume (FEV1), Forced Vital Capacity (FVC), Peak Expiratory Flow Rate (PEF), Forced Expiratory Rate (FEF), Forced Expiratory Centre Flow Rate (FEF25-75), Forced Expiratory Time (FET), Vital Capacity (VC), and Maximum Voluntarily Ventilation (MVV)). Fifty micro liter of Mint essential oil was dissolved in 500 ml of mineral water and consumed during a day for 12 days. Spirometry parameters were significantly different after the test. Values of FVC (4.56 ± 0.9 vs 4.67 ± 0.82) ($p < 0.05$), PEF (8.49 ± 0.93 vs 8.8 ± 0.97) ($p < 0.05$), PIF (5.79 ± 1.21 vs 6.52 ± 1.04) ($p < 0.05$). Chest diameter at exhalation at xyfoid level (84.33 ± 5.45 vs 82.95 ± 5.25 cm) ($p < 0.001$). Systolic blood pressure was significantly lower (120.4 ± 9.0 vs 112.9 ± 8.0) ($p < 0.001$). Heart rate was also significantly lower (64.83 ± 12.18 vs 61.91 ± 11.48) ($p < 0.005$). Results indicating effectiveness of Mint essential oil on respiratory parameters, blood pressure and respiratory rate in young students.

Keywords: Mint, Respiratory parameters, University students

ISCA-ISC-2011-16Spots-03

The Effect of Fatigue Protocol on Semi Dynamic and Dynamic Balance in Soccer Players with Functional Ankle Instability

Attarzadeh Hosseini S.R.¹, Meamarbashi A.² and Abbasian S.¹

^{1,3}Faculty of Physical Education and Sport Sciences, Ferdowsi University of Mashhad, Mashhad, IRAN

²Department of Physical Education and Sports Sciences, University of Mohaghegh Ardabili, Ardabil, IRAN

Abstract: Chronic ankle instability (CAI) is a clinical problem frequently seen in soccer players. Altered mechanical joint stability due to repeated disruptions to ankle integrity with resultant perceived and observed deficits in neuromuscular



control has been described as CAI. Most studies have shown that fatigue has a negative impact on balance and body position, therefore, study on dynamic balance control system helping us to understand how the body functions in the fatigue and unstable conditions. The purpose of this study was to study the effect of Bangsbo's fatigue protocol (semi-soccer) on dynamic and semi dynamic balance in soccer players with functional ankle instability. In this research, 29 soccer players (age: 22.3 ± 2.1 years and height: 176.5 ± 4.4 cm) were selected as statistical sample. After the complement of questionnaires including; individual characteristics, health history and Cumberland Ankle Instability Tools, they were divided into two groups; a) Control: without functional ankle instability ($n=16$) and b) Experimental: with functional ankle instability ($n=13$). Semi dynamic by Biodex balance system (BBS) and dynamic balance by *Excursion Balance Test* (SEBT) were taken before and after semi-soccer fatigue protocol. Finally, data were analyzed by GLM-Repeated Measures in significance level of $P < 0.05$. Both groups showed a significant difference in semi dynamic and dynamic balance before fatigue protocol ($P < 0.05$). Additionally, both groups showed a significant reduction in semi dynamic and dynamic balance after fatigue protocol ($P < 0.05$). Decrease in semi dynamic and dynamic balance before fatigue protocol in two groups was not significant ($P > 0.05$). Finding of this study showed that at the end of soccer, the fatigue can significantly reduce semi dynamic and dynamic balance, especially in players with functional ankle instability and subsequently enhances risk of injury.

Keywords: Fatigue, Dynamic Balance, Ankle Instability, Soccer.

ISCA-ISC-2011-16Spots-04

Relative Effect of Health Related Fitness and Skill Related Fitness on Sports Proficiency of Students of Physical Education

Sathe Vivek B. and Kumar Ajay

School of Physical Education D.A.V.V. Indore, MP, INDIA

Abstract: The Physical fitness is the sum total of five motor abilities namely strength, speed, endurance, flexibility and coordinative abilities. These five motor abilities and their complex forms (e.g. strength-endurance, explosive strength etc) are the basic prerequisites for human motor actions. Therefore, the sports performance in all sports depends on a great extent on these abilities. The improvement and maintenance of physical fitness or condition is perhaps the most important aim of sports training. Each sport requires a different type and level of physical condition (specific fitness/condition) and as a result a different type of fitness training is required for different sports. Some sport like distance running requires a very high level of endurance but a low level of other motor abilities. Sports like shooting and archery do not require a high level physical condition. It is almost universally accepted that regular physical exercises or physical fitness enables one to stay physically fit and to sustain the average individual in his daily activities. But if anybody wishes to participate successfully in sports games i.e. aspire to be a champion or to reach the top, he must go for beyond the simple exercises. In many sports and games, little strength can be developed because the resistance to be overcome is relatively moderate for instance, in table tennis the player overcome only the inertia of a bat. In short if an average individual seeks, physical fitness he would best turn towards exercises and not to specialized participation in games and sports. Simply stated one might say that as coaches or as educators we are dedicated to the maximization of human performance in sports or in life, through the improvement of the human physical fitness or condition. Physical fitness or conditioning is highly specific according to ones personal status and needs. The Sprinter, the Marathon runner, the Yachtsmen, the Footballer, the Tennis player, the Gymnast, the Horse rider, the Weight lifter, or the Swimmer, they have their own specific conditioning or fitness requirements. It is accepted, that it has to be cultivated through proper exercised not only during the preparatory stages, but all along one's playing career. Today the preparation of an athlete for achievement is a complex dynamic state characterized by a high level of physical and psychological efficiency and the degree of perfection of the necessary skills and knowledge of teaching and tactical preparation. An athlete arrives at this state only as a result of a corresponding training sports activity directed at grooming an athlete for an achievement and at steadily enhancing this preparation. May other factor also brought into action in his preparation (means of Rehabilitating strength after loads, special nutrition, organization of a generated regime in accordance with the conditions of sports activity etc.) Thus athletes training today is a multi side process of expedite use of aggregate factors (means method and conditions) so as to influence the development of an athlete and ensure the necessary level of preparation. In available literature there were studies on relationships between physical fitness and sports proficiency of any one game or sport. In this study researcher is motivated find out the relative effect of health related fitness and skill related fitness on the sports proficiency of students of physical education.

□□□