



4th International Conference on

Sports Medicine and Fitness

November 14-15, 2018 | Edinburgh, Scotland

Workshop

Day 1

Sports Medicine 2018

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Juan Castellano

Life Kinesis, Turkey

3R system: Rebalance - Reeducation - Retraining

Stability re-training targets both the local and global stability systems. Activation of the local stability system is to increase muscle stiffness along with functional low-load integration in the neutral joint position of controls segmental. Global muscle retraining is required to correct multisegmental or myofascial dysfunction in terms of controlling the site and direction of load that relates to provocation. Our pedagogic method solves dysfunctions with 3 steps (3 R System): (1) Rebalance by global active stretch, (2) Reeducation by proprioceptive and corrective technics, and (3) Retraining by the right patterns of movement adapted to morphology and physical condition. The pedagogic protocol is based on palpating bone references to analyze what happens during the integrated movement and to know if there is lack of stability or mobility in the arthrokinetic chain. In the corrective phase, forces are applied to facilitate certain segmental patterns of movement with sufficient stability. This system has an application to the clinic to avoid irritating the soft tissues before past traumatic episodes.

Biography

Juan Castellano is a Physiotherapist, President and CEO of Life Pilates (2003), Juan Castellano is a recognized expert in the prescription of physical exercise for Health. He is a Regular speaker at international conventions, Pilates, wellness and science health congresses. In 2012 he created a method of work to be able to teach more efficiently the anatomy, biomechanics and Kinesitherapy. In November 2017 Juan Castellano will represent Spain as renowned speaker in the fifth World Conference on Physiotherapy in Dubai. He has been a pioneer as presenter in first Spanish conventions on the Pilates method and in the most prestigious Pilates conventions in South America, Europe and Asia where he has shared his approach with the outstanding world leaders.

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Scientific Tracks & Abstracts Day 1

Sports Medicine 2018

SESSIONS

Sports Science | Exercise Physiology and Metabolism | Sports Injuries and Treatment | Sports Psychology

Chair: Juan Castellano, Life Kinesis, Turkey

Co-Chair: Ahmad Alkhatib, Dasman Diabetes Institute, Kuwait

SESSION INTRODUCTION

Title: Injuries and time-motion analysis in surfers: Development of preventive strategies

Beatriz Minghelli, Piaget Institute, Portugal

Title: Ramp lesion - menisco-capsular tears

Fahad Nasser Al-Khalaf, Al Razi Orthopedic Hospital, Kuwait

Title: Healthy community-education and health promotion in athletes of Special Olympics

Hana Válková, Masarykova University, Czech Republic

Title: Legal claims for the sports person injuries

Warren Collins, Penningtons Manches LLP, UK

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Injuries and time-motion analysis in surfers: development of preventive strategies

Beatriz Minghelli

Piaget Institute, Portugal

Surfing practice has increased in popularity and the numbers of surfers in competitions. Surfers are subjected to external factors (ocean currents, wind orientation, wave size, contact with the board and other surfers) that require quick and efficient adaptations, increasing the risk of injury while riding waves. In a surfing session, it is necessary to perform repetitive paddling movements that require high muscular endurance, moderate-high cardio-respiratory endurance, and anaerobic power of the upper torso. During paddling movements, the surfer performed a hyperextension of the trunk and realized repetitive arm stroke action, and this repeated movement can be considered to be factors associated with chronic overuse injuries. Surfing has become an increasingly acrobatic and dynamic sport, increasing the number of acute injuries acquired while riding waves. Materials used for surfing are becoming lighter and shorter, providing greater speed and improved hydrodynamics and also float lower in the water, causing more instability for the athlete, increasing the injury risk. Thus, it is necessary to develop epidemiological studies, in order to identify the injury prevalence and risk factors, as well as evaluate surfers' activities times in order to account for the time spent in each surfing activity to enable the development of appropriate preventative strategies. This presentation will approach the prevalence of injuries in this modality, indicating the most frequent types and anatomical sites, the injury mechanism, the associated risk factors and the physiological metabolism used for this practice.

Biography

Beatriz Minghelli has completed her PhD in Public Health at National School of Public Health, Lisbon, Portugal; Master of Science in Physiotherapy in School of Human Kinetics at University of Lisbon, Portugal and Physiotherapist training in Education School Helena Antipoff-Rio de Janeiro, Brazil. She is an Adjunct Professor in the School of Health Jean Piaget/Algarve at Piaget Institute, since 2006; Coordinator of the Physiotherapy Course of School of Health Jean Piaget/Algarve at Piaget Institute. She is the Member of Research in Education and Community Intervention (RECI). She has published more than 30 papers in national and international journals and has been serving as a Reviewer of reputed journals. She is the Editorial Board Member of *Journal Austin Spine*, *EC Orthopaedics Journal*, *Research and Reviews and Research & Investigations in Sports Medicine (RISM)*.

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Ramp lesion - menisco-capsular tears

Fahad Nasser Al-Khalaf

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Meniscal tears are seen frequently with ACL injuries. Literature shows about 40% meniscal injuries are associated with ACL rupture. Since the late 1980's medial meniscus posterior horn injuries has been described. Recent literature has shown more detailed classifications of the posterior horn injuries and its meniscocapsular separation which is now known as ramp lesions. Ramp lesions are difficult to diagnose. Images such as MRI have low sensitivity for diagnosing meniscocapsular tears. The gold standard diagnostic tool is arthroscopy. Since ramp lesions are at the "blind spot" of the posterior knee compartment, it became a standard step in the diagnostic arthroscopy to visualize the postero-medial compartment to roll out ramp lesion in the setting of ACL rupture which its incidence can be up to 17%. Unrecognized large ramp lesions can be responsible for failed reconstructed ACL. Biomechanical and laboratory studies shown that un-repaired RAMP lesions can be responsible for increased tibio-femoral joint laxity and increased tibial external/internal rotation which increases the stress over the reconstructed ACL and might be a direct cause of graft failure. Surgical repair of ramp lesion can be technically demanding with increased risk of saphenous nerve injury. Different approaches have been proposed for repair, and each repair can carry its own advantages and disadvantages. Out side-in technique carries the highest risk and should be done with caution. All-inside and inside-out techniques demonstrated higher success and it's more supported by literature. There is no specific rehab protocol for ramp lesion repair. Currently ACL rehab protocol is used for isolated ramp or concomitant ramp and ACL reconstruction with similar result as isolated ACL rehab.

Biography

Fahad Nasser Al-Khalaf has completed his Medical Bachelor's degree at the Royal College of Surgeon in Ireland-Dublin, in 2006. In 2014, he completed his Orthopedic Training and Saudi Board of Orthopedic Surgery at King Faisal Specialist Hospital and Research Center-Riyadh, Kingdom of Saudi Arabia. In 2017, he completed his Sport Medicine Surgery Fellowship at Queens University-Kingston, Ontario Canada. Currently, he is an Orthopedic and Sport Medicine Surgery Specialist practicing at Al Razi Hospital-Ministry of Health in Kuwait.

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Healthy community-education and health promotion in athletes of Special Olympics

Hana Válková

Masarykova University, Czech Republic

The health of Special Olympics athletes is a key component of Special Olympics 2016-20 Strategic Plan. During sport activities inclusion of persons with mental disability can be developed and overall well-being is promoted. Until nowadays persons with mental disability are more restricted in their participation in sport comparing with inactive population in the Czech Republic. Generally lower level of fitness, higher overweight and obesity of persons with mental disability guide to the strategy of healthy communities. Healthy athletes programs are oriented on screening of fitness variables, life style habits including nutrition, the perception of health care and personal well-being perception. The Czech Special Olympics with partner universities is focused on composition of healthy communities in six territories of Czech Republic. To create realistic model of healthy community which will be friendly and pleasant for persons with mental disability is the main goal of presented project. The basic principles of the project are described: management, methods of screening, feedback and follow-up care, fitness level in relation of gender and social environment.

Biography

Dr. Hana Válková is a member of Doctoral Board and Scientific Board of the Faculty of Sports Studies in the Masarykova University, Czech Republic. Currently she is working as a Professor in the Division of History, Philosophy, Sociology and Psychology of Sport. She has over 100 publications in top scientific journals, including books, most recently publication is *Leaving Competitive Sport in the Czech Republic*.

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Legal claims for the sports person injuries

Warren Collins

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Whenever one engages in sports, there is always an inherent risk of injury. Most athletes accept this risk as part of the game. Most injuries are accidental and relatively minor, like sprains, twists, and the occasional bone break. But what happens if an injury occurs as a result of a deliberate hit or someone acts so recklessly that injury is almost certain to occur? As we all know that coaches play a major role in the development of athletes. In other words, since a coach is placed in a position of power and trust, the duty of care will always be placed on him. If certain requirements are not met, the coach may be held financially, or even criminally, liable. It is a discussion on legal liability for sporting injuries, quantification of damages for pain, suffering of past and future financial losses. We will discuss the analysis of the law of consent to injury and contributory negligence/comparative fault. It is a review of the importance of medical records in the legal arena and an exploration of the law relating to medical causation. The claims process explained with particular emphasis on the role of the expert witness.

Biography

Warren Collins has been a Solicitor of the Senior Courts of England and Wales for 27 years. He practices exclusively in Claimant/Plaintiff personal injury claims with an emphasis on neurological injuries. His practice is truly international but with an emphasis on UK/US Claims. He is currently the Chief Assessor for the Personal Injury Accreditation Scheme of the Law Society of England and Wales and also Member of (and Assessor for) the Spinal Cord Injury and Brain Injury Specialist Accreditation Panels of APIL (the Association of Personal Injury Lawyers). In the USA, he is the current co-chair of the Spinal Cord Injury Litigation Group of AAJ (American Association for Justice) and the Secretary of AAJ's International Practice Section. He is the only UK Solicitor member of the *Melvin Belli Society* (pre-eminent personal injury lawyers of America) as well as the National Crime Victims Bar Association of America. Warren is listed in the Lawyers' *Hall of Fame* in the *Legal 500* (a leading peer review directory of lawyers) and has won numerous awards including Personal Injury Lawyer of the Year in 2013.

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SESSIONS

Sports Science | Exercise Physiology and Metabolism | Sports Injuries and Treatment | Sports Psychology

Chair: Juan Castellano, Life Kinesis, Turkey

Co-Chair: Ahmad Alkhatib, Dasman Diabetes Institute, Kuwait

SESSION INTRODUCTION

Title: Lumbar disc herniation in the athlete: Considerations for management and surgical treatment

Michiel Frederik Vande Kerckhove, St. Trudo Hospital, Belgium

Title: Dietary supplement usage of athletes in a South Asian regional country; Sri Lanka

Punchividanelage Nilu Jayashika Fernando, Sri Lanka Anti-Doping Agency, Sri Lanka

Title: A new machine for evaluating the precision and response time of punches

Tossaphon Jaysrichai, Srinakharinwirot University, Thailand

Title: The role of Platelet Rich Plasma (PRP) in musculoskeletal problems & sports medicine

Kaydar Al-Chalabi, Al Moosa Clinics & Day Surgery Center, UAE

Title: Superior Labrum Anterior Posterior Lesions (SLAPs) in athletes: An overview

Valerio Pace, University of Perugia, Italy

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Lumbar disc herniation in the athlete: considerations for management and surgical treatment

Michiel Frederik Vande Kerckhove
St. Trudo Hospital, Belgium

A lumbar disc herniation in an athlete can cause significant morbidity and loss of playing time. It can also lead to financial loss, loss of status, psychological problems or even the end of a sports career. Lumbar disc herniation is a mechanical failure of the intervertebral disc to contain the disc material in the intervertebral disc space. This can possibly lead to a mechanical conflict and/or chemical irritation of the neurological structures in the lumbar spinal column. As such it can lead to irradiating pain in one or two legs, back pain, sensory and/or motor disturbances. The practice recommendations endorse an algorithmic approach to management that begins with observation, physical therapy and possibly epidural injections as the initial steps for treatment. Surgery is reserved for those who do not respond well to conservative care. In the general population, surgical treatment for lumbar disc herniation in the form of microdiscectomy has been shown to have excellent outcomes across several randomized controlled trials, with high success rates, return to work, and cost-effectiveness. This paradigm is also true in the athlete population. Studies suggest that a high level of return to sport is possible following lumbar disc surgery. This presentation depicts why it is important to give extra consideration regarding the management, the timing of surgery and the surgical options in lumbar disc herniation in the athlete.

Biography

Michiel Frederik Vande Kerckhove has completed his Medical studies at the University of Ghent, Belgium. He is in his fifth year of medical training at the University Hospital of Aachen, Germany. He is working as a Resident in the Orthopedic Surgery Department of Prof. Dr. Lauweryns. He has special interest in Spine Surgery.

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Dietary supplement usage of athletes in a South Asian regional country; Sri Lanka

Fernando P N J, Rashani, SAN¹, Pigera, S¹, Niriella, MA², Jayawickreme, S¹ and de Silva AP^{1,2}¹Sri Lanka Anti-Doping Agency, Sri Lanka²University of Kelaniya, Sri Lanka**Objective:** Identification of dietary habits and dietary supplement usage pattern among Sri Lankan athletes.**Methods:** Sri Lankan elite athletes (386) above 18 years old, who belong to 14 sports, were randomly selected for survey study. Data was collected through self-administered structured questionnaire.**Results:** Dietary supplements are being used by 90% of them, mainly including multivitamins (62.5%), protein (47.4%), creatine (19.0%), rehydration fluids (54.5%) being weight gainers (1.1%) the lowest. Players in all 14 sports showed more than 75% dietary supplement usage while badminton, shooting, wrestling, netball and rugby showed significantly higher usage than karate which has the lowest usage. Supplement usage pattern was observed within geographical variation where six provinces showed more than 90% usage compared to all nine. A significant increase in supplement usage was observed in athletes between 21-35 ages. No significant difference was observed in the supplement usage pattern respect to marital status, gender, occupation of the athletes or highest level of participation. All the participants take carbohydrate rich diet for lunch and 13% cereal for breakfast and 4.2% vegetable and meat rich diet for both breakfast and dinner. Among them 10.9% consumes junk food for dinner. From these players 81.9% using fruits, 54.9% using porridge, 43% using soup and 22.8% using drinks made from medicinal plants show similar tendency in using dietary supplements (more than 90%). Among vegetarians (3.6%) the supplement usage is 85.7% which includes 57.1% protein supplements.**Conclusion:** While dietary supplement usage is high among Sri Lankan athletes irrespective of sport, dietary habits and social status, their dietary practice needs a change.

Biography

Punchividanelage Nilu Jayashika Fernando has completed her BSc in Chemistry at University of Sri Jayewardenepura and Postgraduate Diploma in Analytical Chemistry at the University Of Colombo, Sri Lanka. She is a Research Officer at Sri Lanka Anti-Doping Agency. Her research interests include anti-doping science research in the field of sports.

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A new machine for evaluating the precision and response time of punches

Tossaphon Jaysrichai¹, Kachonsak Srikongphan¹ and Pornchalit Jurarakpong²¹Srinakharinwirot University, Thailand²Sport Authority of Thailand, Thailand

Response time and precision of punches are an important skill for boxers, because the high precision and the fast moving response refer to an excellent skill. Our team developed the boxing trainer device that was called “Robo-Boxing Trainer”. The objective is to develop and evaluate the device for measuring precision (in percent) and response time (in seconds) of punches. Researchers cooperated with Sport Authority of Thailand and the Amateur Boxing Association of Thailand for development. Robo-Boxing Trainer consisted of four targets. Each punching target has eight sensors and eight LED lights. Operating software, which created by PLC-CX programmer and DOPSoft (delta), can set the punching series and alarm signals. It could record the response time since starting signal until touching target and to calculate for precision percentage. This software could be set and recorded maximal 40 series and maximal 100 punches in each punching series. Researchers compared the accuracy of counting time with digital oscilloscope and tested the efficiency of sensors’ cutting signal. This study found the counting time to be high accuracy (100% and 98.8%). The cutting sensors’ signal test was efficient. Robo-Boxing Trainer, which is a high accuracy device, might help to test and improve boxer’s skills.

Biography

Tossaphon Jaysrichai has completed his PhD in Biomedical Engineering at Chulalongkorn University. He is a Lecturer of Physical Therapy.

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The role of Platelet Rich Plasma (PRP) in musculoskeletal problems & sports medicine

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Platelet-rich plasma (PRP) is one of many new developments within the expanding field of regenerative medicine. Specialists in areas such as orthopedics, sport medicine, physical medicine and rehabilitation, and rheumatology have been exploring the benefits of this novel therapy. The use of orthobiologics such as PRP continues to advance as patients seek nonsurgical approaches to acute and chronic musculoskeletal injury and disease. Advancements in this novel bioactive therapy have occurred during the past 2 decades. Recently, the body of literature has grown and we are learning a great deal about the potential for this regenerative therapy. Applications in physiatrist, orthopedics, and sports medicine are currently being developed, and regenerative biomedicine is rapidly becoming an exciting and promising treatment option in musculoskeletal medicine. However, much remains to be learned in this emerging field. In this article we will focus on PRP, a bioactive regenerative therapy that has garnered significant attention in recent years. Human clinical trials are emerging that demonstrate the promise of this innovative therapy, which likely will play a major role in shaping the landscape of sports medicine.

Biography

Dr. Kaydar Al Chalabi is a Specialist in Rheumatology, Physical Medicine and Rehabilitation who brings more than 25 years of experience in medical practice. His areas of expertise include Rheumatologic Diseases, Local Pain Management, Neurological Injuries, Pre/Post Orthopedic Management and Rehabilitation, and Post Amputations. Dr. Kaydar holds Bachelor's Degrees in Medicine and Surgery (MBChB) from the College of Medicine at the University of Mosul in Iraq. He also completed a Master's Degree in Physical Medicine, Rheumatology and Rehabilitation from the Faculty of Medicine, Ains Shams University in Egypt.

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Superior Labrum Anterior Posterior Lesions (SLAPs) in athletes: An overview

Valerio Pace

University of Perugia, Italy

A SLAP lesion is defined as an injury of the superior labrum that begins posteriorly and extends anteriorly including the 'anchor' (the biceps tendon to the labrum). It is a frequent injury in throwing athletes. It has 3 anatomical variants: normal, sublabral foramen, Buford complex. The biomechanics of this injury is related to GH translation and motion increment and strain on AIGHL with ABER. Its etiology includes a single traumatic event or repetitive overhead activities (compression, traction, avulsion, internal impingement). Its epidemiology is characterized by a low incidence, no side prevalence and these are frequently associated injuries. The most used classification systems are Snyder and Moffet. A wide range of symptoms are common, causing loss of velocity in throwing athletes. An appropriate examination should include observation, palpation, neurovascular exam, ROMs, assessment of coexisting pathologies. Typical findings are positivity to the following tests: O'Brien's (sensitivity 100%), Jobe's, Grind's, Yergason's, Speed's, Mimori's (sensitivity 100%), Kibler's, Crank's, Kim's. The performance of an MRI arthrogram gives very accurate findings. Treatment options include conservative measures (capsular stretching, rotator cuff strengthening, scapular stabilizers) which are characterized by lack of studies able to report their efficacy. Surgical options depends on classification: debridement is appropriate for type 1, stabilization with biceps anchor for type 2, ; excision of bucket-handle tear for type 3, biceps tenodesis or excision for type 4, stabilization with biceps anchor and labral repair for type 5. Outcomes show relatively good surgical results, while frequent failure of conservative treatments is observed. The post-op rehab program include a sling for 4 weeks, early PROMs and gentle AAROMs, FF 145 and ER 60 (45 in Abd) by 6 weeks, full ROMs by 10 weeks, 14 weeks of restricted sport activity (light swimming, half golf swings), interval throwing program by 10-20 weeks, RTP by 6-9 months. Conclusions: high index of suspicion of this diagnosis in throwers with shoulder pain while clinical exam usually provides the correct diagnosis. MRI is useful investigation to confirm the diagnosis. The recommended treatment for throwers is rest, NSAIDs and rehab program in first instance; surgical management should be considered when conservative measures fail. Suture anchor repair procedures are the preferred option for overhead activities or athletes.

Biography

Valerio Pace has completed his MBBS at the University of Perugia. He worked as T&O SHO and Registrar at Royal National Orthopaedic Hospital (RNOH) NHS Trust between 2015 and 2017. He is currently a T&O Resident Doctor at the University of Perugia, Italy. He also has Honorary Research Contract at the Royal National Orthopaedic Hospital. He has published eight papers in reputed journals, presented at several conferences and carrying on plenty of on-going research projects.

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Workshop Day 2

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Juan Castellano

Life Kinesis, Turkey

L.A.F method, a new approach in physiotherapy in the management of MD and injuries of the loco-motor system

L.A.F (Location, Analysis, and Facilitation) is a new approach in physiotherapy for the management of mechanical dysfunctions. L.A.F solves dysfunctions with 3 steps (3 R System): rebalance by global active stretch; reeducation by proprioceptive and corrective technics and; retraining by the right patterns of movement adapted to morphology and physical condition. L.A.F applies precise forces through manual techniques and provides accuracy to the movement being very effective in the physical condition recovery phase, in re-education and training for a high spectrum of population. L.A.F is a pedagogic protocol that intends to align the right steps for the management of mechanical dysfunction using natural patterns of movement to analyze the reasons or causes of the loss of mobility or stability.

Biography

Juan Castellano is a Physiotherapist, President and CEO of Life Pilates (2003), Juan Castellano is a recognized expert in the prescription of physical exercise for Health. He is a Regular speaker at international conventions, Pilates, wellness and science health congresses. In 2012 he created a method of work to be able to teach more efficiently the anatomy, biomechanics and Kinesitherapy. In November 2017 Juan Castellano will represent Spain as renowned speaker in the fifth World Conference on Physiotherapy in Dubai. He has been a pioneer as presenter in first Spanish conventions on the Pilates method and in the most prestigious Pilates conventions in South America, Europe and Asia where he has shared his approach with the outstanding world leaders.

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Scientific Tracks & Abstracts

Day 2

Sports Medicine 2018

SESSIONS

Sports Marketing and Media | Sports Psychology and Athlete Counseling | Physical Therapy and Rehabilitation

Chair: Ahmad Alkhatib, Dasman Diabetes Institute, Kuwait

Co-Chair: Kirill Micallef Stafrace, Maltese Olympic Committee, Malta

SESSION INTRODUCTION

Title: How to improve sports performance and prevent injuries through individual constitution

André Marques, Abel Salazar Biomedical Sciences Institute, Portugal

Title: Life style habits and fitness of Czech elderly Special Olympic Athletes

Hana Válková, Masarykova University, Czech Republic

Title: Knowledge, perception and practice of elite athletes towards dietary supplements in a South Asian Country Sri Lanka

Shehani Anne Dilrushi Pigera, Sri Lanka Anti-Doping Agency, Sri Lanka

Title: Iselin's disease: Case report and literature review

Thomas Jan Gaetan Mathieu, University of Antwerp, Belgium

Title: Musculoskeletal injuries in foot volley athletes: Associated risk factors

Beatriz Minghelli, Piaget Institute, Portugal

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How to improve sports performance and prevent injuries through individual constitution

André Marques

Abel Salazar Biomedical Sciences Institute, Portugal

The physiological basis, mental and emotional structure and life habits are important variables to take into account in the performance of an athlete as well as prevent injuries. Each human being has its own individual body and mind constitution. Those works as a inseparable pair. Every health professional should develop observation and body signs reading to access to constitutional aspects. Body physiognomy, behaviors, communication, blood type, season's born and daily routines are indicators to individual constitution. Thus, to extract the best qualities, improve sport performance and at the same time prevent injuries, each physical and mental constitution of an athlete should be clear. Knowing about individual constitution allows to adapting training, increasing weaknesses, improving communication (given instructions) and adjusting nutrition to each athlete. In the case of an injury the affected area of body will tell us how the problem relates to psychological aspects. Thereby, injury's location could be an indicator of a specific body-mind dysfunction. To solve and reverse injuries practitioners should understand the underlying role of mind into body clinical manifestations. Additionally, other evaluation's types allow access to a more detailed and specific diagnosis. Hence, combined different therapies and mental approach has been effective in solving and reversing injuries and diseases patterns. This approach will change the view of the human body and improve root treatment.

Biography

André Marques has completed his Graduation in Physiotherapy at Escola Superior de Tecnologias da Saúde do Porto in 2009, and Post-graduation in Traditional Chinese Medicine-Acupuncture and Phytotherapy at Universidade de Medicina Chinesa in 2015. He has also completed the International Training Program at the Chengdu TCM University in 2016. Currently, he is pursuing his Master's in TCM given by the Instituto de Ciências Biomédicas de Abel Salazar. As Chinese medicine specialist, he has been working in private clinics and football clubs, and he is doing research on new treatments as food intolerance and self-modeling of neurological dysfunction.

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Life style habits and fitness of Czech elderly Special Olympic Athletes

Hana Válková

Masaryk University in Brno, Czech Republic

Background: Physical activity (PA) of elderly persons is strong research topic among general population regarding healthy life style and quality of life. Persons with mental disability (MD) seem to be out of this attention in Czech Republic even they have the same rights as people generally. Special Olympic program can provide participation in physical activities for wide spectrum of persons with MD. It is platform for research under umbrella of Healthy Athletes (HA) program. Composition of research projects focused on PA, life habits and healthy life style of elderly with MP can improve their real health and well-being.

Aims: 1. to present survey of age structure of SO participants in Czech Republic and their inclusion in SO sports; 2. to analyze selected variables of life habits and fitness of athletes – participants of SO Visegrad Games 2013; 3. to compare findings with variables of general elderly in published documents.

Methods: a) participants: 87 SO athletes in swimming, athletic and bocce, moderate level of MD (less than 75 points of IQ). All of them go through SO sports training more than two times per week; b) data collection: i) questionnaire recommended by HA manual, especially part Fun Fitness and Health Promotion were used. Questions are oriented on life habits related to health: nutrition and drinking regime, smoking, alcohol using, safety behavior; ii) measurement of body fat mass, fat-free mass, obesity with bioelectrical impedance analysis (Tanita BC-418); c) data processing: descriptive statistics.

Results and Discussion: age-related changes in body composition were similar as in general population. Obesity was found in 18.18 % of athletes aged 20–29 years, in 10.53% aged 30–39 years and 12.50% in the oldest age category (more than 40 years). Increasing accumulation of the fat tissue in the trunk was observed according a segmental analysis. Differences between male – female athletes were found which is relevant with general population, too. But – SO population is touch with regular PA. Nutrition habits and life style habits are strongly influenced with either family or residential education (more healthy in residents). Experience with questioning shows the questioning process has to be revised with high level of verification.

Conclusion: SO and HA program is good platform for research of life style of athletes with MD and their future education and independent living. Exact variables (body fat mass, fat-free mass, obesity, nutrition) are slightly different between male – female participants and between family or residential background. In general - similar like in general population trends. Participation of elderly athletes in regular PA and SO training can be considered positive finding but SO program has to push young athletes' involvement as well.

Biography

Dr. Hana Válková is a member of Doctoral Board and Scientific Board of the Faculty of Sports Studies in the Masarykova University, Czech Republic. Currently she is working as a Professor in the Division of History, Philosophy, Sociology and Psychology of Sport. She has over 100 publications in top scientific journals, including books, most recently publication is *Leaving Competitive Sport in the Czech Republic*.

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Knowledge, perception and practice of elite athletes towards dietary supplements in a South Asian Country Sri Lanka

S Pigera¹, S A N Rashani¹, P N J Fernando¹, S Jayawickreme¹, M A Niriella and A P de Silva^{1,2}¹Sri Lanka Anti-Doping Agency, Sri Lanka²University of Kelaniya, Sri Lanka

Objective: The main objective is to evaluate knowledge, attitude and belief towards usage of supplements and doping in sports in Sri Lankan athletes.

Methodology: A total of 386 elite athletes (33.2% Male and 66.8% Female) from 14 sports categories aged between 18-36 years were randomly selected for a questionnaire based study from January-July 2018.

Results & Discussion: Out of 386 athletes 92.7% ($P<0.05$) believed that the supplements are essential to maintain health and 74.6% believed that it is essential for award winning. Both these perceptions were significantly higher in males than females. Among users 91.3% are aware about prohibited substances in sports showing significance in international players than others. When it comes to practice 76.2% of users are checking the label of supplements for doping substances having significant increase in both international players and those who participated for nutritional workshops. Athletes who participated in nutritional workshops have significantly higher tendency to inform doctor about their sport career while medication. Among supplement users 41.8% are using them to enhance performance in sports and 54% use them to regain energy while 16.5% use without any objective. Among creatine, protein and vitamin consumers respectively, 39%, 14.3% and 51.8% are not aware about the supplement type that they consume. Among supplement users, 60.5% ($P<0.05$) of athletes take supplements by themselves without influence of coach, doctor or any other party.

Conclusion: Even though athletes are empowered with the required anti-doping knowledge, their knowledge about supplements and actual practice needs to be improved.

Biography

Shehani Anne Dilrushi Pigera has completed her BSc and MSc at University of Colombo, Sri Lanka. She is currently working as a Research Officer at Sri Lanka Anti-Doping Agency. She has co-authored five publications in peer-reviewed journals and was awarded Presidential Awards for Scientific Publications in year 2015 and 2017. Her research interest includes epidemiological studies, sports science and sports medicine.

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Iselin's disease: Case report and literature review

Thomas Jan Gaetan Mathieu
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Iselin's disease (ID) or traction apophysitis of the fifth metatarsal base is a very rare cause of lateral foot pain. Dr. Hans Iselin, a German physician, described this pathology for the first time in 1912. Since then, only 17 cases have been reported in literature. Probably, ID is underdiagnosed due to absence of recognition and the paucity of suspicion. The confusing pathology of the proximal part of the fifth metatarsal can make ID difficult to differentiate from an avulsion fracture, a Jones' fracture, a stress fracture of the base of the fifth metatarsal or an os vesalianum. To the authors' knowledge, there are no collected data or published clinical series of Iselin's disease. The purpose of this study was to report a case of ID to show the clinical presence of the pathology and to systematically review the available evidence on Iselin's disease to provide an opportunity to better understand the clinical and radiographic characteristics, differential diagnosis and treatment of Iselin's disease. A systematic literature review of articles published in the world literature focusing on Iselin's disease was performed. The researchers identified 17 cases of ID through an extensive PubMed and EMBASE search of the literature for the terms Iselin's disease and traction apophysitis of the fifth metatarsal. Iselin's disease should be suspected in teenagers around 10-15 years of age who present with lateral foot pain, without trauma in history. Radiographic examination is crucial to diagnose. Management is done by conservative methods in the form of rest, ice packs and an orthosis with a lateral wedge.

Biography

Thomas Jan Gaetan Mathieu has completed his Master's degree at University of Antwerp, School of Medicine. He is Doctor Specialist in the department of Physical Medicine & Rehabilitation at the University of Antwerp. Since his graduation as a Medical Doctor, he is very active in the sports medicine. Currently, he is active as one of the Federal Physicians of the Belgian National Football Association and as a Consult Physician of the Royal Ballet School Antwerp. He has published one review article in a reputed journal. His research interest includes Sports Medicine, Orthopedics, Physical Medicine and Rehabilitation.

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4th International Conference on

Sports Medicine and Fitness

November 14-15, 2018 | Edinburgh, Scotland

Musculoskeletal injuries in Foot volley athletes: Associated risk factors

Beatriz Minghelli, Bruno Costa, Adriana Caetano, Patrícia Morais, Sara Guerreiro and Sara Paulino
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Background: Foot volley is a sport played barefoot in the sand beach by two teams, consisting of 2 individuals play against other 2 on a beach volleyball court. During a foot volley session, it's necessary to realize repeated contacts with impact with the ball in some body areas (foot, thigh, chest, shoulder or head), and displacements by the sand, that consists of an irregular floor. The repetition of these gestures with impacts (touches) associated with movement's performance on an irregular floor can cause injuries.

Objective: This study aimed to determine the prevalence of injuries in foot volley athletes and to analyze the associated factors.

Methods: The sample included 48 foot volley male athletes, aged between 21 and 48 years (33.06 ± 7.01 years) who competed in National Portuguese Football League Championship in 2017. A questionnaire was administered by interview.

Results: Thirty four (70.8%) foot volley athletes reported having suffered an injury since they began their practice, with a total of 66 injuries. Twenty-two (45.8%) athletes had an injury in the 12-months period, with a total of 26 injuries and eleven (22.9%) athletes referred an injury at the moment of data collection. The most common of all injuries was low back pain (34.6%) and muscle injury (strain, contusion) (23.8%), located in the lumbar (34.6%) and cervical (23.1%) spine. Performed a technical gesture (57.7%) was the most prevalent injury mechanism. The older athletes (30 to 50 years) showed a 1.06 greater probability of having an injury (95% CI: 0.34-3.53; $p=0.922$) than the younger one, and the athletes who trained twice or less a week showed a 1.55 greater probability of injury (95% CI: 0.46-5.29; $p=0.483$) than those who trained three or more times, the athletes who trained until 1 hour and 30 minutes had 1.02 more probability (0.28-3.65; $p=0.978$) than those that trained more than this period, and the athletes who didn't performed warm-up showed a 1.24 greater probability to have an injury compared to those performed warm-up before the training. The years of practice were not analyzed, since there were equal proportions between the groups in this variable.

Conclusions: The data revealed a high prevalence of injuries in foot volley athletes, with specific affected body areas, mainly caused by performed a technical gesture. This type of study is to help devise injury prevention strategies during specific training.

Biography

Beatriz Minghelli has completed her PhD in Public Health at National School of Public Health, Lisbon, Portugal; Master of Science in Physiotherapy in School of Human Kinetics at University of Lisbon, Portugal and Physiotherapist training in Education School Helena Antipoff-Rio de Janeiro, Brazil. She is an Adjunct Professor in the School of Health Jean Piaget/Algarve at Piaget Institute, since 2006; Coordinator of the Physiotherapy Course of School of Health Jean Piaget/Algarve at Piaget Institute. She is the Member of Research in Education and Community Intervention (RECI). She has published more than 30 papers in national and international journals and has been serving as a Reviewer of reputed journals. She is the Editorial Board Member of *Journal Austin Spine*, *EC Orthopaedics Journal*, *Research and Reviews and Research & Investigations in Sports Medicine (RISM)*.

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Video Presentation

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Noninvasive and biochemical markers of exercise-induced myocardial injury in professional and non-professional athletes

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Low-to-medium intensity of exercise is advised to be a routine approach to prevent and to treat the cardiovascular diseases also in the variety patient categories. In these cases strategy of treatment is based on the facts of the attenuating of the proinflammatory tissue response, the improvement of glucose metabolism and cognitive function. Minding the athletic performance an intensive isometric or isotonic exercises are followed by an adaptive transforming of the structural and enzyme particles of the different tissues, but more prominent changes generally are found in skeletal muscles and myocardium. It is difficult diagnostic task to reveal early, in many cases the subtle sign of the myocardial injury to separate the functional condition and overtraining syndrome and myocardial damage. Widely used ECG patterns of the myocardial injury were compromised by the low specificity of the superficial ECG. The laboratory blood tests get more specific data of myocardial dysfunction but cannot be available routinely or as a field test. In the everyday practice the missing signs of the ongoing myocardial injury are really harmful for both professional and non-professional athletes and leads to severe cardiovascular complications. The balance between noninvasive and biochemical diagnostics provides more effective instruments for the diagnosis and treatment.

Biography

Natalia Maroz-Vadalazhskaya has completed her MD at Belarusian State Medical University (BSMU), PhD at Belarusian Republican Scientific-Practical Centre Cardiology. She is an Associate Professor in Postdoctoral Faculty at BSMU. She is an Editorial Board Member of eduCAD, Cardiologic Belarusian Scientific Society and Member of the Editorial Board of The Journal of Belarusian Studies She has published more than 50 papers in reputed journals. Her research interest includes sport cardiology, general cardiology, cardiomyopathies, coronary artery disease, heart valve diseases, cardiac arrhythmias; cardiovascular imaging, cardio-vascular stress-tests and heart failure.

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Small sided recreational football and immunology: The effects on immune system

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Background: Any exercise program must be enjoyable so that it can be successfully incorporated into person's lifestyle. Football is associated with high energy expenditure. If used as tool for physical conditioning, the small-sided games of football are very helpful in eliciting heart rate up to around 90-95% of maximal heart rate. Exercise can cause a change in the consistency of serum immunoglobulin (IgA, IgM, and IgG) levels and secretion of the some hormones. Intense physical training led to increased serum cortisol and IgA, IgM, IgG in active and inactive people. On the other hand short moderate training caused serum IgA and IgM decrease significantly without variation in levels of IgG. Present study investigated how 16 weeks of six a side supervised recreational football affected serum immunoglobulin and white blood cells in untrained males.

Methods: Twenty seven male students from King Fahd university of Petroleum & Minerals (KFUPM) with mean age 18.75 yrs were randomized into intervention (n=12) and control group (n=15). Three subjects from control group didn't report for post-test. Intervention group played recreational football for 16 weeks. Football sessions were conducted on 40x30m outdoor artificial pitch. Training sessions were organized twice a week. Each session was divided into two halves of 15 minutes with 5 minute recovery. Heart rate in intervention group was monitored during all football sessions using Polar FT7. Control group subjects followed their regular routine. Analysis of Covariance (ANCOVA) was employed to find difference between two groups after 16 weeks of football. Level of significance was set at .05

Results & Discussion: One way ANCOVA revealed significant increase in total white blood cell count ($P=0.001$), eosinophil ($P=0.006$) and basophil ($P=0.005$), while no significant improvement was observed in Neutrophil ($P=0.797$), lymphocytes ($P=0.820$), IgA ($P=.158$), IgG ($P=.077$) and IgM ($P=.655$). Monocytes and eosinophil counts decreased significantly whereas basophil counts increased significantly post football training. Sixteen weeks of supervised recreation football training was effective in increasing total WBC count in untrained males. Our training was vigorous in nature as indicated by high average heart rate during the training sessions. Further, recreation football could not affect serum immunoglobulin significantly but there was some substantive increase in IgG levels. The long and vigorous training makes the immune system weak while short and mild strengthen it.

Biography

Rakesh Tomar is currently working as a Faculty at King Fahd University of Petroleum & Minerals, Saudi Arabia. He has completed his PhD in Physical Education at Lakshmbai National Institute of Physical Education (LNPE), India. He has authored several publications in various journals. His publications reflect his research interests in exercise physiology, health and fitness. He is also an Associate Editor of *The International Journal of Health, Wellness and Society*, Editorial Board Member of Athens Journal of Sports. He is serving as a Board Member for Asian Society of Kinesiology, Korea. He was Principal Investigator in five funded scholarly project and Co-investigator in two fully funded research projects. He has chaired scientific sessions at international conferences. He has been invited as Keynote Speaker, Invited Speaker, and Guest Speaker at international conferences.

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